



CURRENT ISSUES IN ECONOMIC
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(International Conference for Doctoral Students)
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A 350 YEARS COMMEMORATION¹

– *The Beginning of Modern Political Economy* –

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Keywords: universal jurisprudence, law, political economy.

Abstract

Last year it was 350 years since Samuel Pufendorf's (1632-94) first book *Elementorum Jurisprudentiae Universalis* (Elements of universal jurisprudence) was published in The Hague. It is an integrated account of ethics, jurisprudence, social science and political economy.

The author acquired an enviable reputation and it started his remarkable career; 1660 professor at University of Heidelberg, 1668 professor at University of Lund, 1677 royal historiographer at the court in Stockholm, and in 1688 historiographer and judicial councillor at the court in Berlin.

Not satisfied with his first work an enlarged version in eight books *De Naturae et Gentium* (On the Law of Nature and Nations), which was published in 1672. An abridged student edition *De Officio Hominis et Civis* (On the Duty of Man and Citizen) was published the year after.

The popularised *De Officio* was translated into 9 languages, published in more than 150 editions and in tens of thousands of copies. For more than 100 years it was among the most read academic books and became curriculum at most Protestant universities. The classicists Locke, Montesquieu, Rousseau, Hume and many others had all studied and built on his works. This was also the case for the French; Nicole, Domant, Boisguilbert and the Physicrats; as well as the English; Mandeville, Carmichael, Hutcheson and Smith.

Pufendorf therefore started the process that developed political economy into a subject of its own within the social sciences.

Where Does This Story Start?

When King Christian IV (1577-1648) of Denmark-Norway and the duchies of Schleswig-Holstein died in 1648, his son Frederick III (1609-70) became king. Early in his reign he made the promise that he would reconquer the territories that his father had lost in wars with Sweden.

¹ A previous version of this paper was presented at the European History of Economic Thought Conference at the University of Amsterdam, 24-26 March, 2010.



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He saw the opportunity, when King Karl X Gustav (1622-1660) of Sweden became engaged in a war with Poland, and declared war on Sweden in 1657. Karl Gustav, however, made an unexpected and fast move. He broke off his involvement in Poland, marched his battle trained army westward, and north through Schleswig-Holstein, and into Southern Jutland. The little resistance he met he brushed aside. In an extremely risky operation, he moved his army first across the frozen ice to the island of Fyn. Thereafter, across the ice to Langeland, Lolland, Falster, and onwards to Zealand. On his way he crushed all resistance and in a short while he threatened to take Copenhagen. King Frederick had no other choice than to admit defeat and on February 26th 1658 a peace treaty was signed in Roskilde. In this humiliating and devastating treaty vast areas of Norway and Denmark were seceded to Sweden. Norway lost the counties of Båhuslen and Trøndelag, included Romsdal, which split the country in two. Denmark lost the island Bornholm and the counties Halland, Scania and Blekinge, areas that to day is part of Southern Sweden.

It was clear that this peace was not sustainable. The relations between the parties degenerated very fast, both kings planned and armed for a new war. Karl Gustav, who now wanted to create a Nordic grand state with Malmö as its capital, took the initiative and moved first. Already on August 7th 1658 he again landed his forces on Zealand. He very soon defeated the forces that opposed him, laid a siege on Copenhagen and prepared an all out assault on the city defences.

The Danes in general and the inhabitants of Copenhagen in particular flew into a righteous anger over the breach of the peace. The king and citizens mobilised their resources, fortified their capital and prepared to defend it at all costs. The capital was naturally a hotbed where rumours about immediate attacks were spreading like wildfires. The atmosphere in the city was agitated and the hatred towards the Swedes was mounting. The timing could therefore not have been worse, when in this situation; the new house tutor to one of the Swedish envoys arrived by sea, and unknowingly became tangled in the troubled times between the Nordic rivals.

With disregard for diplomatic privileges, claiming that the Swedes had broken the peace without a declaration of war, and therefore did not have the right to protection, the Danes tried to arrest the two Swedish envoys to the Danish court, Sten Bielke (1624-1684) and Peter Coyet (1618-1667). They succeeded in arresting Bielke, but since Coyet managed to bring himself in safety, they seized the minister's entire retinue included the house tutor, who had just started his work. The reason given was that the Swedish envoys had taken active part in the negotiation of important issues concerning the peace agreement that had been signed in Roskilde. The Danes therefore accused them of treason and claimed that they had no duty to guarantee them immunity. The house tutor who had started his work in the second half of August, was also accused of espionage and thrown into jail.

It should be added that the siege on Copenhagen lasted one and a half years. King Carl X Gustav's tried several times to take the city. First on February 8th 1659 but the defenders had been warned and the assault failed. So did his later attempts. The king died in February of 1660. The Great powers then intervened and forced the belligerent states to make peace. In the Peace in Copenhagen May 1660 the borders between the Scandinavian states became as today.



Who was the House-tutor?

The house tutor was Samuel Pufendorf. He was born in 1632, in the small village Dorfchemnitz in Saxony, Germany, where his father was a Lutheran minister. As a one year old the whole family moved to a neighbouring village Flöha where his father got a better position. His childhood was marked by the difficulties and violence of The Thirty Years War. After elementary schooling, he went, in 1645, to the humanistic Prince's School of St. Augustin in Grimma. He graduated five year later with distinction.

In 1650 he was matriculated at the University of Leipzig, in time for the celebration that marked the end of the Swedish occupation. This event took place two years after the peace in Westphalia that ended The Thirty Years War. After the obligatory introduction courses he entered into the study of theology. However, he found this subject dogmatic and, in consequence, turned to philosophy, philology and history. At the advice of his older brother Esaias, he also moved, for two or three semesters, to the University of Jena in Thüringen, where he got his Magister degree in 1656. In Jena he studied natural law and mathematics, under the supervision of a distinguished mathematician Professor Eberhard Weigel (1625-1699). Furthermore he studied the Cartesian demonstrative method of René Descartes (1596-1650) and received a thorough introduction to the writings on natural law of Hugo Grotius (1583-1645) and Thomas Hobbes (1588-1679).

Pufendorf completed his university studies in 1658. Unable to find work in Saxony he again sought the assistance of his brother Esaias, who had graduated a few years earlier and had joined the Swedish Foreign Service. Esaias managed to secure for his younger brother the above-mentioned engagement as a child's tutor. His career as a tutor for the children of the Swedish envoy in Copenhagen was, however, cut short.

A Creative Imprisonment

Samuel Pufendorf sat more than eight months as a carefully guarded prisoner at the Kastellet fortress. The conditions of his imprisonment were very bad, as a consequence he infected typhus, a fever transmitted by louse, and was for a long time very ill.

Throughout his harsh captivity, he had been deprived of learned books and the possibility of normal contact and conversation with other people. However, in spite of his solitude he managed to put his incarceration to good use. He reflected on his studies of natural law and especially upon his studies of the works of Descartes, Grotius and Hobbes and not least the teaching of his acclaimed Professor Weigel. For his own diversion he wrote down, when his health condition permitted it, a small system of natural law. Maybe he also in his writings was inspired by the fact that Grotius when he was imprisoned in The Netherlands used the time to write his work on Dutch law.

After more than eight months of difficult negotiation ambassador Coyet managed to convince the Danes that Pufendorf was his house tutor and not a spy and that they should release him. This happened in April 1659. After his release Pufendorf spent some months to recover from his illness and dreary experience, first in Helsingör and then at Roskilde and Sorö. All places on Zealand that at the time was occupied by Swedish forces.



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In the old Academy of Knights at Sorø he also got access to a library with a substantial number of books. Coyet also received many important books taken as spoils of war by the Swedes from a library which had belonged to the Danish member of government Jørgen Seefeld (1594-1662).² When Pufendorf had recovered from his illness he journeyed with ambassador Coyet and his two sons to Leiden in the Netherlands.

A 350 Years Commemoration

On arrival in Leiden Pufendorf and Coyet's two sons matriculated at the university in March 1660. Here Pufendorf continued his studies and he also had the luck to befriend Peter de Groot, the son of Hugo Grotius. He showed him and other friends the manuscript he had written during his captivity. They all strongly urged him to publish his work. He followed their advice and sent it to the publisher after he had consulted the principal works of Grotius.

Three hundred and fifty years ago, in 1660 *Elementum Jurisprudentiae Universalis* (Elements of Universal Jurisprudence) was published in The Hague. This book has been called the first textbook on natural law or moral philosophy. Here Pufendorf started his mission to construct, based on a set of universal principles, a comprehensive political and moral philosophy appropriate to the conditions of modern Europe. Wehberg (1922) claims that this book is probably Pufendorf's "most original work" and that all "the original ideas of Pufendorf" are found in it.³

Pufendorf denies in this book the existence of a positive law of nations. The law of nation is only a part of natural law. He claims that international law could not arise from custom or from treaties among nations. With this doctrine he became the founder of the purely natural law conception of the law of nations. His theory is therefore considered inauspicious for the development of the law of nations.

Behme (2009) claims that Pufendorf's book inaugurated the modern natural law movement in the German-speaking world, that it established him as major figure in natural law and made the foundation for his later natural law works, which were to sweep across Europe and North America.⁴

The book was dedicated to Prince-elector Karl Ludwig (1617-1680) of the Rhenish Palatinate, who was known as one of the more enlightened rulers. In return, the prince, on recommendation of Peter de Groot, invited Pufendorf, in 1661, to the University of Heidelberg and told that he would establish for him a new chair. However, when Pufendorf got an offer of a chair in Roman law he turned it down. He expressed a wish to be professor in politics at the Faculty of Law, but this was not accepted by the faculty professors. The reason was probably that Pufendorf did not have a degree in law. His Magister degree was in philosophy. He then accepted an offer to become "*extraordinarius professor iuris gentium (international law) et philologiae*" at the Faculty of Philosophy, hoping he could turn it into a real professorship in Natural and international law.

² Walde, O. (1920): *Storhetstidens litteräre krigsbyten. En kulturhistorisk studie.* (A literary spoils of war. A cultural historical study), Uppsala och Stocholm.

³ Wehberg, Hans (1922) Introduction xi-xxiii.

⁴ Behme, Thomas (2009) Introductions ix-xx.



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In October 1661 he was appointed to this position at the university. Pufendorf never succeeded in his attempts to get a position at the Faculty of Law at Heidelberg, but he did indeed lecture in Natural law and international law and he was paid as a professor of Law.

The Elementorum Jurisprudentia Universalis

In his *Elementorum Jurisprudentiae Universalis* Pufendorf attempted to construct a system of natural law, which included and integrated ethics, jurisprudence, social sciences and last but not least political economy, based on evident and indubitable principles. In the preface he declares that his aim was to develop natural law as a demonstrative science modelled after the mathematical disciplines. This Euclidean geometric method he took over from Professor Weigel's lectures at the University of Jena.⁵ His starting point is that man is able to use reason. From this assumption he makes it clear that a man, "who is about to set forth some body of doctrine" must at the very beginning explain precisely what is meant by the subject-matter that he is going to discuss. Furthermore he must search for "fixed principles from which necessarily true declarations concerning these matters may be deduced".⁶ From this it follows that "every body of doctrine" ought to be complete in three parts: The first, comprehends the definitions, the second, the axioms and the third the conclusions that should be derived from the axioms. To this a fourth may be added where those topics "in which certainty does not clearly appear" can be gathered.

In Pufendorf's expositions there are twenty one definitions, two axioms; the first determines which human actions that can be approved and which cannot, the second ascertains how a party in possession of power can bind those subjected to it. There are five conclusions or observations. However, it is not clear how he in his exposition uses the geometric method. His definitions include presentation of theories, and it is difficult to see how his observations are deduced from his definitions and axioms. It can be questioned how suited this method is for the treatment of these kind of subjects. Pufendorf himself seems to be aware of this dilemma since he in his later works abandoned this approach.

There are very few references in this work. This is, of course, partly due to the fact that it was almost entirely written during his imprisonment. But Pufendorf also makes it clear he owes much to Professor Weigel, the illustrious man and a respected friend of mine, and that "much is drawn from that marvellous work, *De jure belli ac pacis*, by the incomparable Hugo Grotius." He continues: "No small debt likewise do we owe to Thomas Hobbes, whose basic conception in his book, *De cive*, although it savours somewhat of the profane, is nevertheless for the most part extremely acute and sound"⁷

Pufendorf's natural law as presented in *Elementorum Jurisprudentiae Universalis* is "the science of law and equity, ..., by virtue of which the duties of all men whatsoever toward one

⁵ Lectures that was published in 1658 as *Analysis Aristotlica ex Euclide restitua* (Aristotelian Analytics as Restored from Euclid).

⁶ EJ Preface p.xxix.

⁷ Ibid p.xxx.



another are governed.”⁸ It is therefore clear that his representation embraces and integrates ethics, jurisprudence, social sciences and political economy.

In this presentation it is his economic doctrines that are the focus of interest. Essential to his economic theories is his theory of human behaviour.

Theory of Human Behaviour

Pufendorf’s doctrine of human behaviour is the foundation that his natural law is built on. He starts out in the very beginning of his work, Definition I, section 1, defining what is meant by man’s voluntary actions.

*“We call voluntary actions those actions placed within the power of man, which depend upon the will, as upon a free cause, in such wise that, without its decision setting forth from the same man’s actions are elicited by previous cognition of the intellect, they would not come to pass; and, indeed, according as they are regarded not in their national condition, but in so far as they come to pass from a decision of the will.”*⁹

Voluntary actions are called human actions, and human actions themselves are called moral actions.

The fundamental element in human behaviour is man’s ability to use reason and to make free choices:

*“The fundamental element in moral action is reason acting with freedom of choice, by which reason the physical motion just described is perceived as produced by a decision of the will. Now this reason, acting with freedom of choice, presupposes or includes that faculty of man in which is placed the capacity to produce or to omit those motions.”*¹⁰

In Definition III he discusses the status of man in respect to himself and towards other men.

*“The natural status of man, since it has no special designation, we shall for the time being call humanity, or human life. It is that condition in which every man whatsoever, by virtue of the very fact that he is a man, is constituted. It also involves the obligation of observing the law of nature toward himself and towards other men, and living with them on terms of social intercourse; as, further, the right of enjoying from any and every man the services due by the law of nature, and of exercising other privileges which universally attend to human life; as also the capacity of acquiring special rights for himself among men.”*¹¹

For Pufendorf, who grew up during the violence and horrors of The Thirty Years war, a society in peace was the best society for people to live in; therefore every man is under obligation to cultivate peace.

⁸ Ibid p.xxviii.

⁹ Ibid. I.i, p. 3.

¹⁰ Ibid.I.i.3, p. 4.

¹¹ Ibid.I.iii.2, p. 8.



“Subordinate to the natural status of man and proceeding immediately from it is peace; for every man whatsoever, just because he is a man, is under obligation to cultivate peace with every other man whatsoever, so long as care for his own safety does not persuade him to breach thereof on account of the wrong done him by others.”¹²

Men’s public and economic status

Men who lives in states has three roles or statuses; *ecclesiastical, political and economic.*

“The first two are called public, because ordinary men, by the authority of a civil society, or by the authority of those men as such by whom that society is governed, or placed in them, and because these tend immediately or direct to the good of society as such. The last is called a private status, because it depends upon each individual’s free will, and tends immediately or directly to the advantage of individuals as such.”¹³

How can man judge his actions?

In Book II, Observation I Pufendorf discusses how man can judge his actions or things that follow from his actions; *“the good and the evil the, the just and the unjust”.*

There are two types of judgements the *right conscience* and the *probable conscience*. The first, right conscience *“is one which declares that a thing which is altogether to be done, is either to be done or left undone, or, in other words, one which knows certainly and indubitably that it is in agreement with divine and human law.”* So here the conclusions are known. The second, probable conscience, *“rest upon an opinion based on reasons, which are not thought to be obviously infallible, but only probable, in such wise that it is not regarded as impossible for the opposite side perhaps to be true, although, on the basis of the present reasons, that is not apparent”.*¹⁴

When an action has been ruled to be in accordance with right conscience it should either be undertaken or should not. The conclusion is clear. If an action falls under probable conscience various rules of conduct is specified.

- (1) When two opinions have been proposed, and although neither is opposed to the law, nevertheless one rest upon firmer reasons, while the other appears to be safer, whichever one you please may be undertaken.
- (2) When two opinions have been proposed, of which the one rests upon less firm reasons, the other seems more safe, the safer is properly preferred before the other.

He then claims that in matter of probable conscience, what is probable can depend on if a man is learned or not.

- (3) In matters that are of little importance, if there be probable arguments on both sides, whichever one you please may be chosen.
- (4) In matters that are of great importance, if probable arguments present themselves on both sides, the safer side is to be preferred.

¹² Ibid.I.iii.5, p. 11.

¹³ Ibid.I.iii.8, p. 15.

¹⁴ Ibid.II.i.5, p. 222.



Man should therefore be careful and cautious when decisions are made. In the case of uncertain proof of a crime, it is better to absolve than to condemn.¹⁵

Pufendorf then continues to present his theory of human behaviour in Observation II and III. In Observation II he finds that since man's actions and his choices have to be governed by law he has **an internal moderator**, who assists him in his decisions to undertake or to leave undone a certain action.

"Since man was to be made by the Creator an animal governed by laws, he had to have a will as an internal moderator of his actions, to wit, in order that, when objects had been placed before him and recognised, he might move himself towards them from an intrinsic principle, without some physical necessity, and might be able to choose that which seemed most suitable to himself".¹⁶

The driving forces in human behaviour

Pufendorf then continues in Observation III with a discussion of the driving forces behind human actions. The first force is self-interest:

"Man has this in common with all living things to whom it has been given to realize their own existence, that he loves himself most, is zealous to protect himself in every way, and strives to acquire the things which seem good to him, and to repel the evil."¹⁷

This force is so strong that any attachment or devotion to other human beings must subserve to it. Furthermore, he rejects the possibility that people can act altruistically. If for example parents prefer to have transferred to themselves the pain which they see their children suffer; *"this was done either because, as the result of an intimate relationship, they regarded the good or evil of others as their own, or else because, by that display of affection or fidelity, they were on the way to acquire some special good for themselves."¹⁸*

But the pursuit of self-interest is not the only driving force behind human action. Man has another inclination:

"Now, in truth, man would have been very little different from beast, nor would he be living a life much more civilized or comfortable than they, were it not that he had some other inclination also implanted by nature, namely that he enjoys living in association with his kind. This is so clear that it does not need to be set forth at length."¹⁹

Man is therefore also a social individual.

Why human beings have this inclination for living in association with their kind Pufendorf explains in the following way:

"The weakness of human beings just born is greater than that of any other animal, and while in the case of others but a few days or months are sufficient to enable them to look out for their own food, in the case of men a number of years is hardly sufficient. Add that

¹⁵ Ibid.II.i.6, p. 223.

¹⁶ Ibid.II.ii.1, p. 226.

¹⁷ Ibid.II.iii.1, p. 233.

¹⁸ Ibid.II.iii.1, p. 233.

¹⁹ Ibid.II.iii.2 p. 233-234.



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the earth has everywhere placed their food before beasts, but what suits man requires generally industry and cultivation. And yet the ability to gather food for the stomach is but a very small part in one's deserving the dignity the name man. Nay, we should not simply be the prey of beasts, but should also rage against one another mutually, in the manner of wild monsters, were it not that nature had altogether bidden us to unite to form a peaceful society."²⁰

How these inclinations are balanced and why individuals unite to form such a society he explains in the following way:

*"However, so that the reasons of those who undertake to deny matters as clear as the foregoing, may not, perchance, move on, it should be known: (1) These two inclinations, by which man loves himself and seeks after society, ought, by the intention of nature, so to be tempered that nothing be lost to the latter through the instrumentality of the former. That is to say nature commended to man self-love, in such a way that he should, nevertheless, commit nothing because of it, which would conflict with his inclination to society, or injure the very nature of society. And when, through the exorbitance of his emotions, he neglects that, and seeks his own advantage together with some hurt to others, there arises whatever disturbance there be in which men conflict with one another. (2) That definite individuals unite to form a definite kind of society comes about either in consequence of a special harmony of dispositions or of other qualities, or else because they imagine that they can obtain some special end better with these persons than with those."*²¹

Man is born as a social animal but man must, however, be educated to be able to act well in this society.

*"And so the sense of that trite saying, 'Man is by nature a social animal,' is this: Man is destined by nature to society with his like, and this is most suitable and useful to him; and man has been endowed with such a disposition that, by cultivation, he can receive a fitness for acting well in that society; nay more, this is perhaps the principal fruit produced by societies, namely, that the recently born, in whom no actual understanding of those things has been implanted by nature, may, within societies, be fashioned into suitable members of the same."*²²

The two basic inclinations of human behaviour, pursuit of self-interest and the societal inclination are in Observation IV transformed by Pufendorf into the two fundamental laws of nature:

*"Now the fundamental laws of nature and those from which all the rest flow are two:
(1) That any one whatsoever should protect his own life and limbs, as far as he can, and save himself and what is his own.*

²⁰ Ibid.II.iii.2, p. 234.

²¹ Ibid.II.iii.4, p. 234.

²² Ibid.II.iii.4. p. 235.



(2) *That he should not disturb human society, or, in other words, that he should not do anything whereby society among men may be less tranquil.*²³

However, these two laws interact with one another to such an extent that they can be combined into one law. *"These laws ought so to conspire, and, as it were, be intertwined with one another, as to coalesce, as it were, into one law, namely, That each should be zealous so to preserve himself, that society among men be not disturbed."*²⁴

Pufendorf then concludes that *"as a result of carefully observing that law, there results peace, which is the status best suited to human nature, and for the establishment and preservation of which the law of nature has primarily been implanted in man."*²⁵ This shows clearly that Pufendorf, in contrast to Hobbes's theory that the natural condition is "a struggle of all against all", considered peace the condition best adapted to human society. It alone is in keeping with natural law.

Written shortly after the Thirty Years' War, in a time of violence, turmoil and unrest where peace was the exception rather than the rule, Pufendorf's writings were truly radical, if not revolutionary. His fundamental element in human behaviour is reason acting with free choice. However, since man is governed by law he has an internal moderator, who helps him to make the right choice. The driving force behind his human behaviour is man's pursuit of self-interest checked by his inclination to live in society with others. The result will be a society in peace.

Pufendorf's theory of human behaviour is the foundation that his natural law builds on. It is therefore also the foundation for his writings on political economy.

Theory of Property

Pufendorf's theory of property is outlined in Definition V. He claims that men divide ownership into three kinds. 1. Eminent domain. 2. Ordinary ownership. 3. Limited ownership: a) direct ownership, b) ownership for purposes of utilization. With eminent domain is meant the power that a state has over the property of citizens for the common good of all. By ordinary ownership is meant private ownership, whereby the private owners have full use. If the usufruct of my property belongs to another or the usufruct of another's property falls to me by way of inheritance it is called limited ownership.²⁶ If the usufruct is with another it is called direct ownership. Ownership for purpose of utilization we have over those goods whose usufruct alone belongs to us, but the direct ownership to someone else.

The things that belong to us we can enjoy according to our free will, and we have the right to keep all other persons away from it. If the state has left certain things to citizens indivisibly, and has assigned ordinary ownership to no one else it is listed and called public property.

²³ Ibid.II.iv.4, p. 242.

²⁴ Ibid.II.iv.4, p. 242.

²⁵ Ibid.II.iv.11, p. 250-251.

²⁶ Ibid.I.v.2, p. 21-22



After a long and detailed discussion of things that can not be under private property, for example the open sea, he goes on to examine the origin of proprietorship and the ways off acquiring it.

Origin of property

His foundation is that it is with the consent and the will of the Deity that man took to himself the proprietorship and domain over things that were inanimate and animate. The things which springs up out of the earth were expressly assigned to man for food. This concession does however have the force of a command but merely the granting of a privilege which any one may use as far as it pleases him. But this privilege gives him only a right of utilisation in a responsible way.

The law of nature has therefore given man the right to harvest the fruits of the earth and the power of appropriating and utilizing things which are necessary for life;

*so it has left the manner of power, and its intension and extension, to the free will and disposition of man, to wit, whether they wish to circumscribe it with definite limits, or, indeed with none at all; likewise, whether they wish any one whatsoever to have power over anything whatsoever, or over merely some definite part of it, or, indeed, to assign to each man whatsoever his own portion, in contentment with which he may be unable to ascribe to himself any right over the rest.*²⁷

The question is then if things should be owned privately or in common. Pufendorf points out that the most ready occasion of war is the simultaneous desire or need of the same thing. Private ownership was therefore also introduced to avoid war and secure peace among men.

*“This, therefore, is what nature has been urging upon us, namely, that in order to preserve peace about those things from whose promiscuous utilization strife was very likely to arise, each man should have some definite portion assigned him, to which no other could assert any just claim. As for the rest of things, utilization of which is limitless, nature left it to the mere free will of man as to what disposition he might see fit to make of them.”*²⁸

And he claims that no state of affairs has ever existed in which all persons had all things in common.

*“For the fables which the poets tell us of the golden age, have either been distorted from the state of man in Paradise, or else hint at the liberality and humanity with which primitive men gave freely to any one who needed it the use of their possessions.”*²⁹

Pufendorf concludes that the sum of all that has been said comes to this, namely, that the first man, with the consent of God, took to himself things when they offered themselves, as it were, to him. When mankind multiplied nature urged individuals to possess separately things to the exclusion of other men. This was done in order to avoid the inconveniences which would arise from common ownership.

²⁷ Ibid.I.v.15, p. 34.

²⁸ Ibid.I.v.15, p. 34.

²⁹ Ibid.I.v.15, p. 35.



Ownership established by pacts.

The actual division which confers ownership to things have been fortified by tacit or expressed pacts of men. Ownership has therefore been established by pacts. It must be understood that this pact has been made for the purpose of avoiding strife thereafter, which would otherwise certainly have arisen.

Theory of Value and Money

What determines price?

The theory of value or price is treated in Definition X. Here he starts out claiming that the most natural foundation of value (or the price) in things (goods or services), that is goods and services, are their ability to exhibit some use in life. "*Hence things which are utterly useless we are accustomed commonly to call worthless.*" However, with the term use of a good or service is not only meant that it truly helps to preserve our existence. A good or service can also contribute some "*pleasure or ornament*". It is therefore clear that the foundation of value or price of a good or service is the utility or delight that men get from it.³⁰

Now we find in nature that those things which our life can not do without are rather accorded with a low value or price, "*because nature presents us with a bounteous supply of them. Therefore it is rarity or scarcity of these goods and services that are effective in this case.*"³¹ Pufendorf had therefore a clear understanding of what later has been called the paradox of value.

In this context human behaviour plays an important role. Luxury consumption, the nobility of the application of a thing, things that are held in common with a few would be estimated to have a high value and goods that are in the households of everybody will be estimated to have a low value. He is therefore also aware what later has been called conspicuous consumption and the snob effect.

Although Pufendorf emphasises that the natural foundation of the price of a good is its ability to exhibit some use, its utility, he also points out that the value or price will be influenced by the cost of labour and the expenses which merchants have to pay. In addition the day of payment, is part of the price, the profit is higher if the price is paid on delivery or if it is paid later. The value is also influenced by the place where the merchandise is produced or where the worth is paid, since the value of money or the interest is not the same everywhere. Furthermore, the rate of exchange for forwarding money is also different in different places.

If the price of a good has not been fixed by law it will be determined by the interchange of what is demanded and what is offered of the good.

It is not only goods that have a price but also services, "in so far as they can bring to others some utility or delectation."³² However, it must be noted that some services "by the laws of God and of man" have been placed outside human bartering; they should therefore not be performed for a price. Examples are religious services and the administration of justice which

³⁰ Ibid.I.x.1, p. 72.

³¹ Ibid.I.x.1, p. 72.

³² Ibid.I.x.2, 65.



should be performed gratis. Furthermore there should not be a price for criminal acts, prostitution or for a man “who sets out to help unjust causes, or to overthrow just ones”.

However some goods and services do not have a price. It could be that “*by the laws of God and of man, some of them have been placed outside human bartering; to such a degree that man ought not to fix a price for them, and ought not in turn to supply or perform these actions for a price*”.³³

What causes the price to change?

What causes the price of a good to change, that is to increase or decrease? It could be due to the large or the small number of buyers, the large or small supply of money or the large and small supply of the merchandise. In modern parlance this is changes in demand and supply. Furthermore the price could change because of a treat of war or of an approaching peace.

The value or price of a useful or delightful service is “*commonly estimated in proportion to the necessity, utility, difficulty, or delicacy of the action, or the multitude or scarcity of the artisans or workmen, large or small number of contractors available, and the abundance or scantiness of their means, and will change if some of these factors change.*”

Market price and money price

Value or price can be divided into *common* or *eminent*. The common price is the one that has been discussed, which is the price of goods and services that enter into exchange, and that is the market price. Before the use of money was introduced there was only this price. Hence business transaction in such societies consisted merely in the simple exchange of things and they were for example not able to let or to hire another’s services except in return for a thing. Therefore civil life “*was rude and simple as long as that was the sole method*” to exchange goods. The inconveniences of exchange led most nations to agreed with one another to set a certain eminent value; “*upon a definite thing, according to which as a standard the worth of other things should be exacted, and in which that same worth should be, as it were, eminently contained; and all that to such a degree that this thing could be used in exchange for any thing at all, and could be conveniently employed for conducting business and fulfilling all kinds of contracts.*”

The most suitable for this purpose were nobler metals, gold, silver and bronze. “*These metals, in quantities of a definite weight, and marked with definite figures, are called coins, upon which the administrators of states, or mutual agreement of the users, set a fixed value.*”

However, the increase and decrease which other goods and services undergo, because of scarcity or abundance, money also does not entirely escape.³⁴In Definition XII Pufendorf discusses if it is in accordance with natural law to take interest or usury. His starting point is contracts whereby for a loan of money a fee is given “*which men are afraid to call usury, because by divine law, profit seeking under that designation is forbidden.*”³⁵ So instead of paying interest they would rather have a contract in which they should make amends for the loss which he who lends money suffers, or for the gain which comes from the loan, that is the amount which it is worth to him. Unless a man stipulate for an unreasonable large sum for the use of his money, especially from the poor, there is nothing repugnant to such a contract. There

³³ Ibid.I.x.2, 65.

³⁴ Ibid.I.x.3, p. 66.

³⁵ Ibid.I.xii.57, p. 143.



is no reason why a person should lend out his money gratis to a second person who seeks therewith his own gain and advantage. Particularly since the first person in the meantime might either have made the same gain, or else certainly was undergoing the risk of losing his principal by the misfortune or dishonesty of the second person.

Pufendorf points out that money are not a sterile thing. With the means of money other things can be secure, from which an immediate gain may be had.

Theory of the Establishments of States

In Observation V Pufendorf makes it clear that the causes of the law of nature alone are not sufficient to preserve the social life of man. Man's inclination that he enjoys living in association with his kind is not enough "to preserve the social life of man". This disposition that man has does not exist merely within the limits of marriages or families it extend also to the establishment of states. Why would several families come together and form a state? The reason is that in such a state they could take care of their common security and enjoy a richer life. In such a state they would also manage their affaires by common counsel of the society under definite laws that decided who should command and who should obey. However, although nature has wished to have such states it is up to men's free choice:

*"Such societies nature has altogether wished to have among men, although it has been left within the free choice of men, and so is to be determined by pacts. Just what individuals are to be united to what society, or who is to be set at their head for governing them."*³⁶

How can the social life of man be preserved?

If each man should be left to his own conscience; *"there would come to be a most abundant crop of wrongs to the rest of men, and all others also would have to seek the protection of their own safety in nothing but violence; the result of this would be everything resounding with warfare between those who repel and those who inflict wrong."*³⁷

To this he added that although the law of nature orders that controversies should be taken before arbitrators we still have a problem. Arbitrators have no competent jurisdictions over the contending parties and therefore the parties can not be forced to follow their recommendation. What will be the result if no one would recognise the authority of any man over him? Many wars are waged, in an almost unbroken series, since man has not been able to unite into one body.

As a consequence it was necessary for the preservation of peace and security among man; *"to have something established whereby it might commonly be rendered more preferable for men to one another their due offices, than by injuries to contract for mutual hurt, as it were."*

Many men have to band together

When no more convenient means could be found the intention of nature would then be *"that men should band together for the sake of bearing mutual aid to one another"*. And there should not only be a few that decided to join in such a society or state, there should be so many

³⁶ Ibid.II. iii. 4. p.235.

³⁷ Ibid.II. v.1. p.273-274.



of them that their combined strength would deter the ones who are on the point of attacking to do them wrong. However, it is also certain that if the ones that have agreed to come together for mutual defence can not agree on how this defence should be carried out, their objective would not be reached. The objective can therefore not be obtained in a better manner than that each individual subject his will to the will of some one man or a council. Whatever this man or council should decide upon in regard to public safety shall have the force of the will of all. Furthermore this man or council should have the ability to use the strength and faculties of the individuals for the common safety.

Two pacts are necessary

For this society or state to reach its objective Pufendorf claims that two pacts are necessary. The first pact is of individuals with individuals and second pact is made with those to whom the care of the common safety is entrusted. The content of these pacts are outlined in Definition XII where he develops an entire system of the law of obligations.

The objective of the first pact is that individuals desire to have their affairs, which are “mutually intertwined, administered by common council”. In this pact the consent of each and all is necessarily required. If someone does not express his consent he is not bound by the majority of votes to join the society, but can remain outside.

Furthermore this pact is either absolute or conditional. In case it is absolute, then an individual absolutely binds himself to adhere to the group, whatever form of administration may finally be decided by the majority. The consent of the majority is then accepted as the consent of all together. So someone that is not pleased with the form of government will be under obligation by the plurality of the votes. Is it conditional then it “*supposes the introduction of a form of control which the individual approves of*”. In this case the consent of individuals is required and if one individual does not signify his consent he is not regarded as a member of society.

In practice it has been found that in almost all societies, which are administered by a number of persons, it has been accepted that “*the votes of the majority have the force of the votes of all together*”. This is even the case if it should happen that the minority opinion “*is more conducive to the common interest and more reputable*”.

The second pact is the one which is made with the one to whom the care of the common safety is entrusted. The one person in command can be a monarch, or in a certain few as in aristocracies or in the whole people as in democracies.

There can be no doubt that Pufendorf supports absolute monarchies, however, he discusses the pro and cons of monarchies, aristocracies and democracies. In particular he discuss the case when an absolute prince should assume a mind absolute hostile towards his subjects. “*A people properly has the right, in case of extreme necessity, namely, when the prince has become an enemy, to defend its safety against him.*”³⁸

The Diffusion of Elementorum Jurisprudentia Universalis

The *Elementorum Jurisprudentia Universalis* earned Pufendorf, as mentioned an enviable reputation. The book almost instantly gained a wide audience. During his lifetime it was

³⁸ Ibid..II.v.23, p. 293.



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published in seven editions. The Haag 1660 was the first one. The second was published in Jena, in the same year, probably due to Professor Weigel. The third Zwickau in 1668, the fourth again in Jena in 1669, the fifth Cambridge in 1672, the sixth in Frankfurt and Jena 1680 and the last in Frankfurt in 1694. All these editions were in Latin.

The only modern translation found is the English by Professor William Abbott Oldfather, at the University of Illinois. This translation was based on the Cambridge edition from 1672. It was published in 1931 by the Clarendon Press Oxford, with a photographic reproduction of the 1672 edition and an introduction by Hans Wehberg, as a publication of the Carnegie Endowment for International Peace. In 1994 parts of it was translated by Professor Michael Seidler, in an selection of texts edited by Craig L. Carr and published by Oxford University Press as *The Political Writings of Samuel Pufendorf*. In 2009 a new translation into English, based on the 1931 translation of William Oldfather, but revised with an introduction by Thomas Behme, was published by the Liberty Fund Inc. Indianapolis.

It should also be mentioned that in 2002 a new Latin edition published as volume 3 of *Samuel Pufendorf Gesammelte Werke* and edited with an introduction in German by Thomas Behme (general editor Professor Wilhelm Schmidt-Biggeman), appeared in Berlin.

At this point there is not much knowledge about the actual use of the book as a university textbook or by professors using the book in preparation of their own lectures. However, in addition to Pufendorf's own use, it is known that John Locke (1632-1704) had the book in his possession, and used it when he lectured on natural law at University of Oxford in the beginning of the 1660's.³⁹ Later in life Locke both spoke highly of Pufendorf and used his natural law works in developing his own theories.

Academic Career

The *Elementorum Jurisprudentiae Universalis* earned, as mentioned, Pufendorf the position as professor of international law at University of Heidelberg.

He took up his position at the end of 1661. The next seven years were very productive. He filled the position with great credit and he drew large audiences of students to his lectures. In his teaching he used the works of Hugo Grotius and his own book.

³⁹ Von Leyden (1954) p. 39 "Locke possessed two copies of the *Elementa*, the edition of 1672, which he had bought together with *De Jure Naturae*, in 1681 and the edition of 1660, which he may have acquired shortly after it was published. There can be little doubt that he consulted this book when he wrote his essays." This is also confirmed by Woolhouse, Roger (2007): *Locke. A Biography*. Cambridge University Press, Cambridge. On page 38 he states that in October and November 1660 Locke was in Pensford. From his correspondence it is clear that Locke was occupied with "what was called the 'law of nature'". "Two important books on the subject had been published during the year. One of these, *De Officiis secundum Naturae Jus*, was by Robert Sharrock, and, ... ,it is very possible that Locke had read it; the other, which he evidently did read, was Samuel Pufendorf's *Elementa Jurisprudentia Universalis*." Michael P. Zuckert (1994) claims, that it was "a book Locke admired". This meant that Locke acquired a good theoretical knowledge of natural law, which included a state of the art exposition of ethics, jurisprudence, politics and political economy, early in his life.



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The 1648 Treaty of Westphalia, which ended the Thirty Years' War, attempted to establish peace in Europe. This treaty had moved power away from the Holy Roman Emperor and towards his territorial princes. This new system created considerable unrest. It was against this background that Pufendorf published, anonymously, his historical and political work *De Statu Imperii Germanici* or *On the Constitution of the German Empire*. This book, which contains a devastating criticism of the condition of public law within the Empire, suggests a path to its regeneration through a European commonwealth of sovereign states based on natural and international law. Although the book was banned by the imperial censor, it was reprinted time and again, translated into several languages, and distributed across all Europe. By 1710, more than hundred thousand copies had been printed in Germany alone. With this book, his reputation was also extended to non-academic circles. He achieved both fame and criticism.

Pufendorf was not satisfied with his first book and he therefore also started to work on an enlarged version. The manuscript of what became his major work in natural law *De Jure Naturae et Gentium* (On the Law of Nature and Nations) was almost completed in Heidelberg in 1669, but not published before 1672 in Lund.

In 1668 Pufendorf accepted an offer to become Professor Primarius in natural law at the newly established University of Lund in Sweden. His stay in Lund turned out to be a new productive period in Pufendorf's life. He had realised that his eight volume work would be too much for the beginning students, and also for lay people that had an interest in the topic. He therefore started immediately on an abridged version. This 'student edition' was published in Lund in 1673 as *De Officio Hominis et Civis* (On the Duty of Man and Citizen). This book hit the market at the right time and became an international bestseller. Pufendorf thereafter turned most of his attention to historical, political and theological studies.

When the University of Lund was closed in 1677 because of the outbreak of a new war between the rivals, Denmark-Norway and Sweden, Pufendorf was offered the combined post of royal historiographer and secretary of state at the king's court in Stockholm. Here, he continued his historical and theological studies. In the years that followed, he introduced empirical studies of the archives, and published more than 30 volumes of historical studies. He is therefore also regarded as a progenitor of nineteenth century historicism. One small book on theology was also published.

In 1688, he accepted an invitation to become historiographer and judicial councillor at the court of Prussia in Berlin. There he continued his works on historical and theological issues. Six volumes of historical studies and one book on theology was the result. He died at the end of 1694 of blood poisoning, which he had contracted on a return journey from Stockholm, where he had been elevated to the nobility as a baron. He is buried in St.Nikolai Church in Berlin.

The Beginning of Modern Political Economy

In his *The Emergence of Political Economy 1662-1776* from 1988, Terrence Hutchison claims that a crucial advance in the development of economics as a science took place when; "the foundations were laid for a more profound, comprehensive, systematic case, derived from a fundamental, philosophic view of the nature of man."



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This paper claims that it is such a foundation that Pufendorf established in his works on natural law. Natural law, or moral philosophy as it later became known as, embraces what today would be ethics, jurisprudence, social sciences and political economy.

His *De jure naturae et gentium*, which is an expanded version of his first work is a comprehensive integrated account of the state of the art of natural law at this time. This work is also a great reference work since it has an almost overwhelming number of quotations not only from Greek and Roman sources, but also from medieval and contemporary literature. There are more than 420 names in the Index of Authors Cited. In addition there are quotes from the Bible, the Koran and numerous law books.

This work has extensive treatments of several topics of political economy. His starting point is his theory of human behaviour. This theory is used to develop his theory of private property. Thereafter he expands this theory to create his account of how private ownership is expanded in a society developing from the gathering of the fruits of the earth, through hunting, through a society where cattle grazed on pasture land, then to a society where land was cultivated and in the end a commercial society enfolded. When such a society grew it brought with it trade, the growth of markets, and creation of prices and finally introduction of money. He therefore also expanded his theory of value and of money, where he comes very close to what today will be called a Marshallian demand and supply analysis. Finally he has a comprehensive treatment of topics of political economy; the foundation of states, the functioning of state councils, the division of state powers and last but not least a theory of taxation. All these theories are seen as an integral part of a totality.

Pufendorf's 'student edition' *De Officio Hominis et Civis* became an international bestseller and the study of natural law became fashionable among academic scholars, students and educated people all over Europe and North America. It was, according to Luig (1972), published in more than 150 editions, in tens of thousands of copies. More than 100 editions are in Latin but it has also been translated into nine European languages; Danish, Dutch, English, French, German, Italian, Russian, Spanish and Swedish. This growing interest also led to more than 40 editions and translations into English, French, German and Italian of his major work *De Jure Naturae et Gentium*. His natural law works in general and his student edition in particular could be found in university or state libraries all over Europe. Natural law or moral philosophy became part of university studies in most Lutheran universities. The basic principles of natural law which embraced ethics, jurisprudence, social sciences and political economy were therefore known to all learned people in the 18th century. Scholars that had an interest in economic problems new that an introduction could be found in Pufendorf's smaller work, and that a more comprehensive account, with references to other sources, could be found in his major work.

The French philosophers Jean Jacques Rousseau (1712-78) and Charles Louis Montesquieu (1689-1755) and countless more had all studied Pufendorf's natural law works. Many of them expressed that they considered these works to be fundamental and necessary for the study of civil law and politics, and that they used his theories when they developed and elaborated their own.

The earlier mentioned Hutchison (1988) claims that the crucial advance in the science of economics occurred at the turn of the seventeenth, and the beginning of the eighteenth, by Pierre de Boisguilbert (1646-1714) in France and Bernard Mandeville (1670-1733) in England. Furthermore, that they all were importantly indebted, directly and indirectly, to Pierre Nicole



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(1625-95) and Jean Domat (1625-96). Nicole claims that it was self-interest that brought people together in both societies and economic life. Therefore, this self-interest could be directed so that it becomes relatively enlightened. Hutcheson claims that Nicole anticipated Smith's famous observation about "the benevolence of the butcher, the brewer, or the baker". Domant expressed similar views. Furthermore he claims that it was their analysis of "the mutuality of a commercial society, based on a realistic, if pessimistic, view of human nature, which laid the foundation of the case for commercial freedom and economic liberalism, developed by Boisguilbert and Mandeville, and elaborated later in Scotland and France." The fact that it is unlikely that they were ignorant of Pufendorf's writing on natural law in general and his theory of human behaviour in particular is not addressed.

Pierre de Boisguilbert (1646-1714), who had studied law at the *École de Droit* (School of Law), became a magistrate in his home city of Rouen. He was appalled at the economic situation in France and wrote numerous letters and memoranda to officials attacking present policies and advocating reforms. Boisguilbert started from the idea of interdependence of men in an exchange economy. "Man cannot survive alone but must engage in exchange, and by mutual help provide reciprocal utility." He emphasized how individuals, who were moved by their own interests, contributed to the general good of society. From this starting point he developed his theories. He wrote about money, taxation and what we today would call macroeconomics and development economics. Hazel Roberts, in her 1935 dissertation, *Boisguilbert: Economist of the Reign of Louis XIV*, claims that Smith, in his *The Wealth of Nations*, built directly on Boisguilbert.

Although it is clear that the students at *École de Droit* must have known and studied Pufendorf and his natural law included political economy is not mentioned, by neither Hutcheson nor Roberts, as a source for Boisguilbert, the Physiocrats or Smith.

Bernard Mandeville was born in Rotterdam and studied philosophy and medicine at University of Leiden. He is best known for his pamphlet *The Grumbling Hive* from 1705, and his major work the poem *The Fable of the Bees: or Private Vices, Public Benefits*, which first appeared in 1714. In this fable, a beehive where all lived virtuously was poor, while a beehive where all lived in vice was rich. This came under severe criticism and it was denounced as immoral. Outrage and condemnation came from the pulpits in many churches across Europe.

Edvard Cannan (1904-1937), discusses Adam Smith's predecessors, stops with Mandeville. He does not mention that Mandeville probably was introduced to Pufendorf when he studied in Leyden.

It was not only Boisguilbert who spoke out against the appalling economic conditions. A group of French intellectuals, who first claimed the name Economists, but later called themselves Physiocrats, also wrote and spoke against the situation. Many historians of economic thought agree that this group composed the first real school of thought in economics. They were the first real economic model builders.

The group's undisputed intellectual leader was Francois Quesnay (1694-1774), court physician to Madame Pompadour and Louis XV. The Physiocratic group has therefore also been identified as a court party, although a radical one. The group included as its most important members Victor Marquis de Mirabeau (1715-1789) and Pierre Samuel Dupont de Nemours (1739-1792). The French minister, Anne Robert Jacques Marguis de Turgot (1727-1781), expressed sympathy for their doctrine, but did not consider himself a member of the close group



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around Quesnay.⁴⁰ The Physiocrats maintained that natural law governed the economy. Individual rights, and the justification of private property based on these rights, was part of this natural law. The laissez-faire principle was the basis for the harmony-of-interest doctrine in which individual pursuit of self-interest by each member of society would lead to the maximum social good. Society must approve human action, effects and tools, and must positively sanction property as a social good. It must recognize individual self-interest as the most respectable motive for social action. In this defence of individual's right to property, in contrast to the traditional notions of the community's right to preserve social harmony, lies the hearth of the Physiocratic ideology, which they summed up in the words: property, liberty, security. Principles that Pufendorf strongly advocated.

Carmichel, Hutcheson and Smith

It is not known what motivated Gershom Carmichael (1679-1734) to introduce *De Officio Hominis et Civis* as a textbook in moral philosophy at University of Glasgow. In 1714, he published a Latin edition (second edition 1724) of the book with his own comments (also in Latin) for the use of students. This edition became part of the curriculum for students at Scottish universities, among them Francis Hutcheson (1694-1746), David Hume (1711-76) and, not least, Adam Smith (1723-90).

Hutcheson was a student of Carmichael and when he died he was called to take over the chair. He recognized that his own writings are strongly influenced by Pufendorf. His *A Short Introduction to Moral Philosophy*, is not just built upon *De Officio Hominis et Civis*; it follows it almost chapter by chapter. A close inspection shows that he in many cases copies Pufendorf. This is particularly noticeable when he discusses the issues of economics and the state. His chapter, 'Concerning the Values of Prices and Goods', is, with some small adjustments taken from Carmichael's *Commentary*, more or less a free translation of Pufendorf. However, Hutcheson disagreed fundamentally with Pufendorf on his theory of human behaviour. Hutcheson saw man's sociability – that is, his passion for altruism and cooperation – as the major wellspring of society. He therefore departed from Pufendorf's view that individual pursuit of self-interest, checked by man's sociability, would lead to the best society. Hutcheson also maintained that human motivation and our conception of right and wrong are innate, not acquired. This contrasted sharply with Pufendorf, who claimed that "no actual understanding of those things has been implanted by nature". In other words, man must be educated in order to act well in society.

Adam Smith (1723-90) was one Hutcheson's students of at the University of Glasgow in 1737 and was greatly influenced by "his never to be forgotten teacher". In his teaching on human behaviour, Hutcheson's departure from the author of the textbook he used cannot have gone unnoticed by his students, particularly one of Smith's standing. In any case, there is good reason to believe that this disagreement on a major philosophical point caused Smith to investigate all of Pufendorf's works on natural law. These books he could find in the university

⁴⁰ Elisabeth Fox-Genovese (1976) in her book *The Origins of Physiocracy. Economic Revolution and Social Order in Eighteenth-Century France* points to Pufendorf as an important source for the Physiocrats.



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library, or, when he moved to take up his Snell Foundation scholarship, at the University of Oxford in the Balliol and Bodleian libraries. Smith also had a copy of the French translation of Pufendorf's major work *De Jure Naturae et Gentium* in his private library. In this work Smith would find the inspiration for his own works.

However, Smith departed from his mentor and did not accept his view on human behaviour, that man, on entering into the world was fully equipped to make moral decisions. Instead, he embraced the ideas of Pufendorf.

Smith refers directly to Pufendorf on several occasions in *Lectures on Jurisprudence*, but only twice in *The Theory of Moral Sentiments*. In *The Wealth of Nations*, we do not find any direct reference to Pufendorf. This does not, however, tell us anything about Pufendorf's influence on Smith. From our discussion, it follows that Smith must have been strongly influenced by Pufendorf.

In his *Theory of Moral Sentiments*, Smith argues, as shown, that "fellow feeling" denotes man's genuine interest in the happiness of his neighbour. Self-interest is not incompatible with sympathy or benevolence. These basic motives live side by side and each has its part to play. This view is in sharp contrast to Hobbes, Mandeville and Hume, who argued that all our sentiments can be deduced from certain refinements of self love. However, this is in accordance with Pufendorf's view of self-interest and sociability: "*But by a sociable attitude we mean an attitude of each man towards every other man, by which each is understood to be bound to the other by kindness, peace, and love and therefore by a mutual obligation.*"

Smith agreed with Hutcheson that man has an ability to reach correct moral decisions. However, he disagreed with his view that man, at birth, was fully equipped to make correct decisions. Man's moral decisions are not informed by any higher principle but by his common feeling of sympathy for others. This principle of sympathy enables man to adjust his actions to a level that is socially acceptable. Again, Smith's views are more congruent with Pufendorf's view that our sociability will tell us how to make the right decisions.

Smith's *Wealth of Nations* contains evidence that he used Pufendorf's theory of human behaviour, that is, his theory of the self-interested social man (who, by satisfying his own needs also satisfies the needs of others) in a commercial society, to construct his own theory of economic growth in such a society. Hont (1986) claims that Smith's contemporaries recognised "that the famous passage on the benevolence of the butcher, the brewer and the baker was a direct comment on the central issues of natural law." Furthermore, a comparison of Pufendorf's theories of property, the nature of the state and taxation with Locke's and Smith's treatment of these issues shows strong similarities. There are, therefore, strong indications that both Locke and Smith built directly on Pufendorf in their writings on political economics and politics.

Conclusion

The publication of Pufendorf's *Elementorum Jursiprudentiae Universalis* 350 years ago started both a remarkable academic career and the development of natural law or moral philosophy into a science that was taught at all protestant universities across Europe.

From this presentation, it is clear that Pufendorf was one of the most eminent scholars in the hundred-year period that began around 1680. Scholars and students in this period who were



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interested in ethics, jurisprudence, social science and economics would probably have a good grasp of his ideas.

It was the diffusion of Pufendorf's natural law or moral philosophy in general and his economic theories of human behaviour and the commercial society in particular, through the popularisation of his *De Officio Hominis et Civis*, which laid the foundation for the progress of economics as a science in the eighteenth century. This was particularly the case for the economic liberalism developed by Nicole, Domat, Boisguilbert, Mandeville and others and elaborated later by the French Physiocrats, the Scots and the English liberalists the most important being Adam Smith.

Pufendorf therefore started the process that developed political economy into a subject of its own within the social sciences.

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MARKET PRICE REACTIONS OF ANALYST REVISIONS AND DETERMINING FACTORS ON THE GERMAN STOCK MARKET

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Abstract

We examine whether analyst recommendations for the German stock market contain new information which, on average, trigger market price adjustments. Our results show that the stock prices react immediately and significantly to changes in the consensus of recommendations. This reaction has a longer lasting effect for downgrades (until event day t_{+5}) than for upgrades (until event day t_{+2}). Moreover, the magnitude of the reaction is -1.54% based on the market-adjusted method and -1.43% for the mean-adjusted method. In terms of percentage reaction, it is larger for downgrades than for upgrades which lead to abnormal returns of only 0.74% and 0.76%, respectively.

Besides the examination of the market reaction the results display that different factors determine the observed abnormal return. The findings show that upgrades to strong buy result in a higher stock price reaction than upgrades to another consensus recommendation level. Furthermore, upgrades with a high consensus recommendation revision have a higher stock price impact than a lower revision. On the other hand, downgrades with a higher delta of the target price revision have a larger negative impact on stock prices than target price revisions with a smaller delta.



1. Introduction

Stock market analysts are an integral part of capital markets and therefore attract a lot of attention, particularly since they're supposed to reduce asymmetric information. Their reports but more especially their recommendations are closely observed by both institutional and individual investors as well as by researchers. It is often hypothesized that analysts can forecast and influence stock price movements by means of their reports and recommendations [1]. For quite a long time, academics have been interested whether analyst recommendations contain useful information that result in market price adjustments. A significant body of research papers records that stock prices react significantly positively to upgrades and significantly negatively to downgrades in the consensus of recommendations [2, 3, 4]. Our research addresses the market price reaction i.e. the stock price movement due to changes in recommendation consensus of analysts and gives evidence on the question whether recommendation revisions do contain new information. Furthermore, we examine the determinants of the market price reaction. Contrary to most existing research focusing mainly on the United States, our contribution provides empirical evidence for Germany. Finally, our sample also captures the effects of the financial crisis after 2007.

This paper is organized as follows. First, an overview of related literature is given. In the subsequent part, we describe our methodology and the selection of the dataset. The features of the selected sample are then outlined in chapter four which provides summary statistics. In section five we present and discuss our results on the market response, while the determinants of abnormal returns are analyzed in chapter six. Finally we conclude our results.

2. Literature Review

Research papers mostly conclude that analyst recommendations contain new information and do in fact add value. An early stream of research mostly concentrated on the information content of recommendations. Most of the findings report a significant market reaction in the wake of consensus revisions. In contrast, the more recent analyses rather concentrate on the determining factors of the abnormal return. Therefore, the comprehensive literature on analyst recommendations can be classified into two main groups that will subsequently be discussed in more detail.

The first group consists of studies that give evidence on the information content of recommendations. The most likely cited paper "Do Brokerage Analysts' Recommendations Have Investment Value?" by Kent L. Womack (1996) [3] examines the price reaction of recommendation changes both at the event time (measured by a three day event window) and in the months before and after the event including a sample of recommendations of fourteen major US brokerage firms in the period of 1989 to 1991. This sample comprises 1.573 recommendation changes made for 822 different companies. Womack documents that during an event window of three days a significant price increase of 3.00% for buy recommendations and a significant price drop of 4.70% on average for sell recommendations can be observed. The mean post event return for buy recommendations hence is modest and short lived whereas it is larger and longer for sell recommendations. The immediate reactions appear to be of permanent nature and imply



that recommendations indeed include valuable information. Therefore, the significant price reactions can be seen as an evidence for market efficiency. Further studies on the information content of recommendations are provided among others by Dimson / Marsh (1984) [5], Elton / Gruber / Grossman (1986) [6], Francis / Soffer (1997) [7], Brav / Lehavy (2003) [8] as well as Michaely / Womack (2003) [9].

The second group of research examines the determining factors of the examined price reaction. The study "The Anatomy of the Performance of Buy and Sell Recommendations" by Scott E. Stickel (1995) [10] investigates the market reaction and their determining factors for a sample of 80 US brokerage firms in the period of 1988 to 1991. In total he analyses 16,957 recommendation changes (8,790 buy and 8,167 sell recommendations) of 1,179 companies. Concerning the information content of the recommendations he observed a mean price increase of 1.16% for an event window of ten days and 3.57% for a longer event window of 125 days as well as a mean price decrease of 1.28% for the short event window and 2.11% for the longer event window. Hence, his findings are in general consistent with those of Womack (1996) [3]. Beyond the market response to recommendations he also tested for the determinants of the price reaction using cross sectional regressions of the abnormal returns. His analysis shows that the strength of recommendation as well as the firm size and the revision of earnings forecasts appear to be permanent. Further studies on the second group of research are provided among others by Krische / Lee (2000) [1], Bradshaw (2002) [11], Brav / Lehavy (2003) [8], Kerl / Walter (2007) [12] and Stickel (2007) [4].

Our paper covers both of the two above mentioned research questions. Moreover combining the two research questions in one paper and working on the German stock market is a fairly new approach.

3. Hypotheses and Methodology

In efficient markets stock prices have to be related to new information. Therefore event studies that capture price changes due to recommendation changes should offer evidence for the semistrong form of market efficiency. If a positive (upgrade) or negative (downgrade) change in analyst recommendations contain new information the price of the respective stock should immediately adjust according to the change. Therefore, the stock price should increase following a recommendation upgrade and decrease following a recommendation downgrade which leads to our first hypothesis:

Hypothesis H1: A recommendation upgrade (downgrade) leads to an immediate increase (decrease) of the stock price.

We test this hypothesis by means of an event study, in which a change in the consensus of the recommendation level indicates an event. As reported, previous research normally finds that upgrades (downgrades) have positive (negative) effects on stock prices. Moreover the findings should be ancillary evidence for the semistrong type of market efficiency and therefore confirm hypothesis H1.

In order to get a further idea of the anatomy of the stock price reaction six parameters are tested using ordinary least square regressions for the hypothesized factors. Apart from company



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specific factors like company size (measured by the market capitalization) and the book-to-market ratio of equity also recommendation specific factors are tested. These factors represent the level of consensus recommendation and the dimension of consensus recommendation revisions as Stickel (2004) [4] proposed. In addition, the level of the mean target price as well as the dimension of the mean target price revision is analyzed as a potential factor.

A second hypothesis relates to company size. In general, less information is available for smaller companies and it is also released less frequently. Thus, the impact of an information release is hypothesized to be more intense for a small company than for bigger companies [13]. Analyst recommendations can therefore be seen as the occurrence of new information:

Hypothesis H2: Small companies display a stronger reaction to revisions in consensus recommendations (expressed by upgrades as well as downgrades).

The size of a company is measured by the market capitalization on the day of the event. The observations in our sample need to be ranked by quartiles and divided into two groups (small and big) represented by the two dummy variables SIZE_LOW for small companies and SIZE_HIGH for big companies. We expect the coefficient of the variable SIZE_LOW to be positive for upgrades and negative for downgrades. The coefficient of the variable SIZE_HIGH is expected to be negative for upgrades and positive for downgrades.

According to Fama and French (1992) [14], average returns are positively related to the book-to-market ratio (B/M). It is argued that value stocks bear higher risk because a high B/M signals distress. Hence, negative information on a company classified as a value stock could worsen its situation. Such bad information could be represented by a recommendation downgrade. Furthermore, as Fama and French (1998) [15] argue, also good information provided by a recommendation upgrade cannot improve the situation of a company in distress. Therefore we hypothesize the following:

Hypothesis H3: Companies classified as value stocks display a stronger reaction to downgrades than companies classified as growth stocks. Conversely, growth stocks display stronger reaction to upgrades than value stocks.

The B/M ratio of a company is measured by the book value of equity divided by the market capitalization on the day of the event. Like in the test for the previous hypothesis the sample is ranked by quartiles and divided into two groups represented by the dummy variables BM_LOW for companies with a low B/M ratio (growth stocks) and BM_HIGH for companies with a high B/M ratio (value stocks), respectively. The coefficient of the variable BM_LOW is expected to be positive for upgrades as well as for downgrades. The coefficient of the variable BM_HIGH is expected to be negative for upgrades as well as for downgrades.

The next two factors focus on the recommendation of the analyst itself. The first factor we look at is the strength of recommendation. By issuing e.g. a buy recommendation, the analyst signals that in his eyes the respective stock is undervalued by the market. Thus a strong buy must be an even stronger signal. As a consequence the information included in this recommendation is richer in content and should lead to a stronger price reaction of the valued stock. This proposition should likewise also be true for a sell and a strong sell recommendation which pro-



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vide the opinion that a stock is overvalued. Therefore, a downgrade to a strong sell should lead to a sharper price reaction relative to a downgrade to a pure sell recommendation.

Hypothesis H4: Upgrades to strong buy have a greater positive price effect than upgrades to buy or an inferior recommendation. Downgrades to strong sell have a larger negative price effect than downgrades to sell or a superior recommendation.

In order to test hypothesis H4 two dummy variables need to be implemented. The variable **STRONGBUY** is set equal to one if the upgrade is to a strong buy and otherwise equal to zero. Moreover, the variable **STRONGSELL** is set equal to one in case of a downgrade to strong sell and otherwise equal to zero. The coefficients of the variable **STRONGBUY** as well as the coefficient of the variable **STRONGSELL** are expected to be positive for upgrades and negative for downgrades.

Furthermore, Stickel (1995) [10] argues that revisions in recommendations that skip a rank have a greater impact on stock prices. The change of recommendation consensus (delta) is therefore calculated by subtracting the previous recommendation consensus from the actual recommendation consensus at a specific date. The delta measures the intensity of a change in the recommendation consensus. A positive delta signals an upgrade of the recommendation consensus whereas a negative delta signals a downgrade of the recommendation consensus. The greater the magnitude of delta the greater the impact on the stock price is expected to be.

Hypothesis H5: Positive (negative) recommendation revisions with a higher delta have a greater positive (negative) impact on stock prices than recommendation revisions with a smaller delta.

To test this hypothesis the whole sample needs to be ranked by quartiles and divided into two groups (low and high) represented by the two dummy variables **DELTA_LOW** for small changes in recommendation consensus and **DELTA_HIGH** for larger changes in recommendation consensus. The coefficient of the variable **DELTA_LOW** is expected to be negative for upgrades as well as for downgrades. The coefficient of the variable **DELTA_HIGH** is expected to be positive for upgrades as well as for downgrades.

In addition to their recommendations analysts often set target prices. These should reflect the fair value of a company and can be seen as an unambiguous statement on the expected value of a company in the analyst's eyes, as Brav and Lehavy (2003) [8] argue. Hence, the target price has a similar function as the level of the recommendation issued by the analyst. A target price above the stock price shows that in the analyst's view the stock is undervalued. The higher (lower) the target price compared to the current price, the greater the valuation difference.

Hypothesis H6: Upgrades with a high target price compared to the current stock price have a greater positive price impact than low target prices. Downgrades with a low target price compared to the current stock price have a greater negative price effect than higher target prices.



In order to test hypothesis H6 the sample has to be ranked by quartiles and divided into two groups (low and high) represented by the dummy variables TARGET_LOW (which stands for a low proportion of the target price compared to the current price) and TARGET_HIGH for high proportions, respectively. According to the hypothesis the coefficient of the variable TARGET_LOW should be negative for upgrades and positive for downgrades. The coefficient of the variable TARGET_HIGH is assumed to be positive for upgrades and negative for downgrades.

Similar to the delta of the recommendation consensus the revision of the target price (delta target price) is calculated by subtracting the previous proportion of target price and current stock price from the actual proportion of target price and current stock price. The delta of the target price measures the strength of a change in target price. A stronger revision in target price should result in a greater price reaction than smaller revisions because of larger prospect changes. This can be applied for positive changes as well as for negative changes in delta.

Hypothesis H7: Positive (negative) target price revisions with a higher delta have a greater positive (negative) impact on stock prices than target price revisions with a smaller delta.

To test this hypothesis the observations in our sample have to be ranked by quartiles and divided into two groups (low and high) represented by the two dummy variables DELTATARGET_LOW for small changes in target price and DELTATARGET_HIGH for large changes in target price. The coefficient of the variable DELTATARGET_LOW is assumed to be negative for upgrades as well as for downgrades. The coefficient of the variable DELTATARGET_HIGH is expected to be positive for up-grades as well as for downgrades.

The primary data examined in this paper are taken from Reuters Knowledge for the period of 1999 to the end of 2008. Like this, the sample captures various economic cycle situations such as the internet bubble around 2000/2001 and the subsequent boom as well as the impacts of the worldwide economic crises in the wake of the subprime crisis in 2007. The sample comprises of recommendations about German companies that are constituents of the DAX, MDAX or SDAX. Consequently the selected market guarantees a representative sample size.

To measure the impact of changes in recommendation consensus an event study according to Wells (2004) [16] is implemented. A change in the recommendation consensus of a certain company in the examined sample identifies an event (t). Four different event windows reaching from day t_1 to t_{+3} (5 days), t_1 to t_{+8} (10 days), t_1 to t_{+18} (20 days) and t_1 to t_{+28} (30 days) are used to assess the temporary as well as the permanent effects. These different event windows should also capture longer lasting effects [3]. The inclusion of the day before the event (t_1) captures the price reactions prior to the event. Such a significant price reaction, taking place before the event, might be due to traders with superior information. In addition to the event and the event window the normal stock return has to be defined. Following MacKinley (1997) [17] and Henderson (1990) [18] we concentrate on the market-adjusted model and the mean-adjusted model. For the use of this article the normal return for the mean-adjusted model is calculated



within an estimation period of 180 trading days prior to the event window. The sample comprises companies either included in the DAX, MDAX or SDAX. Each of the three indices can be seen as a market. Therefore, the affiliation of a company to an index determines the market. Consequently the normal return for the market-adjusted model is calculated using the respective index of a company included in the sample. All abnormal returns are aggregated across all companies and throughout time. Moreover, the various abnormal returns have to be tested statistically. The result of these tests ascertains whether the abnormal returns as well as the aggregated abnormal returns are significantly different from zero. This step is carried out by using a parametric t-test as well as the nonparametric Wilcoxon signed rank test (Rank test). Due to the fact that prior literature [18, 19, 20] states that the parametric t-test is the best choice to test the significance, the results of t-test will have a higher weight. The results of the Wilcoxon signed rank test will serve as additional evidence. In order to analyze the determinants of the abnormal return the anatomy of these returns is analyzed by means of ordinary least square (OLS) regressions including six different factors. In a first step, each factor is regressed separately followed by a multifactor regression including all factors.

4. Sample Statistics

As mentioned above, the primary data is taken from Reuters Knowledge for the period from 1998 to 2008. In order to calculate the abnormal return for the mean adjusted method stock price data of 180 trading days prior to the first event is needed. Therefore, the examination period starts in 1998 and is reduced by one year resulting in a final data period of ten years starting on January 1, 1999 and ending on December 31, 2008.

Using the consensus of recommendations instead of only single analyst recommendations reflects the views of all analysts covering a specific stock. As this figure is reported in a variety of financial websites as well as several financial databases, investors have easy access to this information. The recommendations can be generally expressed with “buy”, “hold” and “sell”. Furthermore, the phrase “strong” is used to intensify the buy or sell recommendation. These expressions are converted by the brokerage houses into a five point scale. For the use of this analysis the recommendation phrases refer to certain numbers on the five point recommendation scale. A “strong buy” refers to a recommendation consensus higher than 1.5, a “buy” has to be equal or below 1.5 but above 2.5, a “hold” has to be equal or lower than 2.5 but better than 3.5, a “sell” has to be equal or worse than 3.5 but better than 4.5 and a “strong sell” has to be lower than 4.5 on the five point scale. Especially the classification of the “strong” recommendations is important because they are used as determining factors for hypothesis H4. Some studies expand their definition of strong sell to sell because these recommendations are rather seldom issued. Due to the size of the gathered sample this step is not necessary.

As some papers had problems with the size of their sample we chose the German market for our analysis because it is one of the largest and most liquid markets in Europe. The companies are selected regarding to their affiliation to the three German main indices DAX, MDAX, and SDAX on the date of December 31, 2008 which leads to a sample of 129 companies. On the company level the main selection criterion is the availability of a recommendation consensus. After controlling for this criterion, the number of companies is reduced to 127



due to missing consensus recommendations for two companies creating 20703 events. Further selection criteria are the availability of a mean target price as well as the share price and the market capitalization. After controlling for these three criteria the number of companies is once again reduced to 126. The reduced number of companies as well as the adjustments of the selection criteria produces a total of 14,471 events. The following table provides an overview of the number of events derived from the examined sample. Nevertheless, the sample leads to a representative group for the examination due to the selected time horizon as well as the selected market.

5. Market Response

In order to analyze the market reaction to revisions in recommendation consensus the data set is split into positive (upgrades) and negative (downgrades) consensus recommendation revisions. Table 1 shows the results for upgrades. It can be observed that there is an abnormal return on the day prior to the event day. With respect to all four statistical tests the picture is rather unclear. One could conclude that the market does not react significantly to upgrades on the day prior to the event day. Additionally, it can be observed that the effects are at least a higher significant from the event day t until event day t_{+2} . The days following event day t_{+2} offer mixed results. The abnormal returns of the remaining event days change their sign rather frequently. Regarding the mean cumulated abnormal return it can be observed that three out of four event windows show highly significant results for both models as well as for both statistical tests. Similar results can be observed for downgrades. Table 2 depicts the results for downgrades in recommendation consensus. Contrary to the upgrades the event day prior to the event day t shows a highly significant market reaction for both models and both statistical test which is an unequivocal sign for insider activity. The abnormal returns for the following four event days are highly significantly different from zero. Event day t_{+4} shows highly significant values except the t -test for the mean-adjusted model. Also the effects on the following day (event day t_{+5}) are significantly different from zero with at least a high significant abnormal return for each model and test. Equal to upgrades the event days thereafter show a mixed picture with both significant and non significant statistics. The same behavior of abnormal returns can be observed which is that abnormal returns start with a rather low magnitude compared to the event day, reach the peak on the event day t and get subsequently lower again. All mean cumulative abnormal returns representing the four event windows show highly significant abnormal returns.



Table 1

Significance test of AR for upgrades

	Market-adjusted model			Mean-adjusted model		
	Mean	t-test	Rank-test	Mean	t-test	Rank-test
t ₋₀₁	0.06%	1.71 *	1.05	0.05%	1.42	0.67
t	0.40%	11.29 ***	11.90 ***	0.43%	11.09 ***	11.47 ***
t ₊₀₁	0.16%	4.09 ***	2.30 **	0.18%	5.13 ***	6.66 ***
t ₊₀₂	0.12%	3.54 ***	2.69 ***	0.10%	3.07 ***	3.02 ***
t ₊₀₃	0.02%	0.42	0.75	0.05%	1.23	2.18 **
t ₊₀₄	-0.14%	-4.15 ***	3.50 ***	-0.07%	-2.18 **	1.76 *
t ₊₀₅	-0.03%	-0.83	1.70 *	0.00%	0.14	0.66
t ₊₀₆	0.11%	3.10 ***	1.07	0.08%	2.56 **	0.96
t ₊₀₇	-0.02%	-0.48	1.21	0.03%	1.04	0.53
t ₊₀₈	-0.13%	-3.92 ***	3.81 ***	-0.09%	-2.75 ***	2.46 **
t ₊₀₉	0.03%	1.00	1.76 *	0.04%	1.24	0.49
t ₊₁₀	0.05%	1.40	1.92 *	0.03%	0.86	1.74 *
t ₊₁₁	-0.11%	-3.09 ***	4.16 ***	-0.03%	-0.93	1.29
t ₊₁₂	-0.11%	-3.16 ***	3.81 ***	-0.05%	-1.56	1.54
t ₊₁₃	0.12%	3.46 ***	1.08	0.11%	3.50 ***	2.29 **
t ₊₁₄	0.06%	1.88 *	1.09	0.05%	1.48	1.75 *
t ₊₁₅	-0.07%	-2.23 **	2.21 **	-0.06%	-2.09 **	1.32
t ₊₁₆	-0.07%	-2.08 **	2.62 ***	-0.06%	-1.82 *	1.38
t ₊₁₇	-0.07%	-2.10 **	2.75 ***	-0.06%	-1.71 *	1.60
t ₊₁₈	0.00%	0.08	0.14	0.00%	0.08	0.58
t ₊₁₉	-0.01%	-0.28	1.85 *	-0.02%	-0.66	1.37
t ₊₂₀	0.01%	0.18	1.07	-0.04%	-1.20	2.24 **
t ₊₂₁	-0.07%	-2.20 **	2.95 ***	-0.05%	-1.58	1.03
t ₊₂₂	-0.09%	-2.65 ***	2.42 **	-0.04%	-1.47	1.13
t ₊₂₃	0.00%	0.07	0.00	0.02%	0.80	0.27
t ₊₂₄	0.02%	0.73	0.40	0.08%	2.65 ***	2.44 **
t ₊₂₅	-0.07%	-2.11 **	3.45 ***	-0.01%	-0.27	1.39
t ₊₂₆	0.03%	0.78	0.60	0.06%	1.92 *	1.90 *
t ₊₂₇	0.07%	1.89 *	0.05	0.07%	1.99 **	0.74
t ₊₂₈	0.02%	0.53	0.60	0.05%	1.44	0.36
CAR(t ₋₀₁ ,t ₊₀₃)	0.75%	10.63 ***	11.02 ***	0.80%	10.31 ***	13.05 ***
CAR(t ₋₀₁ ,t ₊₀₈)	0.54%	6.01 ***	7.51 ***	0.77%	7.56 ***	10.11 ***
CAR(t ₋₀₁ ,t ₊₁₈)	0.37%	3.23 ***	4.38 ***	0.73%	5.17 ***	7.34 ***
CAR(t ₋₀₁ ,t ₊₂₈)	0.27%	1.97 **	3.43 ***	0.85%	4.92 ***	6.93 ***

***, **, * indicate statistical significance at the 1%, 5% and 10% level

Source: own calculations based on data from Reuters Knowledge following Stickel (1995) [10]



Table 2

Significance test of AR for downgrades

	Market-adjusted model			Mean-adjusted model		
	Mean	t-test	Rank-test	Mean	t-test	Rank-test
t ₋₀₁	-0.26%	-6.04 ***	6.06 ***	-0.23%	-5.09 ***	4.47 ***
t	-0.57%	-13.01 ***	15.82 ***	-0.59%	-12.44 ***	14.20 ***
t ₊₀₁	-0.22%	-5.66 ***	9.46 ***	-0.24%	-6.80 ***	7.64 ***
t ₊₀₂	-0.10%	-2.70 ***	4.15 ***	-0.10%	-2.85 ***	3.98 ***
t ₊₀₃	-0.17%	-4.22 ***	5.77 ***	-0.13%	-3.52 ***	4.81 ***
t ₊₀₄	-0.13%	-3.20 ***	5.24 ***	-0.06%	-1.64	3.61 ***
t ₊₀₅	-0.09%	-2.30 ***	2.99 ***	-0.07%	-2.03 ***	2.32 **
t ₊₀₆	0.00%	-0.04	2.23 **	0.00%	0.08	2.37 **
t ₊₀₇	-0.09%	-2.24 ***	3.41 ***	-0.03%	-0.93	1.83 *
t ₊₀₈	-0.17%	-4.83 ***	5.31 ***	-0.09%	-2.77 ***	2.66 ***
t ₊₀₉	-0.06%	-1.69 ***	3.19 ***	-0.01%	-0.28	1.54
t ₊₁₀	0.04%	0.92	1.52	0.05%	1.40	0.61
t ₊₁₁	-0.06%	-1.80 ***	2.91 ***	-0.01%	-0.37	1.71 *
t ₊₁₂	-0.04%	-1.09	2.91 ***	0.03%	0.84	0.13
t ₊₁₃	0.02%	0.55	1.73 *	0.01%	0.41	0.92
t ₊₁₄	0.02%	0.50	0.22	-0.01%	-0.42	0.82
t ₊₁₅	-0.10%	-2.68 ***	4.53 ***	-0.09%	-2.56 ***	4.46 ***
t ₊₁₆	-0.09%	-2.65 ***	3.30 ***	-0.10%	-3.07 ***	3.62 ***
t ₊₁₇	-0.03%	-0.83	1.30	-0.01%	-0.19	0.21
t ₊₁₈	-0.06%	-1.57	2.24 **	-0.03%	-0.92	0.58
t ₊₁₉	-0.11%	-3.13 ***	4.91 ***	-0.08%	-2.55 ***	3.42 ***
t ₊₂₀	0.00%	0.00	0.87	-0.03%	-0.90	1.04
t ₊₂₁	0.00%	-0.06	2.19 **	0.02%	0.59	0.93
t ₊₂₂	-0.12%	-3.38 ***	3.64 ***	-0.08%	-2.55 ***	2.17 **
t ₊₂₃	-0.07%	-1.88 ***	2.30 **	-0.02%	-0.49	0.68
t ₊₂₄	-0.06%	-1.65 ***	3.38 ***	-0.02%	-0.46	1.87 *
t ₊₂₅	-0.02%	-0.43	2.28 **	0.04%	1.16	0.04
t ₊₂₆	-0.03%	-0.89	1.44	0.01%	0.27	0.50
t ₊₂₇	0.02%	0.44	0.71	-0.01%	-0.16	1.44
t ₊₂₈	0.00%	-0.07	1.91 *	0.02%	0.61	0.53
CAR(t ₋₀₁ ,t ₊₀₃)	-1.32%	-15.71 ***	17.33 ***	-1.30%	-14.35 ***	14.61 ***
CAR(t ₋₀₁ ,t ₊₀₈)	-1.80%	-17.40 ***	18.57 ***	-1.55%	-13.47 ***	13.36 ***
CAR(t ₋₀₁ ,t ₊₁₈)	-2.17%	-16.51 ***	16.65 ***	-1.72%	-11.02 ***	10.19 ***
CAR(t ₋₀₁ ,t ₊₂₈)	-2.57%	-16.58 ***	16.70 ***	-1.86%	-9.96 ***	8.93 ***

***, **, * indicate statistical significance at the 1%, 5% and 10% level

Source: own calculations based on data from Reuters Knowledge following Stickel (1995) [10]



Overall, the findings show that stock prices react with a relatively high significance prior to the event day t . We can therefore conclude that some market participants may receive the new information earlier than others and therefore have a time advantage which they can exploit. Another factor leading to this result may be the nature of consensus calculation used in this study. Because the consensus includes several recommendations which are released during the entire day it is likely that the consensus is published towards the end of the day. Obviously individual analyst recommendations are published during the entire day. Market participants following individual analyst recommendations which are also included in the consensus but probably published earlier than the consensus may cause the abnormal return prior the event day. Both upgrades and downgrades show a significant reaction on the event day t , t_{+1} and t_{+2} . Therefore, hypothesis H1 can be confirmed. The results clearly show that upgrades lead to an increase and downgrades to a decrease in stock prices. Beyond that it is necessary to mention that according to the existing literature the effect of downgrades lasts longer than the effect of upgrades.

In order to get a more detailed picture of the market reaction figure 1 and 2 illustrate the accumulation of mean abnormal returns for the individual event days graphically. Figure 1 shows that the most intense market reaction takes place during the first days of the event window respectively from event day t_{-1} till event day t_{+2} . This reaction results in a cumulated mean abnormal return of 0.76% on event day t_{+2} . This is nearly the same for both the market-adjusted and the mean-adjusted model. Although there is a peak with 0.91% on event day t_{+14} within the mean-adjusted model the cumulated mean abnormal return more or less levels out after the intense rise. Moreover it can be observed that there is a difference between the two models beginning around event day t_{+3} . Nevertheless the direction of both models is nearly the same for the following event days.

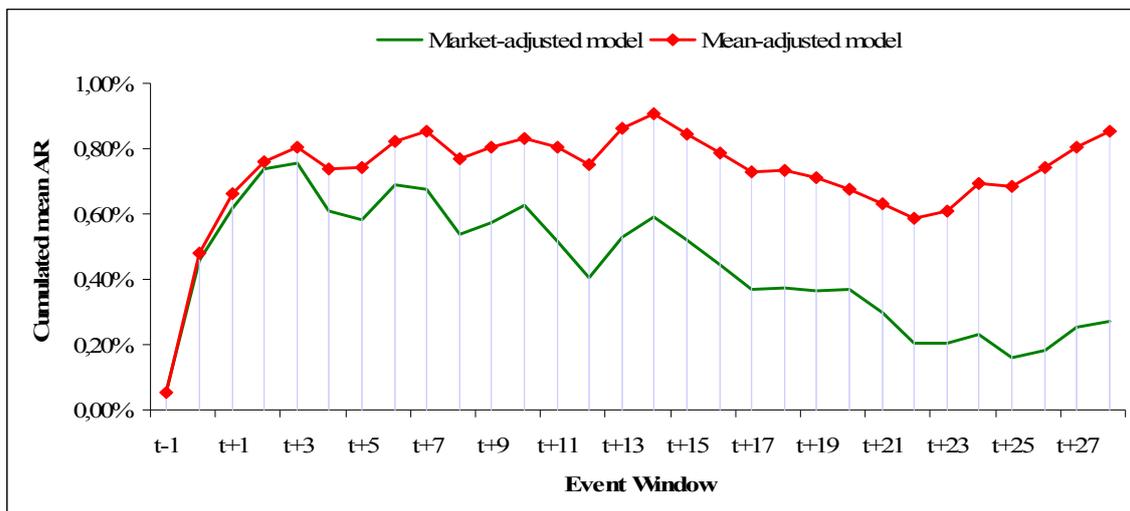


Figure 1. Cumulated mean abnormal return for upgrades

Source: own calculations based on data from Reuters Knowledge following Green (2006) [21], p. 9.



Obviously figure 2 shows that downgrades in recommendation consensus create a negative stock price reaction with a strong and sharp decline during the first days of the event window. Until event day t_{+3} both models nearly proceed parallel. After this event day, the levels of the two models change whereas the market-adjusted model proceeds on a lower level than the mean-adjusted model, but the rather rectified deployment remains. These observations support the result of the significance test displayed in table 1 and 2. The intense reaction in the early event window indicates new information resulting in a positive market reaction for upgrades and a negative market reaction for downgrades even on the day prior to the event. Moreover, the magnitude of the market reaction to downgrades is higher than the reaction to upgrades.

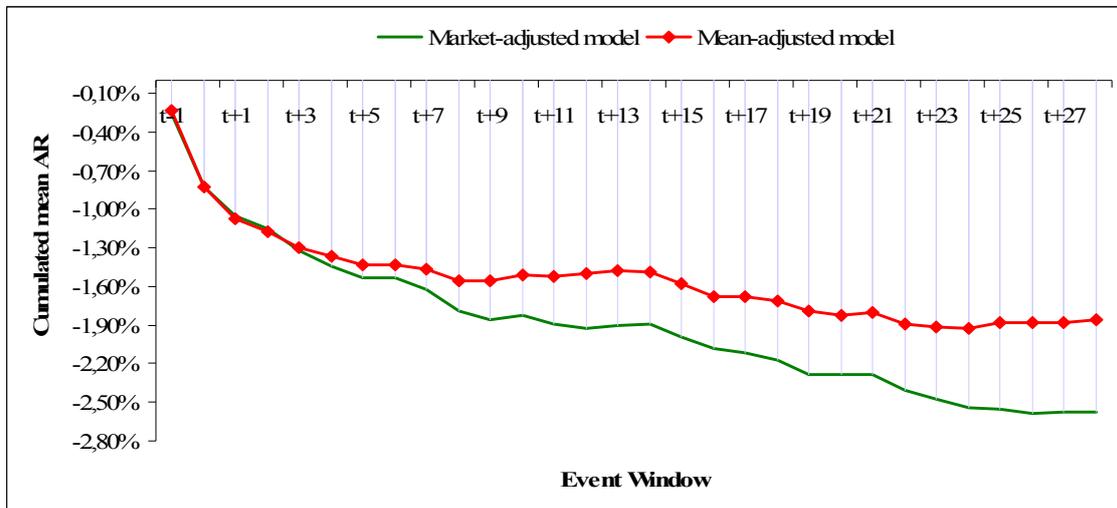


Figure 2. Cumulated mean abnormal return for downgrades

Source: own calculations based on data from Reuters Knowledge following Green (2006) [21], p. 9.

The following two tables summarize and outline the main findings to answer the question which determinants drive the abnormal returns. The signs for the dummy variables can either take the position of a plus (significant coefficient in line with the predicted sign) or a minus (coefficient is either not significant or not in line with the predicted sign). Changing signs within a column are separated using a slash.

Table 3 shows that except for the four event windows in the multi factor model within the mean-adjusted model, the result of the dummy variable `STRONG_BUY` has significant coefficients with the expected sign. Furthermore, the dummy variables `DELTA_LOW` and `DELTA_HIGH` are the first determinants which show significant coefficients in both the market-adjusted and the mean-adjusted model as well as in the distinction between the single and multi factor regressions. It can be observed that the market-adjusted model displays significant values in every case. On the other hand, the mean-adjusted model shows significant coefficients within the single factor model for the first three event windows as well as for the first two event windows within the multi factor model. Therefore, it can be concluded that hypothesis H5 is valid for the first two event windows ($CAR(t_1, t_{+3})$ and $(CAR(t_1, t_{+8}))$ but not for the other ones.



Table 3

Final summary of OLS regressions for upgrades

Upgrades	Market adjusted method		Mean adjusted method	
	Single factor model	Multi factor model	Single factor model	Multi factor model
SIZE_LOW	+/-	---	++++	--/++
SIZE_HIGH	---	---	++++	-/+++
BM_LOW	++++	+/-/++	---	---
BM_HIGH	++++	++++	---	---
STRONG_BUY	++++	++++	++++	---
DELTA_LOW	++++	++++	+++/-	++/-
DELTA_HIGH	++++	++++	+++/-	++/-
TARGET_LOW	---	---	--/++	--/++
TARGET_HIGH	---	---	-/+++	-/+++
DELTATARGET_LOW	---	---	---	---
DELTATARGET_HIGH	---	---	---	---

Source: own calculations

Overall, it can be summarized that upgrades to strong buy have a greater positive price effect than upgrades to buy or an inferior recommendation. Furthermore, positive recommendation revisions (upgrades) with a higher delta have a greater positive impact on stock prices than recommendation revisions with a smaller delta.

Table 4 summarizes the results for downgrades. Compared to all other dummy variables, DELTATARGET_LOW and DELTATARGET_HIGH display a distinct finding. Each event window for both normal return models as well as both regression models shows significant coefficients which are in line with the predicted sign.

Table 4

Final summary of OLS regressions for downgrades

Downgrades	Market adjusted method		Mean adjusted method	
	Single factor model	Multi factor model	Single factor model	Multi factor model
SIZE_LOW	++++	++++	++++	+++/-
SIZE_HIGH	++++	--/++	+++/-	---
BM_LOW	++++	++++	---	---
BM_HIGH	++++	++++	+/-	---
STRONG_SELL	-/+/-	---	---	---
DELTA_LOW	---	---	---	---
DELTA_HIGH	---	---	---	---
TARGET_LOW	++++	--/++	+/-	---
TARGET_HIGH	++++	++++	++/-	++/-
DELTATARGET_LOW	++++	++++	++++	++++
DELTATARGET_HIGH	++++	++++	++++	++++

Source: own calculations



To summarise, it can be stated that only hypothesis H7 can be confirmed for downgrades. Therefore, it can be concluded that negative target price revisions with a higher delta have a greater negative impact on stock prices than target price revisions with a smaller delta.

6. Summary and Conclusion

Our event study documents an immediate and highly significant reaction for both upgrades and downgrades in recommendation consensus. Additionally, it can be observed that the reaction for downgrades lasts longer (until event day t_{+5}) than for upgrades (event day t_{+2}). Consequently, it can be concluded that the revisions in consensus recommendation do contain new information which is consistent with semistrong market efficiency.

The magnitude of the reported market reaction is consistent with previous studies, documenting a significantly asymmetric reaction of a mean cumulated abnormal return of 0.74% (market-adjusted method) or 0.76% (mean adjusted-method) for upgrades within an event window of four days (t_{-1} until t_{+2}) and -1.54% (market-adjusted method) or -1.43% (mean-adjusted method) for downgrades within an event window of seven days (t_{-1} until t_{+5}). Furthermore, the results also indicate that there is a post recommendation drift. However, due to the fact that the significance test does not show a clear picture the post recommendation drift cannot be approved. In addition, it can be argued that the post recommendation drift is triggered by other events taking place in the meantime or in other words that the observed abnormal return has different reasons than the revision in recommendation consensus. Besides the examination of the market reaction the results display that factors like the level of the recommendation, the magnitude of the revision in recommendation as well as the magnitude of the target price revision are determining factors of the observed abnormal return. The findings show that up-grades to strong buy result in a higher stock price reaction than upgrades to another consensus recommendation level. Furthermore, high consensus recommendation revisions have a higher stock price impact than lower revisions. On the other hand, downgrades with a higher delta of the target price revision have a larger negative impact on stock prices than target price revisions with a smaller delta. These findings are partly consistent with the findings of Stickel (1995) [10]. It can be concluded that the German stock market is to some extent inefficient.

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IS VOLATILITY RISING LIKE A PHOENIX? CHARACTERISTICS OF VOLATILITY AS AN ASSET CLASS FOR A GERMAN INVESTOR

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Abstract

In this study we examine in detail the effects of adding volatility as an asset class to a German portfolio. We show statistical characteristics of volatility investments and present the investment opportunities which stand open for a primary institutional investor. Furthermore, we conduct several different scenario analyses, covering Bear, Bull and trendless markets and are even able to quantify the betterment of including volatility as an asset in a portfolio. Our findings suggest that the optimal proportion of a portfolio's capital allocated to volatility investments is not dependent on the market environment, but rather on the asset allocation itself.

1. Introduction and Literature Review

The financial crisis showed that panic reactions on all stock exchanges resulted in the worldwide highest fluctuations on financial markets ever observed. In general volatility shows low expected returns and a high standard deviation. Correlations among assets' returns are critical for the analysis of a portfolio's possible risk and return profile. Studies show that volatility movements are negatively correlated with stock market's returns and hence direct investments in volatility appear to be attractive for investors seeking risk diversification [1].

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This study aims to scrutinize an institutional investor's opportunity to invest directly in volatility. We cover the German market and exhibit volatility investments return characteristics in a basic statistical way as well as in a deeper econometrical context. The paper raises the question to which extends correlations are constant and how they change during scenarios, in order to find out about coherences between volatility and stock or bond market developments. Additionally, we aim to investigate the benefits of volatility in a portfolio context. Investors' willingness to speculate on volatility and to use arbitrage opportunities raised the demand to invest directly easier in this asset [2], e.g. by using variance swaps. [3] Several exchanges create volatility indices to ease investments, in order to grant access to the volatility market for a multiplicity of investors [4].

The majority of studies conducted on volatility cover volatility in general and the U.S. equity market. Hsu et al (2007) [5] analyze the U.S. volatility index VIX and its relationship to the S&P 500. They find a significant difference between realized and implied volatility and a negative correlation between the VIX and the S&P500. This is very interesting, since the VIX is calculated very similar to the VDax-New. Sheikh (1993) [6] examines the time series of implied volatilities and its relationship to returns in the underlying stock finding positive autocorrelation in the time series of implied volatilities and a positive relationship between returns and lagged implied volatility. Canina et al (1993) [7] claim that implied volatility has no explanatory power at all thus to disprove the results concluded above to a certain extent. They do not find any correlation between implied volatility and future return volatility. Dong (2006) [8] analyzes the predictability of the VIX by applying a generalized autoregressive conditional heteroscedastisity model, and finds that this predictability is present and exploitable, at least pre-costs. Aboura et al (1999) [4] conduct the same approach with VIX, the VX1 as well as the VDAX. Henke (2004) [9] finds that including the VDax-New in an otherwise equity only portfolio significantly reduces risk by giving up only a little of the portfolios return. Moreover, he also finds that the VDax-New is mean reverting and stationary and therefore tries to exploit the predictability of this asset class.

There are some constraints to this study. Firstly, data on the V-Dax-New and VDax are available only since 1992, giving a very limited time horizon for the study. We assumed that it is possible for an investor to expose oneself to the development of the VDax-New by entering an accordant future contract. However subject to some constraints, since future contracts on the VDax-New are available only for a short time horizon, forcing long term investors to roll over strategies, leading to higher transaction and trading costs, especially when the VDax-New is far from its mean, either in states of Contango or states of Backwardation. We consider these results as not affecting our study too much, since future contracts have relatively low transaction costs. Another significant constraint on our study is the high volatility of the VDax-New, so that a different choice of a starting point might change the results considerably. We start most of our analyses with the VDax-New at a quite low level of only 13.09 points in January 1992. In general, the outcome of the study is heavily dependent on the development of equity markets.

2. Data Sample and Methodology

Data Sample. The data for this study is provided by Thomson Financial Datastream, covering the period from 1992 - 2008. We analyze the total observation period excluding the



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financial crisis (01/1992 until 11/2008), and divide the time span into a Bull Market (1992 until 2000), as well as a Bear Market (2000 until 2003). We analyze total time horizon based on annual, monthly, weekly and daily data, while focusing on monthly returns. For the descriptive statistics we analyze the total observation period excluding the financial crisis, including only the dot.com bubble. The financial crisis would have had a distorting effect on the analysis. However, in the portfolio analysis we include the total observation period.

The dataset includes four different asset classes. For the German equity market, we choose the Deutsche Aktien Index, also Dax30 to be the most representative index. It covers the 30 biggest and most liquid equities in the German market, representing 85% of the volume of German traded equities. For the government bond investments we choose the Merrill Lynch German All Maturities Government Bond Index (MLGBI), which covers only German government bonds. For the risk-free rate we use a proxy of the German Interbank offered 3 month rate, which we adjust slightly downwards, since we think that the high interest rates in the early 90s based on high inflation rates, are distorting. Thus, we use a weighted average of the mean interest rate of 4% constantly as a risk-free rate.

For volatility we use the VDax-New, which was launched by Deutsche Börse AG on April 20th, 2005 and succeeds the earlier volatility index VDax. The VDax-New Future is traded on the Eurex Exchange in Frankfurt and has a contract value of 1.000 Euro per index. It aims to quantify the risk in the German stock market by conducting a strongly ruled based approach. The implied volatility of Eurex traded options on the Dax30 with a maturity of 2 to 24 months is included in its calculations. Because of that, the VDax-New represents the market's expectation on the fluctuations in the Dax30. The index is calculated on the basis of effectively traded options, which makes it perfectly possible to use it as an underlying for several different products.

Methodology. For all our calculations, we assume no taxes, no transaction costs, as well as the possibility to calculate the optimal portfolio with variances, correlations and returns. We assume that investors do not face personal constraints or social responsibilities and thus only invest according to risk (variance) and return patterns. Returns are assumed to be normally distributed and the risk-free rate is available. Investors plan to hold assets for exactly one period. Under these constraints, the Sharpe-Ratio will be maximized. We calculate the expected return, mean, and median and explore the return's standard deviations, skewness and kurtosis. The normal distribution of the returns will be tested with the Jarque-Bera-Test. Correlations are evaluated by observing correlations within a one year, as well as a three year time frame, especially with regards to the diversification effect. While the one year time frame gives more accurate results, reflecting changes in correlations faster, the three year time frame is smoother, giving a better impression of the long term correlations of the assets.

In order to find out, which weight we shall give volatility as an asset class in a portfolio, we measure the exact advantage. DeFusco et al (2004) [10] state that adding a new asset to a portfolio always makes sense when the Sharpe Ratio of the new asset is bigger than the Sharpe Ratio of the existing portfolio multiplied with the correlation (*corr*) of returns between the new asset and the existing portfolio. However, this shortcut is only valid if one takes into account asset classes' long term expected risk and return characteristics:

$$\frac{E(R_{new}) - r_f}{\sigma_{new}} \geq \frac{E(R_p) - r_f}{\sigma_p} \times corr(R_{new}, R_p) \quad (1)$$



While the value above the fraction bar might be negative due to the deduction of the risk free rate(r_f) from the long-term expected return ($E(R_{new})$) of zero from an investment in volatility, the high standard deviation (σ) pushes the value towards zero. On the right side of the inequality, however, for a stock investment we expect the fraction to be positive in the long term, while the correlation is expected to be negative, which leads to a negative total. Therefore, we expect the left side to be bigger, or at least less negative, which is in favor of an investment in volatility compared to a pure stock portfolio.

3. Empirical Results

3.1. Total Observation Period

Mean, Median, Standard Deviation - By looking at the development of the VDax-New we see, that it peaks during crash scenarios and reaches low values during booming markets. In contrast the Dax30 encounters the major crash between 2000 and 2003. Bond returns represented by the MLGBI remained constantly high with low volatility.

Annual Results: Considering the mean annual return, the Dax30 and the MLGBI with 8.86% and 6.50%, respectively, can be considered to be representative for the long term. At the same time the mean annual return on an investment in volatility is stated to be 3.86%, which has to be interpreted with caution as volatility as an asset class is mean reverting and thus its long term expected return therefore approaches zero. However, due to the high volatility in investments in the VDax-New, an observation of only sixteen years may easily result in the outcome observed. The same constraints are valid for the median. The bond index has an extraordinarily low standard deviation of 5.54%, explaining why investments in this asset class are very interesting when it comes to considerations of risk-adjusted returns.

Table 1

Overview on the asset classes' monthly performance over the total observation period, excluding the financial crisis

Return's	VDax-New	Dax30	MLGBI
Mean	0.0010	0.0082	0.0053
Median	-0.0047	0.0169	0.0048
Standard Deviation	0.1685	0.0616	0.0122
Skewness	0.4623	-0.8355	1.0545
Excess Kurtosis	0.3871	1.7928	3.4765
Jarque-Bera	7.9955	47.8026	131.5853
Correlation Matrix	VDax-New	Dax30	MLGBI
VDax-New	1		
Dax30	-0.59186146	1	
ML Gov Bonds	0.1449319	-0.21952468	1

Monthly results: The mean of the VDax-New return now significantly approaches zero, reaching a monthly value of only 0.10% or annualized 1.15%. Same is true when analyzing the



median. The standard deviation for the VDax-New amounts to 16.85% p.m. (annualized close to 60%), which is representative for the VDax-New's volatility. The mean and the median of the Dax monthly returns reach values of 0.82% p.m. and 1.69% p.m. MLGBI return characteristics point out the predominance of bonds when the portfolio is optimized with regards to the Sharpe Ratio. Table 1 summarizes the most important facts of the monthly performance during the observation period, excluding the financial crisis.

Skewness, Kurtosis, Normal Distribution. On an annual basis, the skewness of the VDax-New return is negative, amounting to -0.376, while at the same time the Dax's skewness amounts to -1.289. In contrast, the MLGBI is positively skewed by 0.393, showing up preferable distribution characteristics. But looking at monthly data the VDax-New changes its negative skew to a positive one of 0.462. As weekly and daily data support the monthly results, we believe, that the VDax-New returns in general can be considered to be positively skewed. One can comprehend these findings by the fact that collapsing stock markets lead to up shooting values among volatility indices, while price appreciations normally take place only with moderate speed and so lead to a frequent but soft reduction in volatility. The skew for equities remain negative on monthly, weekly and daily data. The values of the MLGBI are again positive, amounting to 1.054. While these results are preferable for a risk adverse investor, they are not supported by the weekly and daily data.

Analysing kurtosis we find that, on an annual basis, the of VDax-New return distribution exhibits negative excess kurtosis amounting to -0.785, which is different for monthly data with a slightly positive excess kurtosis of 0.387. Same is true for the value of weekly and daily return data, which leads us to the conclusion that the VDax-New return distribution is subject to a slim positive excess kurtosis. For the DAX on annual, monthly, weekly and daily basis a positive excess kurtosis can be found, which is why we conclude that a portfolio consisting volatility as an asset as well as a stock index is subject to a smaller excess kurtosis as a portfolio including the stock index only. Again, these results suggest that for the risk adverse investor a combination of VDax-New and Dax30 is preferable to a pure Dax30 investment, since extreme outliers are not as common in a distribution with a smaller excess kurtosis. For the bond market we find ambiguous results and we cannot give any recommendations. When it comes to the sole analysis of kurtosis and skewness, we point out that that volatility as an asset increases the risk and return characteristics' of a portfolio, which includes stocks and bonds.

Testing for normal distribution with the Jarque-Bera-Test (monthly data) we cannot reject the null hypothesis, that the returns of the VDax-New are normally distributed, at a 1% significance level. At a 5% significance level we can do so, with a critical value of 5.99%. Thus we cannot give a valid statement on the normal distribution of the VDax-New, which is remarkable if one takes into consideration the fact that financial market's returns normally are not normally distributed at all, as also can be seen for the equities and bonds in our analysis. We conclude that returns among investments in volatility tend to be more likely normally distributed than returns of investments in the classic asset classes [11]².

² It is very important to mention that these results give no information on whether or not investments in volatility are preferable due to its distribution characteristics. The outcome of the Jarque-Bera-Test remains free of judgement. However, we conclude that the classical ways to conduct Mean Variance-Analyses or portfolio optimizations can be applied on investment in volatility, too.



3.2. Scenario Analysis

Bull Market. Depicting all details about returns, standard deviations, Sharpe-Ratio and correlations in Table 2 we highlight the most important differences between the asset classes. In this period the Dax30 exhibits high average returns with an average of more than 16% p.a.. Standard deviation of less than 20% is rather low compared to other equity markets. These features result in a quite high Sharpe Ratio, amounting to 0.6171. Even if in this period negative returns might be expected for the VDax-New, this cannot be observed, with an average annual return of 5.63% and an annualized standard deviation of 56.13%. While these features result in a positive Sharpe Ratio of 0.0291, it is obvious that volatility itself as a stand alone asset still cannot be considered to be an attractive investment. Investments in bonds results have higher average annual returns than volatility and a considerably lower standard deviation, pointing out a Sharpe Ratio of 0.8647. Investments in government bonds are highly attractive during this appreciation in the stock market. The negative correlation during the bull market between the Dax30 and the VDax-New reaches a quite low value of only -0.4426. Thus, even during strongly advancing stock markets investments in volatility seem to be complimentary. The same is true for the correlations between Dax30 and the MLGBI. The correlation between volatility and bonds reaches a low value of 0.0173, thus adding the VDax-New to a Portfolio still leads to favorable diversification, even if the portfolio comprises of a large portion of bonds.

Table 2

Overview on the asset classes' performance during Bull and Bear Markets

	Bull Market			Bear Market		
	VDax-New	Dax30	MLGBI	VDax-New	Dax30	MLGBI
Return p.m.	0.0046	0.0125	0.0065	0.0104	-0.0199	0.0055
Return p.a.	0.0563	0.1607	0.0812	0.1324	-0.2149	0.0674
Variance	0.0263	0.0032	0.0002	0.0412	0.0089	0.0001
SD p.m.	0.1620	0.0569	0.0137	0.2030	0.0942	0.0110
SD p.a.	0.5613	0.1957	0.0476	0.7033	0.3262	0.0382
Sharpe Ratio	0.0291	0.61714	0.8647	0.1313	-0.7813	0.7165
Correlation Matrix	VDax-New	Dax30	MLGBI	VDax-New	Dax30	MLGBI
VDax-New	1			1		
Dax30	-0.4426	1		-0.8637	1	
MLGBI	0.0173	-0.0930	1	0.5560	-0.4879	1

Bear Market. Turning our interest to a typical Bear Market [12], we find the devastating development of the equity market during this period with highly negative returns. The VDax-New, in comparison, reaches an average annualized return of more than 13%, though also a high standard deviation. The immense diversification benefit of investments in volatility is observable: When stock markets plummet, volatility shoots up. The investments in government bonds again would have been a good choice, though interestingly performing slightly worse than during the Bull Market. The correlation between returns in the stock market and returns in the VDax-New reaches the tremendous negative value of -0.8637. This points out how perfectly



investments in volatility serve as a hedge. Correlation between equities' returns and bonds' returns become highly negative [13]. Interestingly, correlations between returns in the VDax-New and in the government bond market increase significantly. We conclude that investments in bonds and investments in volatility can provide protection against losses in equity investments hand in hand, by moving up together during plummeting stock markets. However, during times of rising stock markets, the correlation vanishes, pointing out that these two asset classes do not decrease together, but rather move totally independent from each other.

3.3. Quartile Analysis

We apply a conditional analysis as it was applied by Ranaldo et al (2004)[11] by investigating the single months on their own, sorting the returns of all assets in dependence to the equity market's returns observed in the 201 months of the total observation period. Subsequently we created four quartiles of 50 months each. The first quartile, called *Bull Market*, consequently includes the different assets' returns during the most positive 50 months in equity returns. The second quartile (51-100) is called *Normal Bull Market* followed by the third quartile (101-150), the *Normal Bear Market*. The fourth quartile (151 – 200), the *Bear Market*, includes the three asset classes' returns observed during the 51 worst months in equity markets. Table 3 summarizes the mean returns of the three asset classes observed in the mentioned quartiles.

Table 3

Overview on the asset classes' returns, ranked in accordance to equity market returns, observed during total observation period

	DAX	VDax-New	MLGBI
Analysis of 1st Return Quartile			
Mean Return in Bull Market p.m.	7.40%	-6.55%	0.27%
Mean Return in Bull Market p.a.	135.55%	-55.64%	3.29%
Analysis of 2nd Return Quartile			
Mean Return in Normal-Bull Market p.m.	3.22%	-9.34%	0.38%
Mean Return in Normal-Bull Market p.a.	46.20%	-69.18%	4.65%
Analysis of 3rd Return Quartile			
Mean Return in Normal-Bear Market p.m.	-0.45%	-0.17%	0.82%
Mean Return in Normal-Bear Market p.a.	-5.22%	-1.97%	10.29%
Analysis of 4th Return Quartile			
Mean Return in Bear Market p.m.	-7.85%	18.67%	0.68%
Mean Return in Bear Market p.a.	-62.49%	680.28%	8.50%

Starting with the *Bull Market*, we observe, that the average monthly return reaches a value of 7.40%. Throughout these huge upward moves in equity, volatility tends to decrease. The fact that the VDax-New descends by 6.55% p.m. confirms our claim that these two asset classes are negatively correlated. Unlike in the scenario analysis, this analysis also points out that during bull markets government bonds tend to underperform, amounting to only 3.29%.



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During the *Normal Bull Market* German equities increase and the VDax-New once more performs negatively. Again the negative correlation among equities and volatility and equity and bonds is underlined. In the *Normal Bear Market* there is a modest devaluation in equity investments. Here the diversification benefit of the VDax-New cannot be observed apparently, with the index performing slightly negative, therefore not compensating for any losses in the equity market. Bonds in contrast experience their best market environment. These numbers are suggestive of the fact that while the VDax-New's protection to moderate losses in equities is limited, government bonds do a great job during these scenarios. During the *Bear Market*, the Dax30 are generating losses and protection can be provided partially by investments in the VDax-New. Since volatility steps up rapidly when markets panic, the VDax-New increases significantly by 18.67% p.m., annualizing to almost 700%. This clarifies the massive upward potential and the adjunctive prospective for a portfolio's protection of the VDax-New during crash scenarios.

We find that government bonds due to their low volatility, high long term returns, consequently tremendous Sharpe Ratios and still negative correlation with equity investments provide better long term protection to stock portfolios. At the same time volatility as an asset class is necessary to be included in small portions in order to generate protection against massive stock market crashes, reducing negative outliers and thus the portfolio's excess kurtosis. We even suggest that including volatility as an asset in a portfolio could be the answer to flawed risk measure techniques like the Value at Risk, which fail to take into consideration the leptokurtic distribution in stock markets' returns.

3.4. Correlation Analysis

We investigate correlations in the time flow by taking into consideration the mentioned one and three year time frames. As one can see in Figure 1, the returns of the VDax-New and of the MLGBI are negatively correlated against the returns of the Dax30 for almost the whole observation period. A few exceptions can be observed among the correlations of the returns of the Dax and the MLGBI in the years before 2000 and therefore during a great Bull Market.

Gantenbein et al (2005)[13] describe these for investor desirable results as "Decoupling" and point out that returns among bonds and stocks are stronger negatively correlated during periods of stock market downturns, and less negative or even slightly positive correlated during stock market upturns. This can also be observed after the period of the crash in the year 2000, when correlations between stock's and bond's returns as well as between stock's and volatility's return start to become significantly negative. Correlations were calculated within a three-year time frame, which means that the effect of decoupling is observed deferred. Correlations among the Dax's and the VDax-New's returns behave in a very similar way as correlations among the returns of the Dax and the MLGBI, but even stronger negatively correlated. Correlation oscillates around zero for bonds and volatility. The great exception is the time following the crash in the year 2000, when correlations increased significantly. We find that combinations of investments in stocks, volatility, and bonds make sense. While the latter two are negatively correlated to the former one, they are not highly correlated against each other.

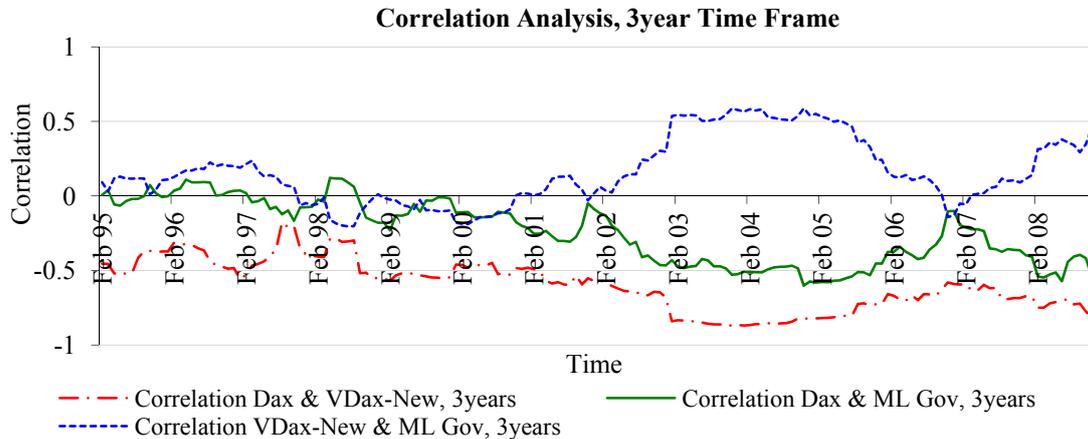


Figure 1. Development of the asset classes' return correlations within a time frame of three years observed during the total observation period.

Observing correlations within a shorter time frame of only one year, results are less smoothed but therefore less deferred. In general, the analysis for the one-year time frame leads to the same conclusions as the former, but we are able to observe the correlations reactions on the crashes more accurate. The most significant observations are the sharp increase in negative correlations among bonds and stocks, as well as the sharp increase of negative correlations among volatility and stocks, which both are observed during the time after the stock market crash at the end of the last century. Finally, even the time period between 1994 and 1996, when stock markets also were not generating positive returns, exhibits a highly negative correlation among. We observe the increase in correlations during the discussed periods among volatility's and bond's returns, which turns positive during these times. This can also be observed for the period of the financial crisis.

4. Volatility in Portfolio Management

Based on our observations we analyze different combinations of the asset classes [14] in Table 4. For all periods we compare Sharpe-Optimal-Portfolios (i), Minimum-Variance-Portfolio (ii) as well as Maximum-Return-Portfolios (iii) of different opportunity sets. We analyze the asset combinations 1. stocks (D), volatility (VD) and 2. stocks (D), bonds (B),volatility (VD).

Total Observation Period. As presented in Table 4 we find for the first portfolio that in the *Sharpe Optimal Portfolio* an investor should hold 75% D and 25% VD, because of the considerably lower standard deviation. The *Maximum Return Portfolio* of all assets includes only one asset: volatility. But it generates the unattractive Sharpe-Ratio of only 0.0858. The *Minimum Variance Portfolio* is composed mainly of bonds, but includes 1% VD. For the *Tangential Portfolio* the investment in volatility increases to 2%, with equity increasing to 11%



and bonds reducing. The main benefit of adding volatility as an asset to a portfolio comes from stock market diversification. It therefore must not be forgotten, that a 2% fraction of total capital invested in volatility, compared to an 11% portion out of total capital invested in equity (volatility/equity-ratio of 20%), is quite a lot. When looking at the top 100 asset allocations out of more than a possible 5000, we find among almost all an investment in volatility. Moreover, this portion ranges up to a not insignificant 6%. Anyhow, the portion of volatility as an investment increases as soon as the portion of an investment in stocks increases.

Table 4

Optimal Portfolio Allocation (based on monthly data)

Portfolios including Equity and Volatility						Portfolios including Equity, Bonds and Volatility					
	D	VD	Exp. Std. Dev	Exp. Return	Sharpe-Ratio	D	B	VD	Exp. Std. Dev.	Exp. Return	Sharpe-Ratio
Total Observation Period, 01/1992 – 10/2008											
i	75%	25%	13.79%	7.32%	0.2408	11%	87%	2%	3.83%	6.71%	0.7073
ii	78%	22%	13.61%	7.24%	0.2381	9%	90%	1%	3.82%	6.68%	0.7019
iii	0%	100%	61.73%	9.30%	0.0858	0%	0%	100%	61.73%	9.30%	0.0858
Total Observation Period, 01/1992 – 01/2008 (excluding the Financial Crisis)											
i	85%	15%	14.76%	8.91%	0.3325	14%	84%	2%	3.91%	6.97%	0.7601
ii	78%	22%	13.75%	8.27%	0.3105	10%	88%	2%	3.82%	6.82%	0.7402
iii	100%	0%	21.35%	10.28%	0.2940	100%	0%	0%	21.35%	10.28%	0.2940
Bull Market; 01/1992 – 01/2001											
i	86%	14%	15.09%	14.61%	0.7031	18%	79%	3%	4.68%	9.47%	1.1701
ii	81%	19%	14.67%	14.09%	0.6877	10%	88%	2%	4.40%	8.86%	1.1059
iii	100%	0%	19.57%	16.07%	0.6171	100%	0%	0%	19.57%	16.07%	0.6171
Bear Market, 01/2001 – 10/2003											
i	0%	100%	70.33%	13.24%	0.1313	0%	100%	0%	3.83%	6.74%	0.7165
ii	82%	18%	29.60%	-15.24%	-0.6500	6%	94%	0%	3.15%	5.05%	0.3329
iii	0%	100%	70.33%	13.24%	0.1313	0%	100%	0%	3.83%	6.74%	0.7165

Own calculation with data from Thomson Financial Datastream.

Bull Market. The *Tangential Portfolio* for the first opportunity set includes only 14% VD, realizing an expected return of 14.61%. The recommended weight of an investment in the VDax-New in a portfolio of stocks and volatility is lower in an upward market than during the total observation period. The *Tangential Portfolio* includes 3% VD, leading to the highest Sharpe-Ratio of 1.170. This ratio is achieved by an expected return of 9.48% and a standard deviation of 4.68%. Thus, the portion of an investment in the VD during upward equity markets, compared to the total observation period did not decline, but rather increase. Since during rising



equity markets the *Sharpe Optimal Portfolio* includes a larger portion of an investment in equity, the portion of investment in VD increases. The *Minimum Variance Portfolio* contains 2% VD, reaching an expected return of 8.86%. In the top 100 asset allocations almost all include a reasonable portion of the VDax-New, which we find depends again on the share of equity in the portfolio. Again the share of investments in bonds is quite large but we find that the recommended proportion of investments in volatility cannot be considered to be insignificant at all. We find that the *Sharpe Optimal Portfolio*, as well as the *Minimum Variance Portfolio*, including volatility as an asset class, achieves higher returns with a lower standard deviation than accordant portfolios which do not include volatility.

Bear Market. A comparison of an equity only investor and ones benefit of adding volatility makes no sense during the Bear Market. As can be seen in Table 4, the recommended asset allocation again would try to keep the equity share at zero and invest all the funds into the appreciating asset class of volatility. In Bear Markets, investments should be mainly into bonds, especially with regards to the *Sharpe Optimal Portfolio*. The *Minimum Variance Portfolio* includes only a very small proportion of equity, even if volatility is included. Focusing on the top two percentiles of all available portfolios, we find that although the Market Portfolio consists of a 100% bond investment, other very good portfolios include significant proportions of volatility. The increased share of volatility in the portfolio takes place despite the very small share of equity. We find that firstly, during a significant downturn in the equity market, government bonds are preferable to equity and secondly, adding volatility to the portfolio does not compensate for losses generated by increasing the equity share. E.g., if the investor is able to anticipate a significant downturn in the equity market and also is able to reduce ones stock position to zero, should one prefer selling their stocks and buy government bonds, instead of adding volatility to their portfolio. However, these two options are subject the constraints of impossible perfect market timing and the difficulty of reducing equity positions to zero. Additionally, investors have to take into account trading costs.

5. Conclusion

Investments in volatility enjoy increasing popularity, because accordant portfolios seem to be able to generate superior returns. We find that investments in volatility as a standalone asset class are highly unattractive because of high volatility and long term expected returns near zero. Still we find that the diversification benefit of volatility provides a great downside protection. First evidence is provided by the outcome of the analyzed distribution characteristics and furthermore in almost all other observations. Skewness and kurtosis both point out that a portfolio consisting of both, stocks and volatility is preferable to a portfolio containing stocks only. Including volatility as an asset in a portfolio leads to a reduction of excess kurtosis. Thus by reducing outliers on the negative side, it improves the usefulness of risk measures like the VaR. As volatility as an asset class shows a better normal distribution than bonds and stocks, we conducted a valid Mean Variance-Analysis. The correlation analysis signals almost always high negative correlation and a favorable decoupling of the asset classes volatility and stocks. Especially, in crash scenarios the downside protection appears to be in favor for the investor. In a portfolio context the weight of volatility included, does not depend on the development of



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equity markets. It depends on the proportion of equity investment and should ideally amount up to 20% of equity. This finding is of particular importance to investors, who are constrained to keep a large fraction of total funds invested in equity: A small proportion of an investment in volatility tends to generate a superior diversification benefit compared to the diversification benefit generated by a similar small proportion of funds invested in the government bond market. While the later in general displays more favorable investment characteristics, the former on the one hand, is more volatile in itself, and on the other hand, also stronger negatively correlated to the equity market.

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RATIONALITY VS EMOTIONS: WHAT MOTIVATES INDIVIDUAL INVESTORS MAKE A CHOICE?

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Introduction

According to traditional financial theory, the market and its participants are rational „wealth maximizers” and emotions as well as other extraneous factors do not influence people when it comes to make a choice. However, the real market shows many examples where emotions and psychology influence people's decisions, causing them to behave in unpredictable or irrational ways. These anomalies prompted academics to look to cognitive psychology to account for the irrational and illogical behaviors that modern finance had failed to explain.

The real world setting implies dealing with an abundant complexity of financial markets, but modeling human behavior itself presents even greater challenge. Very often it is impossible to explain sudden changes of financial markets by rational behavior of its participants, which is based on information about the business, its changes, forecasts, etc. In the context of today's global crises this tendency is even more evident, that is why behavioral financial models are very important scientific research objects.

The *major problem* is to examine whether rationality is still of prime importance in making investment decisions and discuss the possibilities of influence of psychological factors on the financial market participants (investors): how and when they make decisions, make choices and cooperate? How do their understood values could influence market outcomes? These questions lead to one of the central puzzles: do investors make their decisions only rationally evaluating pros and cons? What could be additional motivation in decision making? Authors of the paper assume, that psychology of investment decisions are equally important and make an attempt to check this hypothesis through theoretical analyses of commonly used strategies of individuals' behavior modeling.

The *aim of this paper* – based on study, analysis and generalization of the economic literature and scientific publications on the nature of rational and irrational behavior of



financial market participants to identify and to discuss factors that can influence the investors decision making.

The following research tasks have been set up to achieve the aim:

- to identify and to describe the factors that could influence the individual investor's behavior;
- to investigate the reaction of the market participants on appearance of new information and to assess if their reaction was rational or irrational. Authors in their pilot research will focus on such irrational factors as the role of emotions and intuition, social interaction and peer influence to the investors' decision making.

In the paper authors will make an attempt to generalize the results of investigation and to make the assumptions about what influences the choice of individual investors: rationality, mindless selective pressures or psychological biases.

1. Basic Biases of Investment Decisions: Theoretical Approach

It's hard not to think of the stock market as a person: it has moods that can turn from irritable to euphoric; it can also react hastily one day and make amends the next. But can psychology really help us understand financial markets? Does it provide us with hands-on stock picking strategies? Behavioral finance theorists suggest that it can and provide a couple key concepts (biases) that contribute to irrational financial decision making: Anchoring, Mental accounting, Confirmation and Hindsight Bias, Gambler's Fallacy, Herd Behavior, Overconfidence, Overreaction and Availability Bias, Prospect Theory. Let's briefly describe each of them.

The concept of anchoring draws on the tendency to attach or „anchor” our thoughts to a reference point - even though it may have no logical relevance to the decision. Although it may seem an unlikely phenomenon, anchoring is fairly prevalent in situations where people are dealing with concepts that are new and novel.

Anchoring can also be a source of frustration in the financial world, as investors base their decisions on irrelevant figures and statistics. For example, some investors invest in the stocks of companies that have fallen considerably in a very short amount of time. In this case, the investor is anchoring on a recent „high” that the stock has achieved and consequently believes that the drop in price provides an opportunity to buy the stock at a discount. While, it is true that the fickleness of the overall market can cause some stocks to drop substantially in value, allowing investors to take advantage of this short- term volatility. However, stocks quite often also decline in value due to changes in their underlying fundamentals.

Mental accounting refers to the tendency for people to separate their money into different accounts based on a variety of subjective criteria, like the source of the money and intent for each account. According to the theory, individuals assign different functions to each asset group, which has an often irrational and detrimental effect on their consumption decisions and other behaviors.

Another aspect of mental accounting is that people also treat money differently depending on its source. For example, people tend to spend a lot more „found” money, such as tax returns and work bonuses and gifts, compared to a similar amount of money that is normally expected, such as from their paychecks. This represents another instance of how mental accounting can



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cause illogical use of money. Logically speaking, money should be interchangeable, regardless of its origin. Treating money differently because it comes from a different source violates that logical premise. Where the money came from should not be a factor in how much of it you spend – regardless of the money's source, spending it will represent a drop in your overall wealth.

The mental accounting bias also enters into investing. For example, some investors divide their investments between a safe investment portfolio and a speculative portfolio in order to prevent the negative returns that speculative investments may have from affecting the entire portfolio. The problem with such a practice is that despite all the work and money that the investor spends to separate the portfolio, his net wealth will be no different than if he had held one larger portfolio.

It's often said that "seeing is believing". While this is often the case, in certain situations what you perceive is not necessarily a true representation of reality. In investing, the Confirmation bias suggests that an investor would be more likely to look for information that supports his or her original idea about an investment rather than seek out information that contradicts it. As a result, this bias can often result in faulty decision making because one-sided information tends to skew an investor's frame of reference, leaving them with an incomplete picture of the situation. Consider, for example, an investor that hears about a hot stock from an unverified source and is intrigued by the potential returns. That investor might choose to research the stock in order to „prove” its touted potential is real. What ends up happening is that the investor finds all sorts of green flags about the investment (such as growing cash flow or a low debt/equity ratio), while glossing over financially disastrous red flags, such as loss of critical customers or dwindling markets.

Another common perception bias is hindsight bias, which tends to occur in situations where a person believes (after the fact) that the onset of some past event was predictable and completely obvious, whereas in fact, the event could not have been reasonably predicted. Many events seem obvious in hindsight. Psychologists attribute hindsight bias to our innate need to find order in the world by creating explanations that allow us to believe that events are predictable. While this sense of curiosity is useful in many cases (take science, for example), finding erroneous links between the cause and effect of an event may result in incorrect oversimplifications.

When it comes to probability, a lack of understanding can lead to incorrect assumptions and predictions about the onset of events. One of these incorrect assumptions is called the gambler's fallacy. In the gambler's fallacy, an individual erroneously believes that the onset of a certain random event is less likely to happen following an event or a series of events. This line of thinking is incorrect because past events do not change the probability that certain events will occur in the future. It's not hard to imagine that under certain circumstances, investors or traders can easily fall prey to the gambler's fallacy. For example, some investors believe that they should liquidate a position after it has gone up in a series of subsequent trading sessions because they don't believe that the position is likely to continue going up. Conversely, other investors might hold on to a stock that has fallen in multiple sessions because they view further declines as „improbable”. Just because a stock has gone up on six consecutive trading sessions does not mean that it is less likely to go up on during the next session.

There are a couple of reasons why herd (crowd) behavior happens. The first is the social pressure of conformity, because most people are very sociable and have a natural desire to be



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accepted by a group, rather than be branded as an outcast, so, following the group is an ideal way to become its member. The second reason is the common rationale that it's unlikely that such a large group could be wrong. After all, even if you are convinced that a particular idea or course of action is irrational or incorrect, you might still follow the herd, believing they know something that you don't. This is especially prevalent in situations in which an individual has very little experience.

Investors that employ a herd-mentality investment strategy constantly buy and sell their investment assets in pursuit of the newest and hottest investment trends. For example, if a herd investor hears that internet stocks are the best investments right now, he will free up his investment capital and then dump it on internet stocks. If biotech stocks are all the rage six months later, he'll probably move his money again, perhaps before he has even experienced significant appreciation in his internet investments. But frequent buying and selling incurs a substantial amount of transaction costs, which can eat away at available profits. Furthermore, it's extremely difficult to time trades correctly to ensure that you are entering your position right when the trend is starting. By the time a herd investor knows about the newest trend, most other investors have already taken advantage of this news, and the strategy's wealth-maximizing potential has probably already peaked. This means that many herd-following investors will probably be entering into the game too late and are likely to lose money as those at the front of the pack move on to other strategies.

In terms of investing, overconfidence (i.e., overestimating or exaggerating one's ability to successfully perform a particular task) can be detrimental to your stock-picking ability in the long run. Odean (1998) in the study "Volume, Volatility, Price, and Profit When All Traders Are Above Average" comes to the conclusion that overconfident investors generally conduct more trades than their less-confident counterparts. According to Odean, overconfident investors/traders tend to believe they are better than others at choosing the best stocks and best times to enter/exit a position. Unfortunately, Odean also found that traders that conducted the most trades tended, on average, to receive significantly lower yields than the market.

One consequence of having emotion in the stock market is the overreaction toward new information. According to market efficiency, new information should more or less be reflected instantly in a security's price. For example, good news should raise a business' share price accordingly, and that gain in share price should not decline if no new information has been released since. In De Bondt and Thaler (1985) study "Does the Market Overreact" the returns on the New York Stock Exchange were examined by separating the best 35 performing stocks into a "winners portfolio" and the worst 35 performing stocks were then added to a "losers portfolio" and tracking each portfolio's performance against a representative market index for three years. Surprisingly, it was found that the losers portfolio consistently beat the market index, while the winners portfolio consistently underperformed. So what happened? In both the winners and losers portfolios, investors essentially overreacted. In the case of loser stocks, investors overreacted to bad news, driving the stocks' share prices down disproportionately. After some time, investors realized that their pessimism was not entirely justified, and these losers began rebounding as investors came to the conclusion that the stock was underpriced. The exact opposite is true with the winners portfolio: investors eventually realized that their exuberance wasn't totally justified.



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According to the availability bias, people tend to heavily weight their decisions toward more recent information, making any new opinion biased toward that latest news. For example, suppose you see a car accident along a stretch of road that you regularly drive to work and probably you'll begin driving extra cautiously for the next week or so. Although the road might be no more dangerous than it has ever been, seeing the accident causes you to overreact, but you'll be back to your old driving habits by the following week.

In 1979, Kahneman and Tversky presented an idea called prospect theory, which contends that people value gains and losses differently, and, as such, will base decisions on perceived gains rather than perceived losses. Thus, if a person were given two equal choices, one expressed in terms of possible gains and the other in possible losses, people would choose the former - even when they achieve the same economic end result. According to prospect theory, losses have more emotional impact than an equivalent amount of gains. Kahneman and Tversky conducted a series of studies in which subjects answered questions that involved making judgments between two monetary decisions that involved prospective losses and gains. It was found that losses are weighted more heavily than an equivalent amount of gains.

The prospect theory can be used to explain quite a few illogical financial behaviors. For example, there are people who do not wish to put their money in the bank to earn interest or who refuse to work overtime because they don't want to pay more taxes. Although these people would benefit financially from the additional after-tax income, prospect theory suggests that the benefit (or utility gained) from the extra money is not enough to overcome the feelings of loss incurred by paying taxes.

Prospect theory also explains the occurrence of the disposition effect, which is the tendency for investors to hold on to losing stocks for too long and sell winning stocks too soon. The most logical course of action would be to hold on to winning stocks in order to further gains and to sell losing stocks in order to prevent escalating losses. When it comes to selling winning stocks prematurely, consider Kahneman and Tversky's study in which people were willing to settle for a lower guaranteed gain of \$500 compared to choosing a riskier option that either yields a gain of \$1,000 or \$0. This explains why investors realize the gains of winning stocks too soon: in each situation, both the subjects in the study and investors seek to cash in on the amount of gains that have already been guaranteed. This represents typical risk-averse behavior.

Above presented biases were checked in numerous more recent empirical researches by Campbell, Sharpe (2007), Lim (2006), Laibson, Madrian (2008), Cen, Wei, Zhang (2009), Glaser, Weber (2007), Oberlechner, Osler (2008), Pouget, Villeneuve (2009), Biais, Weber (2008), Decourt, Accorsi, Neto (2007), Johnsson, Lindblom, Platan (2002) and others. In the next section we briefly review the methodology used and results gained by these and other authors.

2. From Theory to Practice: Methodological Aspects and Results of Current Researches

Campbell, Sharpe (2007) analyzed whether expert consensus forecasts of monthly economic releases from Money Market Services surveys from 1990-2006 have a tendency to be



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systematically biased toward the value of previous months' data releases. Researchers found significant evidence for the anchoring hypothesis; consensus forecasts are biased towards the values of previous months' data releases, which in some cases results in sizable predictable forecast errors. Then, to investigate whether the market participants anticipate the bias, the response of interest rates to economic news was examined. According to the results, bond yields react only to the residual, or unpredictable, component of the surprise and not to the expected piece of the forecast error apparently induced by anchoring. This suggests market participants anticipate the anchoring bias embedded in expert forecasts.

Recent studies have argued that prospect theory (Kahneman and Tversky 1979) and mental accounting (Thaler 1985) provide possible explanations for investor behavior (e.g., the disposition effect) and for outstanding asset pricing anomalies such as the equity premium puzzle, the value premium, and the momentum effect. However, there are relatively few empirical tests on whether and to what extent mental accounting affects investor decisions. Lim (2006) tests the effects of mental accounting on investor trading decisions, which provides more direct insight into whether the joint implications of mental accounting and prospect theory provide plausible explanations for capital market anomalies. As an alternative testing approach, the probability of multiple stock sales is modeled under the assumption that the selling decision of each stock is independent. Under this assumption, the probability of multiple stock sales increases with the number of winners and with the number of losers in the portfolio, and the impact of an additional winner (loser) on the probability of multiple stock sales increases with the investor's propensity to sell a winner (loser). Studies have documented that investors' propensity to sell a winner is greater than their propensity to sell a loser (the disposition effect). If so, the impact of an additional winner on the probability of multiple stock sales should be larger than that of an additional loser if selling decisions are independent. However, the result shows that the effect of an additional loser on the probability of multiple stock sales is much larger than the effect of an additional winner, opposite of what is expected when sales decisions are independent and investors show disposition effect. Thus, this evidence suggests that selling decisions of losers are more positively correlated than selling decisions of winners.

Revealed preferences are tastes that rationalize an economic agent's observed actions. Normative preferences represent the agent's actual interests. It sometimes makes sense to assume that revealed preferences are identical to normative preferences. Laibson, Madrian (2008) found many cases where this assumption is violated and identified five factors that increase the likelihood of a disparity between revealed preferences and normative preferences: passive choice, complexity, limited personal experience, third-party marketing, and intertemporal choice. In the study "How are Preferences Revealed?" the researchers also discuss six approaches that jointly contribute to the identification of normative preferences: structural estimation, active decisions, asymptotic choice, aggregated revealed preferences, reported preferences, and informed preferences. Each of these approaches uses consumer behavior to infer some property of normative preferences without equating revealed and normative preferences. These issues with evidence from savings and investment outcomes are illustrated in the mentioned study in which Harvard staff were asked to allocate a hypothetical portfolio of \$100,000 among equity and bond funds. Two randomly assigned treatment groups were selected: one treatment group given statutory prospectuses and second group given securities proposed "summary prospectus". A result should be disclosure that is layered in a



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manner that allows each mutual fund investor – and each intermediary, analyst and other user – to quickly find and use the information that he or she needs and wants”. Both groups had the same investment horizon (either 1 month or 1 year).

According to Cen, Wei, Zhang (2009) Anchoring describes the fact that in forming numerical estimates of uncertain quantities, adjustments in assessments away from an arbitrary initial value are often insufficient. Researchers show that this cognitive bias has significant economic consequences for the efficiency of financial markets and found that analysts make optimistic (pessimistic) forecasts when a firm’s forecast earnings per share (FEPS) is lower (higher) than the industry median. Further, firms with FEPS greater (lower) than the industry median experience abnormally high (low) future stock returns, particularly around subsequent earnings announcement dates. Finally, split firms experience greater positive forecast revisions, larger forecast errors, and larger negative earnings surprises after a stock split compared to which did not split their stocks, especially for firms with a low FEPS relative to the industry median.

Glaser and Weber (2007) use theoretical models which predict that overconfident investors trade more than rational investors. We directly test this hypothesis by correlating individual overconfidence scores with several measures of trading volume of individual investors. Approximately 3,000 online broker investors were asked to answer an internet questionnaire which was designed to measure various facets of overconfidence (miscalibration, volatility estimates, better than average effect). The measures of trading volume were calculated by the trades of 215 individual investors who answered the questionnaire. According to researchers’ results investors who think that they are above average in terms of investment skills or past performance (but who did not have above average performance in the past) trade more. Measures of miscalibration are, contrary to theory, unrelated to measures of trading volume. This result is striking as theoretical models that incorporate overconfident investors mainly motivate this assumption by the calibration literature and model overconfidence as underestimation of the variance of signals. In connection with other recent findings, it is concluded that the usual way of motivating and modeling overconfidence which is mainly based on the calibration literature has to be treated with caution. Moreover, our way of empirically evaluating behavioral finance models - the correlation of economic and psychological variables and the combination of psychometric measures of judgment biases (such as overconfidence scores) and field data - seems to be a promising way to better understand which psychological phenomena actually drive economic behavior.

Oberlechner and Osler (2008) showed that people tend to be overconfident in two dimensions: they underestimate uncertainty and overestimate their own abilities. Researchers studied overconfidence because this specific departure from rationality has been the subject of substantial research showing that overconfidence could lead to severe distortions in asset prices and provided evidence that foreign exchange dealers are likewise overconfident in both dimensions. Further, the widespread human tendency towards overconfidence is one of the strongest findings in psychology. This evidence provides an objective basis for identifying a specific departure of potential economic significance, thus addressing a common concern: To study dealers was chosen because they set the price in almost every currency transaction and they speculate with substantial resources at their disposal. This is relevant to a second key justification for assuming efficient markets: the market will achieve a rational equilibrium so



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long as the marginal agent is rational. If currency dealers are overconfident there may not be a rational marginal agent. Indeed overconfidence among dealers could bring price distortions even if they are not marginal agents. Oberlechner and Osler's concerned 400-plus North American traders with average trading experience of 12 years. Their modal rank is Senior Trader at a top dealing bank. These traders have had plenty of opportunities to learn their way out of biases and they face powerful financial incentives to do so. The results indicate that currency dealers exhibit the same clear, strong tendencies to overconfidence documented among other groups.

Pouget and Villeneuve (2009) propose a theory of financial markets that incorporates one of these information processing biases, namely the confirmation bias. A person prone to the confirmation bias tends to interpret new evidence as consistent with his or her prior views. In our framework, this bias creates differences of opinion between rational arbitrageurs and biased traders over the interpretation of public information. These differences of opinion in turn motivate trading. Arbitrageurs take opposite positions with respect to biased traders and thus have a stabilizing impact on prices. However, in our model, transaction costs limit the use of arbitrage strategies. As a result, the views of both arbitrageurs and biased traders are factored in asset prices.

Decourt, Accorsi, Neto (2007) implemented investment simulations with Brazilian MBA students and physicians, indicating that the process of making investment decisions is based on the „Behavioral Economics” theory which uses the fundamental aspects of the Prospect Theory developed by Kahneman and Tversky (1979). The following effects have been tested and identified using an investment simulator over the Internet: 1) endowment, that makes the participants not to sell the received assets, no matter if better investment options are available; 2) the disposition effect, that refers to the pattern that people avoid realizing paper losses and seek to realize gains; 3) fear of regret, that makes the participant invest in rejected assets in the past that had good valorization and 4) framing, that modifies the investment decision depending on the perspective given to the problem.

Johnsson, Lindblom, Platan (2002) research on how private as well as institutional investors have changed their investment behavior as a consequence of the speculative bubble during the period from fall 1998 to March 2000. The purpose was to establish what factors lie behind the speculative bubble and further investigate whether the investment objectives and factors influencing investment decision-making are different today than during the speculative bubble. Behavioral finance provides the fundamental theoretical framework for this thesis. The empirical research was based on a questionnaire directed towards active private investors in Sweden, more specifically members of the Aktiespararna Association, and institutional investors mainly resident in southern Sweden. The results obtained suggest that the behavior of market participants during the speculative bubble was to some extent irrational and that the composition of investments has changed as a consequence of the speculative bubble. The results show that the fall in market values after March 2000 was mainly due to earnings and profitability of companies, or a lack thereof. Overconfidence is another concept in behavioral finance that seems to have influenced investment decision-making strongly during the speculative bubble and may help explain the observed irrational behavior of investors. This thesis supports, to some extent, the assumption that even though a majority of the investors during 1998 to 2000 seem to have realized the seriousness of the speculative bubble they



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nevertheless continued their investment activities knowing that the risk for a collapse was imminent.

The main idea underlying mental accounting is that decision-makers tend to separate the different types of gambles they face into separate accounts, and then apply prospect theoretic decisions rules to each account by ignoring possible interaction between the accounts. Mental accounts can be isolated not only by content, but also in respect to time (Goldberg, von Nitsch, 2001) Mental accounting can result in “good money being thrown after bad money” by a continuous operation of non-profitable ventures in the hope that recovery will somehow take place. It may also explain framing which is beneficial to investors with imperfect self-control.

Shefrin reports that the reluctance to realize losses constitutes a self-control problem; he describes professional traders who are very prone to let their losses “ride”. It is the control of losses that constitutes the essential problem. The traders’ problem was to exhibit sufficient self-control to close accounts at a loss even though they were clearly aware that riding losses was not rational. Self-control is also exhibited in the dividends puzzle, mentioned in the previous section. For example, old investors, especially retirees who finance their living expenditures from their portfolios, worry about spending their wealth too quickly, thereby outliving their assets. They fear a loss of self-control, where the urge for immediate gratification can lead them to overspend (Shefrin, 2000).

Heuristics may help to explain why the market sometimes acts in an irrational manner, which is opposite to the model of perfectly informed markets. The interpretation of new information may require heuristic decision-making rules, which might later have to be reconsidered. The whole market can initially react in the wrong way.

Herd behavior is a form of heuristics where individuals are led to conform to the majority of individuals, present in the decision-making environment, by following their decisions. However, herd behavior, as with other heuristics, may lead people astray when they follow e.g. a general market trend. In experimental settings people often tend to show excessive confidence about their own judgments.

People are influenced by their social environment and they often feel pressure to conform. Fashion is a mild form of herd behavior while an example of the strong form is fads that constitute speculative bubbles and crashes. Herd behavior may be the most generally recognized observation on financial markets in a psychological context.

The social influence has an immense power on individual judgment. When people are confronted with the judgment of a large group of people, they tend to change their “wrong” answers. They simply think that all the other people could not be wrong. They are reacting to the information that a large group of people had reached a judgment different from theirs. This is a rational behavior. In everyday living we have learned that when a large group of people is unanimous in its judgments they are certainly right (Shiller, 2000).

It seems plausible to make a distinction between voluntary and enforced herd behavior. Many players on financial markets might think that a currency or equity is not correctly priced, but they refrain nevertheless from a contrary financial exposure. These people simply feel that it is not worthwhile to combat the herd. This is an example of enforced herd behavior. They follow the herd – not voluntarily, but to avoid being trampled and are therefore enforced into following the herd (Fromlet, 2001).



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Even completely rational people can participate in herd behavior when they take into account the judgments of others, and even if they know that everyone else is behaving in a herdlike manner. The behavior, although individually rational, produces group behavior that is irrational and causes fluctuations in the market. The “noise trading” theory stems from the fact that investors with a short time horizon are influencing the stock prices more than the long-term investors are. Investors, with no access to inside information, irrationally act on noise as if it were information that would give them an edge (Thaler, 1993).

Another important variable to herding is the word of mouth. People generally trust friends, relatives and working colleagues more than they do the media. The conventional media, printed information, televisions, and radio have a profound capability for spreading ideas, but their ability to generate active behaviors is still limited. Talking to other people and other kinds of interpersonal communication are among the most important social connections humans have. It is therefore likely that news about a buying opportunity will rapidly spread. In Shiller and Pound study private investors were asked what first drew their attention to a company they recently had invested in. Only six percent of the respondents specified newspapers and periodicals. Even if people read a lot, their attention and actions appear to be more stimulated by interpersonal communications.

The key behavioral factor and perhaps the most robust finding in the psychology of judgment needed to understand market anomalies is overconfidence. People tend to exaggerate their talents and underestimate the likelihood of bad outcomes over which they have no control.

The greater confidence a person has in himself, the more risk there is of overconfidence. This applies, in particular, to areas where people are not well-informed – self-confidence usually bears no relation to their actual knowledge (Goldberg, von Nitsch, 2001). A surprising aspect is the relationship between overconfidence and competence. March and Shapira showed that managers overestimate the probability of success in particular when they think of themselves as experts.

James Montier (2006) in his study „Behaving Badly” found that 74% of professional fund managers surveyed believed that they had delivered above-average job performance. Of the remaining 26% surveyed, the majority viewed themselves as average. Incredibly, almost 100% of the survey group believed that their job performance was average or better. Clearly, only 50% of the sample can be above average, suggesting the irrationally high level of Overconfidence these fund managers exhibited. Of course, overconfidence (i.e., overestimating or exaggerating one’s ability to successfully perform a particular task) is not a trait that applies only to fund managers. Consider the number of times that you’ve participated in a competition or contest with the attitude that you have what it takes to win - regardless of the number of competitors or the fact that there can only be one winner. Price reactions to information are crucial for market behavior. Recent empirical research in finance (Barberis, et al., 1998) has uncovered two families of pervasive regularities: underreaction of stock prices to news such as earnings announcements, and overreaction of stock prices to a series of good or bad news. The underreaction evidence shows that over horizons of one to twelve months, security prices under react to news. As a consequence, news is incorporated only slowly into prices, which tend to exhibit positive autocorrelations over these horizons. A related way to make this point is to say that current good news has power in predicting positive returns in the future. The overreaction evidence shows that over longer horizons of three to five years, security prices overreact to



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consistent patterns of news pointing in the same direction. That is, securities that have had a long record of good news tend to become overpriced and have low average returns afterwards. The underreaction evidence in particular is consistent with conservatism. Conservatism refers to a phenomenon according to which people mistrust new data and give too much weight to prior probabilities of events in a given situation.

Kahneman and Tversky sought to provide a Prospect theory that describes how decision-makers actually behave when confronted with choices under uncertainty. The value function shows the sharp asymmetry between the values that people put on gains and losses. This asymmetry is called loss aversion. Empirical tests indicate that losses are weighted about twice as heavily as gains – losing \$1 is about twice as painful as the pleasure of gaining \$1 (Kahneman and Tversky, 1991). This can also be expressed as the phenomena in which people will tend to gamble in losses, i.e. investors will tend to hold on to losing positions in the hope that prices will eventually recover. This is due to the fact that the utility function under the prospect theory is upward sloping for wealth levels under each individual's reference point. Prospect theory also predicts that investors will be risk averse in gains.

It is important to mention that researches usually analyzed one or a couple of presented in the first part biases. Of course, this allows to evaluate different aspects of its manifestations and make assumptions regarding the investors' behavior in one or another situation. The methodological approach of different authors is very similar: the main methods used in their researches are questionnaire and interview, but the target groups of investors are selected differently: starting from the beginners (or future investors) and sometimes extending the research by involving actively trading investors. It is worth mentioning, that some authors (Montier (2006), Decourt, Accorsi, Neto (2007) and others) do not check the influence of the biases to investors and their research object are managers, students and physicians. As far as the results of all mentioned researches are very different, it is possible to conclude that the influence of psychological biases on different groups of people is not the same and depends on the target group of respondents and surroundings (cultural and economic differences of the region where the survey was held). This allows to make an assumption that in the Baltic region we could see some differences of biases' impact in comparison to other regions. Also the authors of this paper make an attempt to investigate and consider investor behavior as a consequent of impact that all biases could make together and present the complex review of psychological biases influencing investors in the Baltics. Of course, this influence is difficult to evaluate quantitatively, but a wide look on major biases that investors face could help to see the general tendencies and conclude about the factors which effect on investors' behavior is the greatest.

3. Results of Pilot Research on Irrationality of Individual Investors in Lithuania

For the investigation of irrationality of individual investors pilot research was made. The target of the research was to identify the influence of Anchoring, Mental accounting, Confirmation and Hindsight Bias, Gambler's Fallacy, Herd Behavior, Overconfidence, Overreaction and Availability Bias, Prospect Theory to the individual investors of Lithuania.

- The questionnaire was prepared by combining possible influence of these biases into closed-end questions without stating the bias itself.



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- During the survey target group of actively trading Lithuanian individual investors (20 people) was considered.
- Each question was compounded to evaluate one specific bias and at the final stage of the questionnaire the investor was asked to identify himself/herself.
- This personal identification was used for deeper evaluation of the results with the intent to see how investors' personal characteristics (such as education, experience, age and sex) could influence their decision-making.

Below the results and basic findings of the pilot research are presented.

- **Anchoring:** In Lithuania individual investors tend to remember historical prices and usually use them as anchors for trends.
- **Mental accounting:** Lithuanian investors' behavior confirmed Shefrin and Statman (1985) findings, that private investors treat dividends separately from capital gains, though in a world without taxes and transaction costs investors should be indifferent between a dividend dollar and a capital dollar.
- **Confirmation and Hindsight Bias:** Investors usually try to find arguments to prove their beliefs by sorting out only those facts, that could do so. Of course, they suffer from the incomplete "picture" but their decisions are often made according to one-sided information. The majority of investors suffer from hindsight bias. Psychologists attribute hindsight bias to our innate need to find order in the world by creating explanations that allow us to believe that events are predictable. While this sense of curiosity is useful in many cases (take science, for example), finding erroneous links between the cause and effect of an event may result in incorrect oversimplifications.
- **Gambler's Fallacy:** In a series of 50 cent coin flips, the more „heads" side up one by one, the more certain is a person that next coin flip is more likely to land with the „tails" side up. Of course, it is not so. According to the probability theory, the likelihood of a fair coin turning up heads is always 50%. Each coin flip is an independent event, which means that any and all previous flips have no connection with future flips.
- **Herd Behavior:** appears that investor is not confident in his predictions and tries to imitate the behavior of other investors by simply repeating their actions. This type of behavior is more obvious during the steady increases and decreases in the market than investors are nervous and think that the crowd can't be wrong.
- **Overconfidence:** similar to the professional fund managers surveyed by James Montier in 2006, the majority of Lithuanian investors suffer from overconfidence. But the tendency, that overconfident investors trade more often was not detected. The reason for this could be significant transaction costs (that decline the total income). On the other hand, in taking risk investors are determined to succeed not taking into consideration other competitors.
- **Overreaction and Availability Bias:** allow to conclude that after losses investors try to be more accurate and not to take any additional risk. This is very similar to the "snake-bite" effect and the reaction of the investors in test situations shows it confidently.
- **Prospect Theory:** Lithuanian investors probably value gains and losses differently. The results state that thinking about gains investors are willing to take more risk, but in the



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situation with losses they prefer to minimize it and take as little risk as possible. One more interesting finding – losses have more emotional impact than an equivalent amount of gains. Though the authors didn't value the "strength" of that impact the majority of the investors feel more disappointed after the loss in comparison to the same amount in gains. The tendency to hold on to winning stocks in order to further gains and to sell losing stocks in order to prevent escalating losses could be noticed among the investors. This confirms the existence of disposition effect of Lithuanian investors.

Summing up the results, the authors could conclude, that investing without emotion is easier to say than to do, especially because the uncertainty, which rules the market. The pilot research showed only basic trends and tendencies. The research method – the closed-end questionnaire is suitable for the evaluation of biases impact on individual investors, that is why the research could be extended and target group of beginners could be tested. As far as researches on individual investors irrational behavior were not previously held in the Baltic countries, the research could be extended to Latvia and Estonia. Evaluation of similarities and differences that psychological biases course, could contribute to the better understanding of individual investors decision making. The investors could also benefit from the results of the research, as understanding of major biases that they usually face, could significantly contribute to their portfolio performance.

Conclusions

Modern finance relies on two key assumptions: a rational "homo economicus" and a „fair price" being determined by financial markets. Behavioral finance does not contradict to them, but complements by emphasizing the importance of human psychology and group thinking in financial markets.

Behavioral finance is a relatively young field that offers considerable opportunity for informed investors. In the near future, behavioral finance may be formally recognized as the missing link that combines modern finance and explains many market anomalies. Perhaps some market participants will even wonder how it was ever possible to discuss the value of stocks without considering the behavior of buyers and sellers.

During the analysis of major biases that theoretically could influence the behavior of individual investors, it was found that key concepts that contribute to irrational financial decision making are the following: Anchoring, Mental accounting, Confirmation and Hindsight Bias, Gambler's Fallacy, Herd Behavior, Overconfidence, Overreaction and Availability Bias, Prospect Theory.

The analyses of methodologies that this field researches use showed that on a regular basis the researches select one or a couple of biases and evaluate different aspects of its manifestations and make assumptions regarding the investors behavior in one or another situation. This allows to see the "picture" but doesn't answer the question whether rationality is of prime importance making investment decisions and doesn't allow to discuss the possibilities of influence of psychological factors on the financial market participants.



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In order to find the answer to this question, a questionnaire was prepared and distributed among individual investors of Lithuania. The authors combined psychological biases into closed-end questions without stating the bias itself and check whether the investors fell the influence or not.

The results showed that individual investors in Lithuania suffer from all basic biases, but overconfidence, anchoring, mental accounting and herd behavior make the strongest influence to their financial decision-making process.

Evaluating the contribution of other researches in the field of behavioral finance and analyzing the results they achieved authors of the paper noticed the tendency to emphasize the outcomes of such irrational behavior without providing any suggestions how to overcome the bias or use it in order get better results and higher portfolio returns. So, the authors of the paper prepared a list of suggestions how investors could improve their performance by understanding the biases and eliminating their influence.

The impact of behavioral finance researches still remains greater in academia than in practical money management as far as behavioral finance doesn't offer any investment miracles, but perhaps could help investors to train themselves how to be watchful of their behavior and, in turn, avoid mistakes that will decrease their personal wealth.

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A CONCEPTUAL ANALYSIS OF BRAND LOYALTY DIMENSIONS

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Keyword: loyalty dimensions, behavioral loyalty, emotional loyalty, cognitive loyalty.

Abstract

The globalization of competition, saturation of markets, and development of information technology have enhanced customer awareness and created a situation where long-term success is no longer achieved through optimized product, price, and qualities. Loyal customers are reported to have higher customer retention rates, commit a higher share of their category spending to the firm, and are more likely to recommend others to become customers of the firm. While marketers are primarily interested in ways they can generate and increase brand loyalty from their customers, academics strive to conduct research that investigates the antecedents and consequences of customer loyalty. A literature review identifies several classifications of customer loyalty; the most common are attitudinal and behavioral loyalties.

The primary purpose of this article is to illustrate loyalty dimensions of the brand and to summarize information from different studies and to describe theoretical framework of loyalty dimension approaches.

Introduction

Numerous practitioners and academics in various industries have studied the benefits of creating and maintaining brand loyalty with existing customers. In particular, it has been found that brand loyal customers reduce marketing costs associated with attracting new customers. In addition, these customers say positive things about a company to others and frequently pay premium prices.

Many scientists as Reichheld F.F. and Reynolds K.E. and Arnold M. agree that customer loyalty has become essential to business operation [1].

Early till 1970 definitions conceptualized loyalty as a single-dimension approach based on behavioral outcome – typically repurchase or switching intentions. Scientists didn't consider brand loyalty as an extremely useful construct in consumer psychology. Unfortunately, due to different and sometimes conflicting conceptual definitions, over-simplified measures based and distinct theory of brand loyalty, researchers have not paid the due attention in research and thinking it deserved in consumer psychology. As loyalty research developed, Day G.S.



introduced two-dimensional conceptualization that included both repurchase behavior and attitudinal dispositions towards the brand. More recently, three-dimensional conceptualizations have been proposed where loyalty includes a behavioral, emotional and cognitive component. The majority of research in marketing now represents loyalty as a multi-dimensional construct. However, agreement on whether it has two or three dimensions is lacking. In the following paper will be summarized information from the various authors and illustrated two kinds of the brand loyalty approaches.

From Single-Dimensional to Two-Dimensional Brand Loyalty Approach

In the marketing literature, loyalty was originally seen from the behavioral perspective, under which the focus was on the pattern of repeat purchase behavior. A single-dimension approach of behavioral loyalty were dominating until 1970 considering loyalty as the function of the share of total purchases, function of buying frequency or buying pattern or function of buying probability [2]. Numerous brand loyalty researchers have used this behavioral approach by simply measuring those behavioral variables to predict the customer's purchasing behavior in future [3]. However, many researchers suggested that measuring behavioral brand loyalty alone may cause several problems. Dick A.S. and Basu K. argued that this behavioral approach neglects the importance of the customer's decision-making process, which does not differentiate brand loyalty from repeat purchase behavior [4]. Problem with behavioral approach is that repeat purchases are not always the result of a psychological commitment toward the brand. The single-dimension approach looked at brand loyalty in terms of outcomes (repeat purchase behavior) rather than reasons, until Day G.S. introduced the two-dimensional concept of brand loyalty, which stated that loyalty should be evaluated with both behavioral and attitudinal criteria [5].

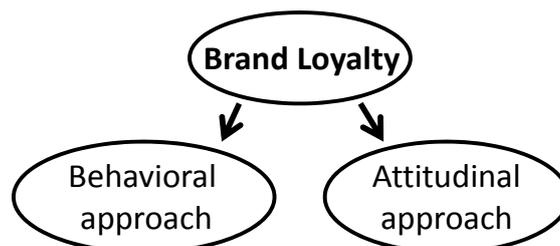


Figure 1. Day's G.S. Brand loyalty two-dimensional approach

According to the research from Kumar V. and Shah D., Lam S.Y. et al., Fullerton both attitudinal and behavioral dimensions of loyalty are considered to be equally critical [6] [7] [8].

Behavioral brand loyalty can be defined as a customer's overt behavior toward a specific brand in terms of repeat purchasing patterns. Specifically, a repeat purchasing pattern can be determined as actual purchase frequency, the proportion of occasions in which a specific brand is purchased as compared to the total number of purchased brands and/or the actual amount of purchase. Hence, none of the operational definitions in behavioral brand loyalty studies



described thus far exhibit an understanding of the factors underlying and leading up to brand loyal purchasing. Numerous researchers have examined the attitudinal aspect of brand loyalty [9]. Attitudinal loyal customers are committed to a brand and they make repeat purchases based on a strong internal disposition. Attitudinal brand loyalty focuses not only on transactional strategies, such as frequent-user programs and gifts for repeat customers but also on attitudinal variables, such as commitment and trust. Attitudinal studies have described brand loyalty not only as the outcome of repeat purchase behavior but also the consequence of multi-dimensional attitudes toward a specific brand. Attitudinal loyalty explains a consumer's identification with a particular service provider and preference of a product or service over alternatives, when a customer is behaviorally loyal, he intends to repurchase the same brand and by that, maintain a relationship with a particular service provider [10]. Attitudinal loyalty is also viewed as the extent of the customer's psychological attachment and attitudinal advocacy towards the brand. Attitudinal loyalty encompasses repurchase intentions, positive word-of-mouth intentions, willingness to recommend to others and encourage others to use the products and services of a company.

Based on the literature overview, author considers that single-dimensional approach is giving the biased picture of the brand loyalty. The results of many researches have showed that measuring behavioral brand loyalty alone may cause several problems. First, single-dimensional approach based on the behavioral brand loyalty neglects the importance of the customer's decision-making process, which doesn't differentiate brand loyalty from simple repeat purchasing behavior. Other problem include providing arbitrary cutoff criteria, failing to assess the complexity and richness of brand loyalty, focusing on the outcome of behavior and not developing definitions that reach at the underlying causative factors.

As loyalty research developed, Day G. S. introduced two-dimensional brand loyalty approach which combined behavioral and attitudinal aspects of brand loyalty. Based on this approach many studies have described brand loyalty as not only an outcome of repeat purchase behavior but also as a consequence of multidimensional cognitive attitudes toward a specific brand. Kumar V. and Shah D., Lam S.Y. stated, loyalty is a biased behavior expressed over time by an individual with respect to one or more alternatives and is a function of psychological processes. Therefore, neither behavioral measures nor attitudinal measures alone are sufficient to assess brand loyalty.

Three-Dimensional Approach

Researchers have done lots of research on single-dimension and two-dimension approach of brand loyalty audit. In the single-dimensional loyalty was originally seen from the behavioral perspective. In two-dimensional approach researchers divided brand loyalty into attitudinal brand loyalty and behavioral brand loyalty. Attitudinal brand loyalty means the consumers psychological commitment to repurchasing the brand, whereas behavioral brand loyalty is concerned with the action of repurchase. This model has been very useful in the past but many researchers found that it was not an affective predictor of three core marketing outcomes (recommendation, search and retention) in a consumer context.



Few years after Day G.S. introduced two-dimensional approach of brand loyalty, Sheth J.N. and Park W. in the 1974 presented a comprehensive theory of brand loyalty by integrating and capitalizing on prior empirical evidence, some theoretical thinking in marketing and considerable body of pertinent knowledge in social psychology. First, Sheth J.N. and Park W. view brand loyalty as a hypothetical construct much richer in meaning than what has been suggested in most of the prior empirical research. Second, authors view brand loyalty as a multidimensional construct. Sheth J.N. and Park W. defined that brand loyalty contains three distinct dimensions. The first dimension is the emotive tendency toward the brand. It refers to the affective (like-dislike) fear, respect or compliance tendency which is systematically manifested more in favor of a brand than other brands in the marketplace [11]. The emotive tendencies are learned by the consumer either from prior experiences with the brand or from nonexperiential or informational services. The examples of emotive tendencies include the strong emotional stereotypes or brand imageries which researchers talk about as commonly prevalent among consumers [11]. The second dimension of brand loyalty which is defined by Sheth J.N. is the evaluative tendency toward the brand. It refers to the evaluation of the brand on a set of criteria which are relevant to define the brand's utility to the consumer. The evaluative tendency dimension of brand loyalty is also learned by the consumer either from prior experiences with the brand or from nonexperiential or informational sources [11]. The third dimension of brand loyalty is the behavioral tendency toward the brand. It refers to the responses toward the brand with respect to its procurement, purchase and consumption activities. Sheth J.N. includes in the behavioral dimension all the physical activities of shopping, search, picking up the brand physically from the shelf, paying for it and ultimately consuming or using it in a systematic way. The behavioral tendency is learned primarily from the experiences of buying and consuming the brand or from generalization of similar tendencies toward other brands [11].

Human behavior is a collection of one or more or three types of responses: behavioral responses (I do), cognitive responses (I think) and emotive responses (I feel). Brand loyalty is the combination of a consumer's thoughts and feelings about a brand that are expressed as an action [12].

Russel-Bennett R. found that attitudinal loyalty in the B2B sector explained only a small percentage of the variance in behavioral loyalty. So attitudinal loyalty can be divided into two sub-components: emotional and cognitive loyalty, which when added to behavioral loyalty is a tree-dimensional approach to loyalty (Figure 2) [13].

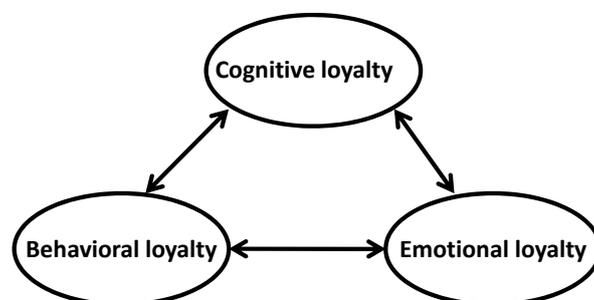


Figure 2. Worthington's S. three-dimensional model of brand loyalty [13]



According to Oliver R.L., cognitive loyalty is a loyalty based on information such as price and features [14]. Härtel C.E.J. expanded this definition by defining cognitive loyalty as “psychological preference for a brand consisting of positive beliefs and thoughts about purchasing a brand on the next purchase occasion”. Emotional loyalty is the degree of positive feelings aroused by repurchasing a brand [14]. Härtel C.E.J. defined emotional loyalty as “affective commitment to a brand consisting of positive feelings about and attachment to purchasing a brand on the next purchase occasion” [12]. Hammond K.R. mentioned that behavioral loyalty is the consumer’s tendency to repurchase a brand, revealed through behavior that can be measured and which impacts directly on brand sales [15].

Very important part of the brand loyalty audit is segmentation. Worthington S.R. proposed a brand loyalty audit framework which segments consumers into eight combinations of loyalty using the three dimensions of loyalty [13]. This is a significant contribution to both theory and practice as there is a little evidence of academic or proprietary brand loyalty models that use emotional, behavioral and cognitive loyalty as the basis for segmentation. The final audit is showed in Figure 3.

	High Emotional Loyalty		Low Emotional Loyalty	
	High Cognitive Loyalty	Low Cognitive Loyalty	High Cognitive Loyalty	Low Cognitive Loyalty
High Behavioral Loyalty	Stable loyals	Passionate loyals	Functional loyals	Vulnerables
Low Behavioral Loyalty	Hot potentials	Hopefuls	Cold potentials	Disloyals

Figure 3. Brand loyalty audit [13]

The main objective of the marketing managers is to achieve high levels of brand loyalty in all three dimensions. Behavioral loyalty is the most essential among all three dimensions. But it is not possible to achieve high levels of both emotional and cognitive loyalty, if resources are not adequate. So each organization should determine which dimension is critical form them to gain competitive advantage and then focus its marketing programs on these. In an ideal world with all adequate resources, all three dimensions are essential but as this is rarely the case, choices must be made and resources prioritized to the areas that need it most. To measure the three-dimensional brand loyalty, three steps to be followed by the marketing managers. The first step is to undertake proper market research to determine the current brand loyalty levels for a particular brand. Next step is to make the priority segments of the consumers and develop proper marketing strategies to maintain or create loyalty. Last step is to measure the effect of the intervention which was a success or which can be modified later.

To summarize, brand loyalty is the combination of a consumer’s thoughts and feelings about a brand that are expressed as an action. Three-dimensional approach is including three types of human responses: behavioral, cognitive and emotive. Cognitive loyalty is “psychological preference for a brand consisting of positive beliefs and thoughts about



purchasing a brand on the next purchase occasion”. Emotional loyalty is the degree of positive feelings aroused by repurchasing a brand and behavioral loyalty is the consumer’s tendency to repurchase a brand, revealed through behavior that can be measured and which impacts directly on brand sales. Three-dimensional approach is the most precise to measure brand loyalty. This approach is an affective predictor of three core marketing outcomes (recommendation, search and retention) in a consumer context.

Conclusion

This paper is integrating different viewpoints and research findings to illustrate brand loyalty dimensions.

There are many articles separate loyalty into attitudinal and behavioral loyalty. Most part of research treat attitudinal loyalty as antecedent of behavioral loyalty [16] [17] [18]. Most customer loyalty studies integrate multi-dimensional concepts into a single construct comprising: “repurchase intention”, “recommendation intention”, “customer retention”, or “price tolerance”. Researchers tally these components, combining them into a single dependent variable to determine factors that affect loyalty.

Based on the investigation of the different scientist research papers, brand loyalty can be divided into three approaches (Author’s proposed Figure 4)

Brand loyalty approach	Dimension	Authors	Years
Single-dimensional	Behavioral	Farley J.	1964
		Guest L.	1964
		Tucher W.T.	1964
Two-dimensional	Behavioral	Day G.S.	1969
		Jacoby J.	1971
		Sheth J.N.	1974
	Attitudinal	Park W.	1974
		Lam S.Y.	2004
Kumar V.	2006		
Three-dimensional	Behavioral	Hammond K.	1996
		Oliver R.L	1999
	Emotive	East R.P.	2005
		Russel-Bennett R.	2007
		Cognitive	Härtel C.E.J
Worthington S.	2010		

Figure 4. Brand loyalty approaches and dimensions



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First, single-dimensional approach based on the behavioral brand loyalty. This approach was used till the late 1960 because of the lack of studies on the brand loyalty. As brand loyalty research developed, second and the most often used approach was introduced by Day G. S. is two-dimensional brand loyalty approach which combined behavioral and attitudinal aspects of brand loyalty. Based on this approach many studies have described brand loyalty as not only an outcome of repeat purchase behavior but also as a consequence of multidimensional cognitive attitudes toward a specific brand. Kumar V. and Shah D., Lam S.Y. stated, loyalty is a biased behavior expressed over time by an individual with respect to one or more alternatives and is a function of psychological processes. Therefore Author's evolution is that neither behavioral measures nor attitudinal measures alone are sufficient to assess brand loyalty.

Third brand loyalty approach where attitudinal loyalty can be divided into two sub-components: emotional and cognitive loyalty, which when added to behavioral loyalty is a three-dimensional approach to loyalty. Cognitive loyalty is a loyalty based on information such as price and features [14]. Härtel C.E.J. expanded this definition by defining cognitive loyalty as "psychological preference for a brand consisting of positive beliefs and thoughts about purchasing a brand on the next purchase occasion". Emotional loyalty is the degree of positive feelings aroused by repurchasing a brand [14]. Härtel C.E.J. defined emotional loyalty as "affective commitment to a brand consisting of positive feelings about and attachment to purchasing a brand on the next purchase occasion" [12]. Hammond K.R. mentioned that behavioral loyalty is the consumer's tendency to repurchase a brand, revealed through behavior that can be measured and which impacts directly on brand sales. Three-dimensional approach is the most efficient approach to measure brand loyalty because of the complexity loyalty concept.

Overall many researchers discussed the need to combine behavioral and attitudinal aspects of brand loyalty in developing measures of brand loyalty. Such studies have described brand loyalty as not only an outcome of repeat purchase behavior but also as a consequence of multidimensional cognitive attitudes toward a brand. As was discussed early, loyalty is a biased behavior expressed over time by an individual with respect to one or more alternatives and is a function of psychological processes. Therefore, neither behavioral measures nor attitudinal nor emotive and cognitive measures alone are sufficient to assess brand loyalty. To receive valuable result of measuring brand loyalty Author's recommendation for researchers is to combine in the studies all three dimensions of brand loyalty.

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INTERACTIONS BETWEEN EU FUNDS DURING 2007 – 2013 PERIOD: THE RESULTS AND RECOMENDATIONS

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Abstract

The aim of the paper is to examine how do contributions financed from various EU funds complements each other and can there be synergy observed among them.

Since the reform of EU Cohesion policy in 1989, it has been implemented through various funds and this paper will cover the following of them:

- European Regional Development Fund (ERDF),
- European Social Fund (ESF),
- Cohesion Fund,
- European Agricultural Fund for Rural Development (EAFRD),
- European Fisheries Fund (EFF).

The analysis on interaction between EU funds will be performed in the cross-section of institutional responsibilities and Operational programme implementation – role of ex-ante strategic planning, programme implementation, projects and beneficiaries.

Methodologically, the study will be based on the desk research involving review of strategic planning documents – National Strategic Reference Framework, Operational programmes and the reporting documents – implementation reports, strategic reports, information available at the websites of institutions forming part of Management and Implementation system of EU funds for the period 2007 – 13, as well as conclusions of recently performed evaluation studies. It is also intended to perform semi-structured interviews with number of public administrators involved in implementation of EU financial assistance.

The data presented in this study shall be considered to have sufficient degree of reliability due to the fact that most of the information regarding the implementation of Programmes financed from EU funds is aggregated into official documents (like reports) of the involved institutions and made publicly available.

At the end, conclusions will be made and presented on the effectiveness of existing system with several EU funds designed for the delivery EU Cohesion policy, as well as the recommendations will be elaborated on the required improvements for the system of allocation of financial assistance through EU funds for the forthcoming budget planning period 2014 – 2020.



Introduction

Debate on the future shape of the European Union's Cohesion policy and its management and implementation system after year 2013 has become more and more intensive over the past year. This is not surprising knowing that the next period of EU budget planning is approaching as the current one will end in a little more than two years time – at the end of 2013. So far, the accomplishment of three objectives of European Union's Cohesion policy – Convergence, Regional Competitiveness and Employment, and European Territorial Cooperation is financed through five different funds – European Regional Development Fund (ERDF); European Social Fund (ESF); Cohesion Fund; European Agricultural Fund for Rural Development (EAFRD); European Fisheries Fund (EFF).

The aim of the paper is to examine how do contributions financed from various EU funds complements each other and can there be synergy observed among them.

In order to accomplish the above defined purpose, the following tasks are defined to be discussed within the paper:

- 1) review the functions of various institutions under the existing system for management and implementation for EU funds;
- 2) perform the analysis of coordination mechanisms for implementation of EU funds at the level of Latvia's operational programmes;
- 3) highlight the future perspectives for the development of management and implementation system of EU funds;
- 4) to summarize the conclusions made within the paper and elaborate the recommendations for the further improvements in Cohesion policy delivery framework.

Applied methodology in elaborations the study is based on the desk research that involves review of strategic planning documents – National Strategic Reference Framework, Operational programmes and the reporting documents – implementation reports, strategic reports, information available at the websites of institutions forming part of Management and Implementation system of EU funds for the period 2007 – 13, as well as conclusions of recently performed evaluation studies.

The first section of the paper briefly outlines the existing Management and implementation system for funds, reviewing the roles of various institutions involved, analysis on coordination of different funds in cross-sections of three Latvia's Operational programmes for 2007 – 2013 is provided within the second Chapter, while within the last third section required improvements in existing Cohesion policy delivery system are summarized and possible future development of EU funds implementation system is highlighted.

The paper has been elaborated as a contribution for International Conference for Doctoral Students "Current issues in economic and management sciences" to be held during November 10-12, 2011 in Riga and being organized by the Faculty of Management and Economics of University of Latvia. Knowing the considerable size of EU financial assistance for Latvian economy and taking into account that Management and implementation system of EU funds is part of Latvian public administration, it is believed by author that the paper might fit in well into academic debate at conference and, perhaps, it could complement some interesting accents to it.



1. Functions of Institutions Involved in Administration of EU Funds

There is a quite large number of evaluation literature available on the implementation of EU financial assistance in Latvia, particularly concerning the previous planning period 2004 – 2006. On the web page set up and maintained by the Ministry of Finance of the Republic of Latvia, Managing Authority for implementation of Operational programmes financed from ESF, ERDF and Cohesion fund www.esfondi.lv, there are some 24 studies listed related to evaluation of Structural funds interactions and 16 studies analysing various aspects of Cohesion fund implementation during the period 2004 – 2006. There is much less information on assessing the delivery of programmes under current 2007 – 2013 period. If the same internet source is consulted, then besides mandatory *ex-ante* evaluations of National Strategic Reference Framework and the supplementing Operational programmes, it names only 4 other studies covering the 2007 – 2013 period. However, none of these studies' prior aim is to evaluate the possible synergies and contradictions of interventions from all five funds what will be attempted to do by this paper. Although due to its limited size it will only provide the overview of existing and potential problems that should be further scrutinized within more extensive studies.

Overall EU financial assistance in Latvia for the period 2007 – 13 is structured into five Operational programmes – “Human Resources and Employment” (ESF), “Entrepreneurship and Innovations” (ERDF) and „Infrastructure and Services” (CF/ERDF), “Rural Development Programme 2007-2013” (EARDF) and “Operational Programme for the Implementation of the European Fisheries Fund Support in Latvia for 2007 – 2013” (EFF).

The financial allocation for each of the programmes and the source of their funding is presented in the Table 1 bellow.

Table 1

Financial allocations for Operational programmes 2007 – 2013, EUR [1, 2, 8, 12, 13]

Operational programme	EU financing, EUR	National co-financing, EUR	TOTAL, EUR	As % of total financing*, %
“Human Resources and Employment” (ESF)	550 653 717	97 174 186	647 827 903	9.03
“Entrepreneurship and Innovations” (ERDF)	736 730 950	366 809 540	1 103 540 490	15.40
“Infrastructure and Services” (CF/ERDF)	3 210 612 967	677 524 137	3 888 137 104	54.24
“Rural Development Programme 2007-2013” (EARDF)	1 041 113 504	320 532 819	1 361 646 323	19.00
“Operational Programme for the Implementation of the European Fisheries Fund Support in Latvia for 2007 – 2013” (EFF)	125 015 563	41 671 856	166 687 419	2.33
TOTAL	5 696 576 701	1 503 712 538	7 200 289 239	100

* Author's calculations



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From the above Table 1, we can make conclusions on relative significance of various programmes in terms of financial allocations, and to identify the Operational programmes which have the largest potential for synergy to occur. The OP “Infrastructure and Services” has the largest share of 54.24% in total EU financing, followed by “Rural Development Programme 2007-2013” with 19%, “Entrepreneurship and Innovations” with 15.4%, “Human Resources and Employment” and OP “Operational Programme for the Implementation of the European Fisheries Fund Support in Latvia for 2007 – 2013” with 2.33%. Therefore, obviously, the „Infrastructure and Services” has the largest potential to cause the synergy with other programmes.

In general Latvia has rather centralised Management and implementation system for EU funds. Two departments of the Ministry of Finance – EU Funds Strategy Department and EU Funds Monitoring Department form the Managing Authority for EU Cohesion fund, ERDF and ESF in the period 2007 – 2013.

“Rural Development Programme 2007-2013” [1] and “Operational Programme for the Implementation of the European Fisheries Fund Support in Latvia for 2007 – 2013” [2] set the institutional framework for the implementation of European Agricultural Fund for Rural Development (EAFRD) and European Fisheries Fund, respectively. Ministry of Agriculture (MoA) is the Managing Authority for the (EAFRD) and European Fisheries Fund (EFF). More particularly, by the Decree of MoA, the Rural Support Department executes the Secretariat functions of the Managing Authority.

Similarly, the Audit Department and of the Ministry of Finance executed the functions of Audit Authority for ERDF, ESF and CF, but the State Treasury acts as the Certifying Authorities for these three EU funds. In conclusion, all three funds – CF, ERDF and CF have shared Managing, Audit and Certifying Authorities.

The functions of Certifying Authority for the EAFRD financed programme are outsourced through procurement procedure. The Budget and Finance Department of the Ministry of the Agriculture is designated to be a Certifying Authority for the EFF for the period 2007 – 13. The Internal Audit department of the MoA is designated to act as Audit Authority for the EFF. The Rural Support Service is the Intermediate Body for the part of Managing Authority’s and Certifying Authority’s functions under EFF, while it is acting as Payment Agency under EAFRD.

Under the present Management and Implementation system for the period 2007 – 13, there are two levels of Intermediate bodies – Responsible Institutions (1st Level Intermediate Bodies) and Cooperation Institutions (2nd Level Intermediate Bodies). Mainly the line ministries are responsible for implementation of sectoral policies, but also, for example, State Chancellery, are the Responsible Bodies. While there is much smaller number of Cooperation Institutions which are usually the agencies subordinated to some of the line ministries. Thus typically the Intermediate Bodies are responsible for the implementation of sectoral policy, which might be financed from more than one EU Cohesion policy fund. For instance, The Ministry of Education and Science (1st level Intermediate body) and its subordinated State Education development agency (2nd level Intermediate body) are responsible for implementation of Operational programmes’ “Human resources and employment” and “Infrastructure and services” activities in the field of education and science which could be financed from ESF (in the case of programme “HR&E”) and ERDF (in the case of programme “I&S”). Quite similarly, Ministry



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of the Environment and Regional development is responsible for implementation of “I&S” activities financed from the ERDF and CF.

In the NSFR it is emphasized that coordination of SF and CF operational programmes is important for mutual harmonization and separation of sectors of assistance, and for alignment with horizontal objectives. In order to ensure coherence between the three OPs to achieve the strategic goals set at the level of the NSRF, the coordination mechanisms are put in place [3].

Further it is stated that the mutual coordination of SF and CF operational programmes is ensured by the Ministry of Finance as the Managing Authority, as well as by the OP Monitoring Committee. The concentrated implementation model, whereby all OPs have a joint Managing Authority, fosters better coordination between OPs. A joint Monitoring Committee has also been established for the OPs, which allows for optimum coordination of OPs by concentrating information on all OPs in one place.

In order to avoid overlap in SF and CF investments, as well as the situation whereby financing for a particular sector cannot be provided by any financial instrument, it is important to coordinate the SF and CF with the European Agricultural Fund for Rural Development and the European Fisheries Fund. This is particularly important when complying with the Cohesion policy objectives as complemented by the Common agricultural policy objective to ensure a fair standard of living for the rural community. The coordination of SF and CF operational programmes with the instruments for implementing the common agricultural policy and the joint fisheries policy has been ensured by the Ministry of Finance as the Managing Authority of SF and CF. During the elaboration of the OPs, the Ministry of Finance consulted the Ministry of Agriculture on the measures to be included in the programming documents and conditions for receiving financing. Coordination has also been ensured during implementation with the participation of a representative from the Managing Authority in the European Agricultural Fund for Rural Development and European Fisheries Fund monitoring committees (management groups), as well as with the participation of a representative from the Ministry of Agriculture in the SF and CF operational programme Monitoring Committee [4].

In addition, according to the national legislation the Ministry of Regional Development and Local Governments will ensure coordination of the OPs with the National Development Plan, while the Ministry of Economy will ensure coordination of the OPs with the Latvian National Lisbon Programme, thereby ensuring harmonization of investments under the SF and CF with the national development programming documents. All of the institutions mentioned are members of Monitoring Committee.

Moreover Annual implementation reports on implementation of OPs provide for very detailed measures introduced to coordinate and demarcate the activities:

At the level of project selection criteria, the control mechanisms to avoid double financing are included by introducing the restriction on “overlapping of financing”, thus the potential Project beneficiaries have also made responsible for receiving double financing. During the evaluation of project proposals, the planned activities within the projects are compared with activities of other projects under other Activities and funds. Applicant signs the statement that planned project activities are not financed from any other public funds and this information is checked against the information at the disposal of Evaluation Committee. Responsible institutions also analyze the information that is available in the Monitoring



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information system on other projects of the Applicant being they completed or under the implementations.

Before the signing the Financing Agreement the Beneficiary is informed about the project accounting requirements and all other available information on applicant is being checked by Intermediate Body. During the implementation of projects, “on the spot” checks are performed based on the results of risk analysis of the projects which then are divided into categories with high, medium or low risk level. The higher is the degree of risk, the more often are the control visits.

The approach applied during the elaboration of NSRF on deciding what kind of activities will be financed from which one of funds was that CF investments have to be mainly focused on the providing assistance for large-scale infrastructure projects, but the ERDF, for the most part, have to provide assistance for relatively small scale investments. Assistance under the ESF is aimed at investments in human resources and, to a lesser extent, in infrastructure, which are traditionally financed under the ERDF. Assistance for new enterprises, within the framework of the European Agricultural Fund for Rural Development, is to be provided for the creation of micro-enterprises in rural areas, and, to a lesser degree, for improvements to the local infrastructure (such as roads, telecommunications, energy supplies, water supplies, sewage and waste management) [5].

2. Coordination of EU Funds at Levels Member State and Programme

2.1. Initial Planning of Directions of Support

During the elaboration of NSRF and OPs for 2007 – 13, the complementarities of the three EU Cohesion policy thematic funds investments with measures financed from EAFRD and EFF was assessed. The demarcations was assessed in sectoral and territorial cross-section and also based on the type of assistance. EAFRD and EU Cohesion policy thematic funds have such common areas of intervention as transport infrastructure, tourism, waste management, NATURA 2000 territories, energy, vocational education infrastructure, business support, training and promotion of employment.

In sectoral cross-section EAFRD provides for support in modernisation of agricultural infrastructure, processing of agricultural production, etc. These activities are excluded from the ERDF support. EAFRD supports vocational training in the agricultural, forestry and food processing sectors that are excluded from the ESF scope. EAFRD also provides support to renovation of premises of educational establishments that have majority of their programmes in the field of agriculture. Assistance to this type of educational establishments is excluded from ERDF support programmes.

Demarcation of funding in territorial cross-section. EAFRD finances the reconstruction of roads owned by Municipalities while ERDF investments are targeted for 1st category roads of State importance, transit streets, transport safety improvements in urban areas. EAFRD support is provided for tourism activities in rural areas, while ERDF – development of tourism products at National level.



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Demarcations by the type of support means that ERDF finances development of infrastructure in NATURA 2000 territories, but EAFRD provides financing for payments compensating non earned income related to implementation of EU Directives.

Cohesion policy thematic funds and EFF have common such areas of support as infrastructure of ports, biological diversity, water management, tourism, business support, training and promotion of employment. EFF supports modernisation of fishery enterprises, but this type of support is excluded from the scope of ERDF business support activities. EFF finances vocational training in fishery industry which is excluded from the ESF. Investments in infrastructure development of ports that are not involved in international freight transportation are supported from EAFRD, improvements in infrastructure of small ports from ERDF, but investments in large scale ports that are part of TEN-T network are covered by Cohesion funds.

2.2. Programme Implementation

As it was mentioned before, there are shared intermediate bodies as well as there are common implementing procedures, at least, in the case of three Cohesion policy thematic funds, who are at the National level governed by the common “Law On Management of European Union Structural Funds and the Cohesion Fund,, and number of “general” Cabinet of Ministers Regulations (for example, how the “on the spot” checks have to be executed), while there are detailed rules set by separate “specific” Cabinet of Ministers Regulations for each activity (these Regulations define, for example: who can apply, what is the scope, what are the eligible costs). There is also joint Monitoring Committee for European Union Structural funds and Cohesion fund set up with two Sub-committees – one for ERDF and CF and another one for ESF. The Monitoring Committee (MC) is comprised from Heads of each Intermediate body (Responsible and Cooperation institutions) and representatives of social partners. The competencies of the MC include monitoring on how efficiently the EU funds allocations are being spent, review the proposals for changes in the planning documents and to adopt the decisions on their approval or rejection, approval of evaluation plan and strategic communication plan and others [6].

For the purposes of collecting, storing and processing financial and physical data on the implementation of EU funds, the Management and information system has been designed already for the period 2004 – 06. Since then the system has been upgraded several times to become more efficient and user friendly. All the information related to three Cohesion policy funds – approved projects, their beneficiaries, budgets, payments, data on physical progress, achievement of indicators are entered into this system and can be retrieved for the management of programmes and other purposes. There have also been strong incentives observed over the past years, to standardize other forms of monitoring activities – like templates for the reports, procedures how “on the spot” check are carried out in project implementation places (there is special Cabinet of Ministers Regulation adopted on this procedure), etc.

The separate monitoring and information system for collecting, storing and processing information has been designed and maintained for two other funds managed by the MoA: EAFRD and EFF.

According to requirements of Cabinet of Ministers Regulation No. 1238, dated 27 October 2009, the evaluation plan [7] has been elaborated and approved by the Monitoring Committee to regulate all the evaluation activities being carried out. *Ex-ante* evaluations for the



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period 2007 – 13 were performed at the programme level, and if it is remembered that only one OP is co-financed from two funds, then these evaluations could be considered as “fund specific”. While the character of ongoing evaluations towards the specific fund(s), mostly depends on the scope of evaluation study. Some of which are “fund specific” studies (mainly on CF, even at level of single projects), but most of them are performed across the Funds. (For example, Structural funds impact to regional development in Latvia, impact on macroeconomic performance, study on simplification of implementation procedures for SF, etc.).

Although there is the same Managing Authority for both ERDF and ESF, there are three OPs each mainly financed from the one Fund (with exception of “Infrastructure and Services” OP financed from the CF/ERDF), and some cross-financing at the level of OP take place. In order to ensure effective implementation of the OP “Infrastructure and Services” Measure “Support for Sustainable Urban Development” according to the principles of integrated urban development under the Priority 3.6 “Polycentric Development”, potential beneficiaries are given an opportunity to propose and implement projects that fall within Operational Programme “Infrastructure and Services”, but in the scope of European Social Fund.

Table 2

Financial allocations for Priority3.6 “Polycentric Development” [14], Euro¹

Activity	Available ERDF financing	Indicative maximum amount available for Cross – financing from ESF
“Growth of National and Regional Development Centres for Sustainable and Balanced Development of the Country”	253 035 286	25 303 528.6
Sustainable Development of Riga	7 028 040	702 804
TOTAL	260 063 326	26 006 332.6

The cross-financing in the framework of priority will not exceed 10% of projects eligible expenditures and no more than 10% from total ERDF financing for the priority [8]. This proportion amounts to maximum of approximately 26 millions euro (please, see author’s calculations in the Table 2) that can cross-financed from the ESF, which equals to only 0.46 percent (author’s calculation) of total EU funding allocated for the OP “Infrastructure and services”. Following activities are supported under this Measure: “Growth of National and Regional Development Centres for Sustainable and Balanced Development of the Country” and “Sustainable Development of Riga”. For example, within the activity “Growth of National and Regional Development Centres for Sustainable and Balanced Development of the Country” the support was planned for investments in renewal of urban environment, to increase competitiveness and development of city communities, thus enhancing their attractiveness, promoting business and technology development, improving the availability and accessibility of

¹ Exchange rate applied for calculations: 1 EUR = 7.02804 EUR



services as well as to ensure equal opportunities for all groups population [9]. Up to now, 43 projects quite various in scope have been approved during the first two call, ranging from transport infrastructure improvements to increased of energy efficiency and support to cultural and educational establishments [10].

2.3. Projects and Beneficiaries

Each of the OPs financed from three Cohesion policy thematic funds has one Programme Complement divided in several priorities, which are further broken down into Measures and finally into Activities/Sub-activities. All together, there are 18 priorities and their 147 activities [11], planned for the implementation of three OPs and their Complements. Thus it is rather difficult to group the beneficiaries according to their eligibility under certain priorities. Very broadly judging - almost every institution in country is somehow eligible for financing under one or another activity. Bellow selected cases are given describing the types of beneficiaries who are eligible under more than one of Funds.

There are several examples when the same beneficiaries are eligible for the financing from more that one EU fund. For example, educational establishments are eligible for financing from ESF for their primary activities like development of educational programmes, supporting students with scholarships (Priority 1.1 “Higher education and science” of OP “Human resources and employment”), while they are also eligible for financing from ERDF for improvement of their infrastructure – conditions of buildings, procurement of teaching and scientific equipment (Priority 3.1 “Infrastructure for Strengthening human capital” of OP “Infrastructure and services”). Similarly, businesses under certain activities are eligible to apply for support for development of new products, improvement of production facilities, (Priority 2.1 “Science and Innovations” of OP “Entrepreneurship and Innovations”) while they are also eligible under some activities delivering training and improvement of skills (Priority 1.3 “Promotion of employment and health at work” of OP “Human resources and employment”).

In conclusion it can be summarized that number of beneficiaries, particularly the local Municipalities, are eligible for the support from more than one fund, while typically each project is submitted and approved under the certain activity of the one of the Operational programmes and being financed from one EU fund (with exception of cross-financed activities).

3. Required Future Improvements for 2014 – 2020

In principle, the existing system with five different funds can be deemed as satisfactory. However, the unified rules for eligibility and their application for all policy fields, funds and financial instruments (including Common agricultural policy instruments) are highly recommended, as it would significantly simplify the implementation process, and the simplification in its turn would allow accelerate the speed and improve the quality of Cohesion policy delivery.

At the programme level, opportunities to finance the programmes from different funds (above existing cross-financing ceiling of 10% for ERDF / ESF) is seen as one of the most required and easy to achieve steps, to increase the chances to successfully address the complex



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problems when their solutions are supposed to be found through measures financed by EU funds.

In some cases, the lack of unified implementation rules and limitations in combination of different funds within one project, when necessary, could impact the delivery of project results due to serious difficulties causes for the project applicants to develop and implement the complex projects. This is particularly true in those cases where the soft activities and needs for hard investments have to be merged within one single project.

The possibility for cross-financing is considered as the very useful and practical tool already applied, for example, by the MoEPRD in implementation of activities “Growth of National and Regional Development Centres for Sustainable and Balanced Development of the Country” and “Sustainable Development of Riga” under the Priority 3.6 “Polycentric Development”. But it would stimulate the programme delivery to much larger extend should it be possible to apply much higher rate (than currently permitted 10%) of cross-financing, when it is deemed to be necessary.

Another example is that the ERDF and EFF are not directly administered by the same Intermediate Bodies at the moment therefore it is quite difficult to provide thoroughly balanced view on the re-integration of these funds into Cohesion policy. But what shall be emphasized again is the need for good co-ordination among all available EU Funds and maximum unification of implementation rules and procedures. In this case, the integration separate electronic monitoring systems for ERDF and EFF would be one of the first steps, which actually would not increase the administrations costs, but most probably would even reduce them through the larger extent of concentrations of resources.

Based on the existing practice in implementation of funds, in some cases larger thematic concentration is also recommended, particularly, in the context of stronger coordination of financial mechanisms in the field of employment policy. Since there are parallel EU budget financial instruments dealing with similar problems (ESF and European Globalization Adjustment Fund (EGAF)).

Therefore, in conclusion, it has to be underlined that the coordination of all available EU financial instruments generates the added value and facilitates achievement of Cohesion goals policy and those of sectoral policies. However, the co-ordination mechanism should be with high degree of flexibility which might be at risk in the case it is too formalised (like determined by laws and regulations instead of exemplifying approach of “good practices”).

This approach of increased level of mutual trust between the involved institutions to optimize the number of functions performed by institutions should be extended to involve not only coordination among National authorities, but also relationship between National authorities and European Commission. For instance, if the EC has accredited the EU member state’s management and control system then it should rely on the audit reports submitted by the EU member states and should not repeat the audit checks at EU level. Such practices would lead to further simplification of procedures and would facilitated avoidance of duplication of functions, relying on the existing control tools and not to double them, which is crucially important aspect in the implementation framework of Cohesion policy.

Moreover, the monitoring process should be designed in a way that it is more “result-oriented” rather than “procedure oriented”, and the role of evaluation should be increased significantly, and the proportion for controls should be reduced accordingly. As the process of



Cohesion policy planning in the future is envisaged to be more result-based, in evaluation of the absorption capacity a greater role should be given to the results achieved by the policy and efficiency improvements, not only the speedy spending. Thus the review on what are the other alternatives to the „*N+2 rule*” are possible after 2013 is highly suggested. Particularly, taken into consideration that in the future Cohesion policy most probably will be even more result-oriented policy as it is now, but the results are generally visible only starting somewhere from the second half of the seven years EU budget planning period and at the end of the planning period as the current practice shows.

Generally, more concentrated Cohesion policy for the next period is suggested and expected. This will require better analysis of needs and preferences of the Beneficiaries as well as designing of better targeted support instruments.

Conclusions and Recommendations

1. Coordination of activities financed from the various funds is the key element in ensuring the synergy from the investments. The concentrated implementation model, whereby all Structural funds and Cohesion fund Operational Programmes have a joint Managing Authority, fosters better coordination between Operational Programmes as well as a joint Monitoring Committee, which allows for optimum coordination of Operational Programmes.
2. Mechanisms to avoid double financing have been introducing restricting possibilities for “overlapping of financing”, and thus reducing the risks associated with the close coordination and funding activities from more than one fund.
3. During the elaboration of NSRF it was decided that CF investments have to be mainly focused on the providing assistance for large-scale infrastructure projects, while the ERDF, for the most of its part, have to concentrate on assistance for relatively small scale investments, but assistance under the ESF is aimed at investments in human resources. Better targeting of the interventions for the particular type of activities enhances the added value of interventions.
4. The complementarities of the three EU Cohesion policy thematic funds investments with measures financed from EAFRD and EFF have been assessed, and demarcations was done in sectoral and territorial cross-section promoting synergy among these funds.
5. Cross-financing at the level of Operational Programme that takes place under the Priority 3.6 “Polycentric Development” of programme “Infrastructure and Services”, where potential beneficiaries are given an opportunity to propose for implementation projects that fall within Operational Programme „Infrastructure and Services”, but in the scope of European Social Fund has to be considered as the very successful example of interactions between two funds, generating additional added value of interventions.
6. Unified rules for eligibility and their application for all policy fields, funds and financial instruments (including Common agricultural policy instruments) are highly recommended, as it would significantly simplify the implementation process, but the simplification in its turn would allow accelerate the speed and improve the quality of Cohesion policy delivery.
7. Opportunities to finance the programmes from different funds (above existing cross-financing ceiling of 10% for ERDF / ESF) is considered as one of the most required and easy



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to achieve steps, to increase the chances to successfully implement complex measures financed by EU funds.

8. Coordination of all available EU financial instruments generates the added value and facilitates achievement of Cohesion goals policy and those of sectoral policies. However, the co-ordination mechanism should be with high degree of flexibility which might be at risk in the case it is too formalised (like determined by laws and regulations instead of exemplifying approach of “good practices”).

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CHANGES IN CAPITAL STRUCTURE AND ITS FEATURES DURING ECONOMIC RECESSION

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Keywords: capital structure, recession, cost of debt, cost of equity, weighted average cost of capital.

Abstract

Enterprise financing represents one of the most studied issues in corporate finance. Capital structure is of particular importance in estimating the value of a company; an accurately estimated and selected equity and debt ratio can maximize the enterprise value and minimize the cost of capital; therefore this issue is especially significant in the changing conditions of economic development.

The purpose of the paper is to analyse and assess the capital structure change and features in the changing conditions of economic recession by estimating the cost of the different sources of financing and the weighted-average cost of capital and, based on obtained data, to put forward recommendations for improving capital structure of Latvian chemical substances and products manufacturing enterprises in the changing economic environment of Latvia.

Overall, one can conclude that international and Latvian average capital structure ratios of chemical substances and products manufacturing enterprises differ – average world debt ratio is increasing, at the same time, this ratio is decreasing in Latvia. Simultaneously with the debt ratio decrease, the cost of debt also decreases – the interbank interest rates go down, enterprises raise even cheaper debt from their owners (compared to loans granted by credit institutions), therefore the weighted average cost of capital is reduced, as well.

Introduction

Enterprise financing represents one of the most studied issues in corporate finance. Capital structure is of particular importance in estimating the enterprise value; an accurately estimated and selected equity and debt ratio can maximize the value of a company and minimize the cost of capital; therefore this issue is especially significant in the changing conditions of economic development.

During the last 10 to 12 years, there have been several financial crises, for example, in Russia (1998), Brazil (1998-1999), Turkey (2000-2001) and Argentina (2000-2002). However, none of them has left such a strong impact and consequences as the current global financial crisis. One must note that financial disturbances usually are long-lasting, while booms are comparatively brief. The price cycles of equity and real estate usually are longer and more pronounced than the credit cycles [1]. The economic cycle has a great importance when company management is making decisions on, amongst other things, attracting new capital.



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There are differences and specific features in the capital structure across industries, therefore, the author chose one particular sector – the chemical industry. The chemical industry of Latvia has stable traditions as it has manufactured for the consumer, as well as for businesses, for a long period of time. The author considers that the industry is of vital importance for the 21st century as it can provide for the comfort and increase the standard of living.

The issue is topical in Latvia due to several reasons. Firstly, in Latvia there have been virtually no deep studies of capital structure. Secondly, no empirical research has been made regarding capital structure and business cycle of Latvian enterprises. Thirdly, in Latvia the calculation of financial indicators and their analysis, including determining the weighted average cost of capital, is not common.

The **purpose of the paper** is to analyse and assess the capital structure change and features in the changing conditions of economic recession by estimating the cost of the different sources of financing and the weighted-average cost of capital and, based on obtained data, to put forward recommendations for improving capital structure of Latvian chemical substances and products manufacturing enterprises in the changing economic environment of Latvia.

The **object of the research** is the capital structure and its change during recession.

The **methodology** of the paper includes quantitative and qualitative methods of research in economics – monographic and econometric methods, time series analysis, and correlation, as well as graphical depiction.

Recent Publications and Most Common Research Areas

There are countless factors defined in financial literature that influence the capital structure. Undeniably, macroeconomic factors have a large impact on corporate capital structure. Traditional consideration is that, in the upward phase of economic cycle, a company can raise debt easily and cheaply, while in recession the opposite is true. However, it is very easy to make incorrect decisions in the upward phase and raise more debt without the consideration of the threat it poses to corporate solvency and financial flexibility. For example, *Graham J. (2002)* has carried out a comprehensive survey which was aimed to analyse the practices in corporate financing with a special attention given to budgeting and capital structure. The results of the survey showed that companies pay less attention to financial theory and are more inclined to follow practical, common-knowledge regularities. When debt policy is set, CFOs (CFO – *Chief Finance Officer*) have one main goal in mind – preserving financial flexibility, and not reducing the weighted-average cost of capital. This goal is related to the maintenance of the set and desirable level of credit rating [2].

The study by *Erel I., Julio B., Kim W., Weisbach M.S. (2011)* (the sample consisted of 21 657 publicly-traded debt issuances, 7 746 seasoned equity offerings, 40 097 bank loans and 12 048 private placements in the U.S. between 1971 and 2007) confirms that the macroeconomic situation influences the way in which companies raise capital, as well as the corporate ability to do so. The authors of the study divide the theories on the subjection of the capital structure from the macroeconomic situation into two groups: depending from the demand or the supply. Capital demand theory is based on the changes in information asymmetry during the business cycle; under bad macroeconomic conditions companies will have to issue less information-sensitive securities, making a switch from equity to convertible bonds, and



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from convertible bonds on to debt. The capital supply theory is founded also on the “flight-to-quality” model, which envisages that in the case of a weak economy the capital supply (in other words, bond demand) will move on to bonds of a higher quality and lower volatility, taking into consideration the changes in risk. Equally, one must note the inference that noninvestment grade companies raise capital (when they have the opportunity) in the period of the upward phase but they are excluded from public capital markets during the recession. In their turn, higher quality companies use the opportunity, which arrives from the heightened demand for corporate bonds, and increase capital when economy is in recession. Overall, a conclusion is drawn that capital supply has a greater impact than capital demand in the period of recession [3].

Hess D., Immenkotter P. (2011) also confirm that the macroeconomic situation is a significant factor that influences the capital structure. Optimal capital structure and benefits from debt vary pro-cyclically, i.e., they are higher in the period of expansion [4]. In his turn, *Amdur D.* (2008) emphasizes that, at a high level of output, overall, U.S. companies raise more corporate debt, make more investments and make larger payments to shareholders. Raising of debt and dividend payments to shareholders have a positive correlation with investments, as well as each other. From these results one can infer that companies use debt to make investments, as well as to increase payments to shareholders. A question arises – why do companies constantly move funds from lenders to shareholders during the business cycle [5]?

Optimal financial decisions are more conservative in bad times, when companies refinance their debt (*Bhamra H.S., Kuehn L., Strebulaev I.A.*, 2008). Corporations with limited financial opportunities observe a more pro-cyclical financial policy. However, empirically, aggregate leverage in economy has been shown to be counter-cyclical [6]. The model developed by *Hackbarth D. et al.* (2006) also envisages that the financial leverage must be counter-cyclical [7]. *Korajczyk R., Levy A.* (2003) conclude that the financial leverage of financially unconstrained companies changes counter-cyclically with the macroeconomic conditions, while in financially constrained companies – pro-cyclically. The authors, taking into consideration that, in accordance with literature, corporations with different levels of access to financial markets have distinct features of debt-raising, divide the sample into two categories – financially constrained and financially unconstrained. A company is financially constrained if it does not have enough cash to take the investment opportunities and it has large agency costs when it accesses financial markets [8]. However, these studies are mainly based on aggregate dynamics, but *Covas F., Haan W.* (2011) claim that, when one uses aggregate data, correct inferences on the cyclicity of raising debt and equity on the level of a company are not arrived at because aggregate data are noticeably influenced by a small fraction of very big corporations. The authors make samples depending on the size of a company and conclude that raising debt, as well as equity (in U.S. companies) is pro-cyclical as long as large companies are not included. In addition, the pro-cyclicity of equity depends on the size of the corporation; pro-cyclicity is more expressed in smaller corporations [9].

The Capital Structure’s Features during Economic Recession

Internationally, the proportion of debt in chemical substances and products manufacturing industry enterprises was decreasing until 2008 (see Fig. 1), while in the both following years,



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one can again find an increase in the debt proportion. In general, one must note that there are no rapid changes in debt proportion; for example, for diversified companies of this industry this proportion fluctuates in the interval of 35-42%, in the five year period. Taking also into account that for the industry overall the ratio has a top range of ~50%, while the low range can be found at ~35%, one can conclude that the optimal proportion of debt and, consequently, the optimal capital structure of chemical substances and products manufacturing enterprises is in this interval.

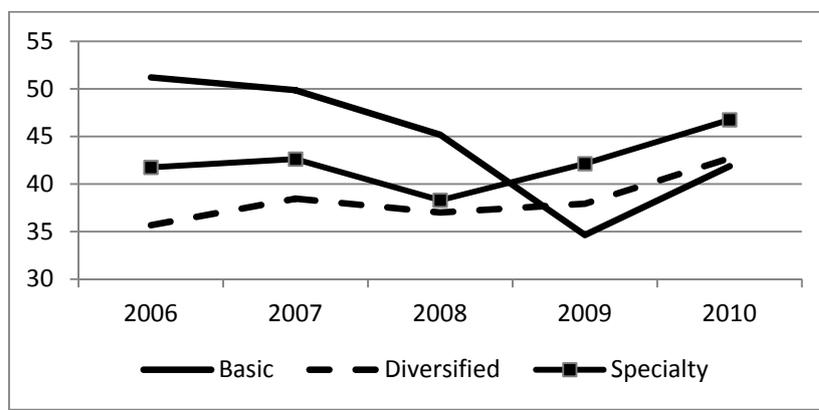


Figure 1. Average world proportion of debt in chemical substances and products manufacturing industry enterprises, 2006-2010

Source: Prepared by the author, using data of the *Damodaran Online* [10].

Latvian companies of the chemical substances manufacturing industry are characterised by relative stability of assets structure in the period in question. Although the proportion of long-term assets in total assets was 52% in 2006, the proportion fluctuated in the range of seven percentage points (60-67%) from 2007 until 2011 (for 2011, 1st quarter data only). However, the trends of capital structure are distinct (see Fig. 2):

- First, Latvian corporations are characterised by extreme changes in the proportion of debt (compared with world data). For example, in three years (2006-2008) the ratio increased by 32 percentage points, while in two most recent years (2009 – 1st quarter of 2011) it decreased by 20 percentage points;
- Second, international and Latvian ways of organizing capital structure by enterprises during the recession are diverging because internationally, on average, a reduction in the debt proportion from 2006 until 2008 was recorded, while in Latvia, on the contrary, the proportion increased. The same situation took shape also in the following periods, i.e., around the world, companies increased debt, while, in Latvia, companies of the respective industry decreased it;
- Third, internationally, the debt proportion practically does not exceed 50% but, in Latvia, on the contrary, the proportion of debt in capital structure does not drop below 51%.



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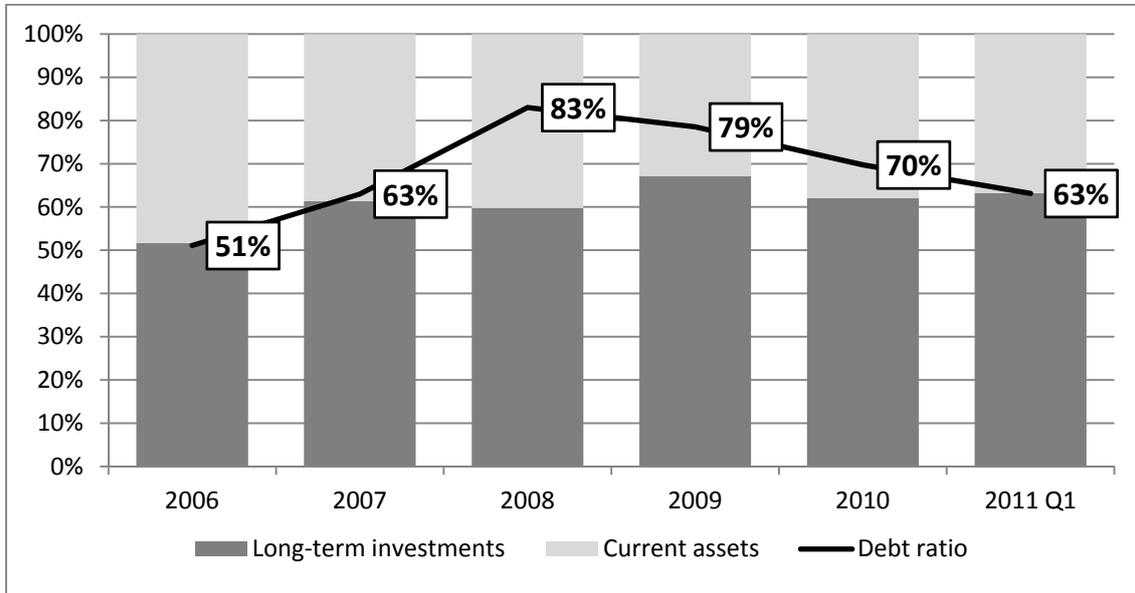


Figure 2. The asset structure and debt proportion of the chemical substances and products manufacturing industry in Latvia, from 2006 until 1st quarter of 2011

Source: Prepared by the author, using data of the Central Statistics Bureau [11].

Out of the five companies included in the sample, two corporations stand out – PPE Serviss, Ltd. and Defreo, Ltd. These are the two companies that are characterised by extreme fluctuations in capital structure in the 5-year period of the study – PPE Serviss, Ltd. has reduced the proportion of debt, while Defreo, Ltd. – has increased (see Fig. 3). The changes in capital structure of the three remaining companies are inconsistent – the debt proportion increases in one reference period, and then decreases again.

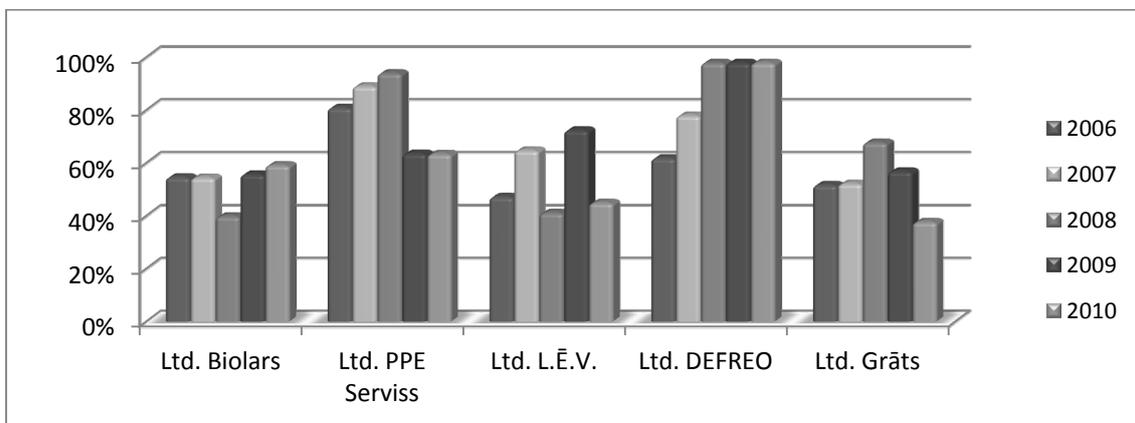


Figure 3. Changes in debt proportion of the companies in the study, 2006-2010 [12].



The changes of the debt proportion of PPE Serviss, Ltd. in the five-year period essentially reflect the ratio of the whole industry, i.e., the proportion of debt increased from 2006 until 2008, but decreased in 2009 and 2010. In its turn, although the ratio of Defreo, Ltd. had an identical trend in the first three years, but in the last two years the company was not able to reduce the proportion of debt, which diverges from the industry-average trend.

While studying both companies in more detail, one can find some additional significant differences (see Fig. 4). Firstly, there is a noticeable divergence in the asset structures of both corporations. The proportion of long-term assets in the asset structure of PPE Serviss, Ltd. in the five-year period fluctuates from 10 to 16 per cent, while the average ratio of Defreo, Ltd. for the period is 72%. Second, PPE Serviss, Ltd. has operated with a profit during the whole period of the study (average current ratio of 1.43), Defreo, Ltd. – practically with losses every year (average current ratio 0.42).

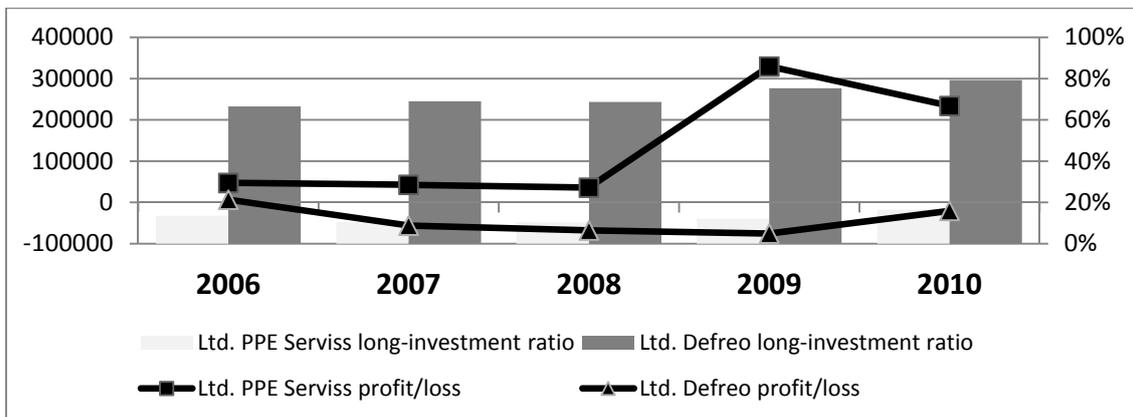


Figure 4. The proportion of long-term assets in the asset structure and profit or loss of PPE Serviss, Ltd. and Defreo, Ltd., 2006-2010 [12].

Overall, PPE Serviss, Ltd. has performed better in the recession phase (taking into consideration its profit and adequate liquidity). However, one must note that PPE Serviss, Ltd. is operating with an atypically low proportion of long-term assets in the asset structure for the sector of industry in question (from 2006 until 2010, the ratio for the industry has fluctuated from 52 to 67%, while company ratio was 10 to 16%). Nevertheless, if one makes a comparison with the three other corporations analysed in the study, it is Defreo, Ltd. that stands out with a high proportion of long-term assets; the average proportion of long-term assets of the 4 companies (PPE Serviss, Ltd., Biolars, Ltd., L.Ē.V., Ltd., Grāts, Ltd.) varies from 24 to 31%. It should be noted that on 17 May, 2010 the insolvency process of Defreo, Ltd. was initiated.

Furthermore, one can draw the following conclusions on the features of the formation of corporate capital structure:

- Use of traditional sources of financing – all companies in the period of the study had, to a larger or smaller degree, used loans from credit institutions. The most frequently employed kinds of loans were: loans and leases; less often – overdrafts and lines of credit. The loans from credit institutions were mainly short-term, corporations (for



example, L.Ē.V., Ltd.) repaid the loans even before the due date. There is no use of less popular forms of credit institution financing (for example, factoring), as well as convertible bonds, straight bonds, etc.;

- The amount of capital stock is relatively constant, only one company (PPE Serviss, Ltd.) has increased its capital stock by LVL 70 000 in 2010;
- A feature that characterises the companies in the study (with the exception of Defreo, Ltd.) – in 2009 and 2010, while loans from credit institutions were dwindling, the amount of other borrowing did increase. Other borrowing was provided to the companies by a) other companies, b) individuals, c) company founders. More often than not, these loans are long-term, not short-term, as well as interest-free.

The author of the paper does not recommend raising debt by issuing bonds during the economic downturn because bonds as a form of financing envisages a repayment at a set date. Compared with, for example, loans from credit institutions where the principal amount usually is repayed during the whole period of borrowing in equal installments, a company would need to make comparatively large cash outpayments, which, under the present conditions, would endanger corporate stability and existence. If a company, at the end of the borrowing period, would not have the funds necessary for repayment, often it is possible to make an agreement with banks on the credit payment schedule, which would be acceptable to both sides. However, in order to repay the existing bonds, one could, for example, issue new ones but there are few investors in the economic downturn period (especially, for noninvestment companies).

Taking into consideration research papers on corporate capital structure and economic cycle, the author of the paper recommends to Latvian chemical substances and products manufacturing enterprises to apply pro-cyclical financial policy. Exceptions are investment grade and large companies – these enterprises can use counter-cyclical policy, because of their ability to raise capital even in the downward phase. Since international and Latvian average structure ratios and its dynamics differ greatly, it is recommended to companies to avoid rapid and sudden increases of debt ratio and it is also advisable for the average debt ratio not to exceed 60%.

Cost of Capital Sources and Weighted Average Cost of Capital Dynamics

While conducting the calculation and analysis of the cost of capital sources and the weighted-average cost of capital, the calculations are not being performed on the data of Defreo, Ltd. because the insolvency process of this company was initiated in 2010. In addition, the company has not made any dividend payments in period of the study (unlike the remaining 4 companies), which makes the calculation of the cost of equity more inconvenient.

The traditional equations for calculating the cost of capital sources and the weighted-average cost of capital cannot be practically applied by external users of company annual reports [13], therefore, the author of the paper has carried out a simplified calculation of the cost of equity, cost of debt and the weighted-average cost of capital, based on the approach in Fig. 5. This is why the following results of capital cost calculations need to be mainly regarded from the point of view of dynamics, not from the view point of absolute numbers.

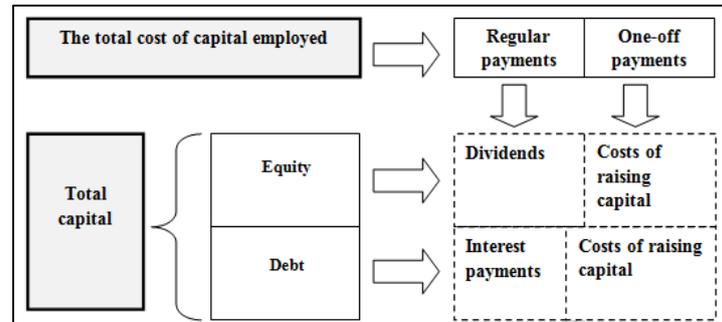


Figure 5. The total cost of capital employed and its components [13].

The calculation of the cost of equity is done with the following methodology:

- Only regular payments are taken into consideration. These are dividend payments because all 4 corporations have made regular dividend payments (the exception is 2010, which will have a separate mention). In the case of these companies (all companies have limited liability, increase in capital stock has happened only in one company and only once), the influence of one-off payments on the cost of equity can be regarded as practically insignificant;
- In the calculations, the dividend payments are used instead of the allocated dividends (the cash outflow principle is being employed). The information on the dividend payments is acquired from the cash flow statement;
- The cost of equity is obtained by dividing dividend payments by equity.

The calculation of the cost of debt is done with the following methodology:

- Only regular payments (interest payments) are taken into account. In this case, the rate of corporate income tax (reduces the total cost of debt) is not taken into consideration, as well as the costs associated with raising capital (increase the total cost of debt). The experience of the author of the paper tells that both these factors correlate with each another, i.e., the larger the loan and the higher the interest payments, the bigger will be the benefit (interest payments reduce the taxable income). Also, the larger the loan, the larger can be the commissions charged by the credit institution (most commonly applied as a percentage of the loan amount), the higher the costs of registering the pledge, and the bigger the premium payments on the insurance policy;
- In the calculations, the interest payments are used instead of the accrued interest (the cash outflow principle is being employed). The information on the interest payments is acquired from the cash flow statement;
- The cost of debt is obtained by dividing interest payments by debt.

The weighted-average cost of capital (WACC) is calculated using the traditional equation:

$$WACC = K_e * (E/(E+D)) + K_d * (D/(E+D)), \quad (1)$$

where K_e – cost of equity;

K_d – cost of debt;

E and D – equity and debt capital [14].



Fig. 6 shows the acquired results for each company. As already mentioned before, a simplified calculation was applied to obtain rough data on the evolution of weighted-average cost of capital and its changes in the recession.

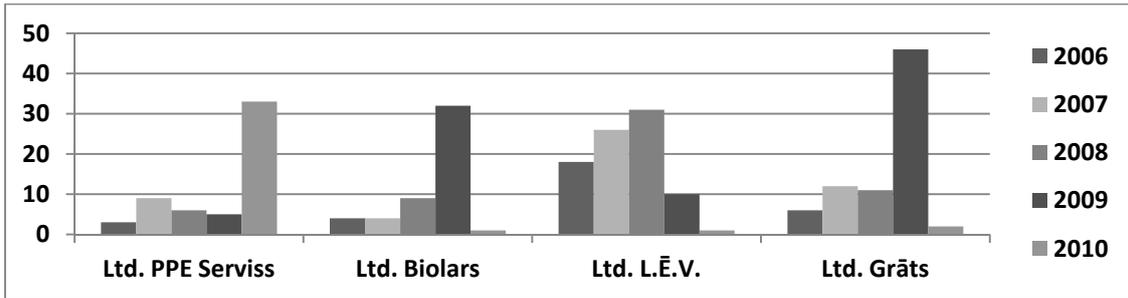


Figure 6. Weighted-average cost of capital of the companies in the study, 2006-2010, %.

The cost of debt in the period of the study fluctuates from 0% to 6%, while the cost of equity changes from 0% (in the period when dividend payments were not made) to 6% (dividend payments are made) and to even 122% (dividend payments are made).

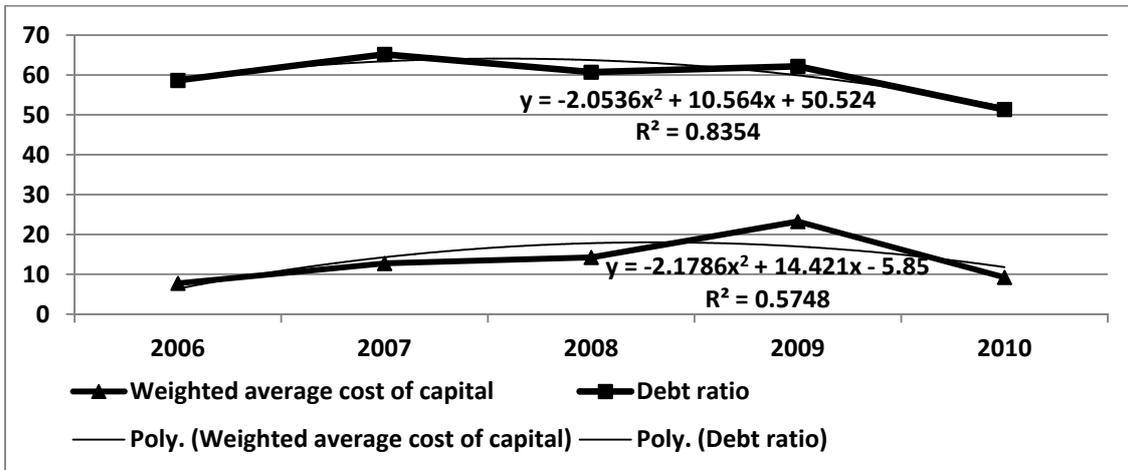


Figure 7. Weighted-average cost of capital and debt ratio of companies in the study, 2006-2010 [average parameters of the four companies]

Three companies (PPE Serviss, Ltd., Biolars, Ltd., Grāts, Ltd.) are characterised by features of a similar nature in the scope of the cost of capital, i.e., the weighted-average cost of capital hovers around or below 10%, except for one period (for PPE Serviss, Ltd. 2010, for Biolars, Ltd. and Grāts, Ltd. – 2009) when the cost increases noticeably. The fast changes of the parameter were caused by dividend payments. Biolars, Ltd. and Grāts, Ltd. have made dividend payments in 2009 that exceed corporation's capital stock 1.4 and 1.9 times, respectively, while dividend payments of PPE Serviss, Ltd. in 2010 exceeded capital stock even 3.4 times. One must note that, in 2010, only PPE Serviss, Ltd. is paying dividends.



For further inferences, the average company parameters were summarized (see Fig. 7). In the four periods (out of 5), the changes of the debt proportion and the weighted-average cost of capital are coordinated – when the debt proportion increases, the weighted-average cost of capital increases, as well, and vice versa. The changes of the debt proportion during the recession comply with the industry data, while the weighted-average cost of capital (despite the high dividends that increase the cost of equity) decreases, too, because companies are switching from the more expensive loans provided by credit institutions to the interest-free loans from other companies, individuals and founders. As the dividends are being paid practically every year, it means that, when the cost of debt goes down, the weighted-average cost of capital decreases, as well.

Both sets of data – the debt proportion and the weighted-average cost of capital – are best described by the trend line of quadratic equation, which, to author's mind, confirms the trend of the data and dynamics according to the economic cycle – the shape of the trend line reflects the shape of the economic cycle. This is also confirmed by the correlation of the debt proportion with the weighted-average cost of capital (a medium correlation, correlation coefficient of 0.4936); with the cost of debt (a weak and negative correlation, correlation coefficient -0.0638); with the cost of equity (a medium strong correlation, correlation coefficient 0.6616).

Conclusions

1. The main aim of companies is not minimizing the weighted-average cost of capital but maintaining the financial flexibility so that, if necessary, they could make investments from equity funds, as well as retain access to the financial markets and raise capital.
2. Companies should avoid faulty decisions already in the upward phase (and essentially in any period of the economic cycle). When a company raises an unduly large amount of debt, one must take into consideration that its solvency and financial flexibility might be at risk in the future because, in the recession phase, the capital supply has a greater significance than capital demand.
3. The features of the setting of and changes in the capital structure of Latvian chemical substances manufacturing companies differ widely from world trends. Compared with the world-average ratios, Latvian companies are characterised by extreme changes in the debt proportion; the dynamics of change are contrary (internationally, the debt proportion increases during the recession, while in Latvia it decreases); the debt proportion practically does not exceed 50% according to the world-average data, while in Latvia, on the contrary, the parameter is no less than 51%.
4. Only traditional sources of financing are used (loans from credit institutions, other companies and individuals). Moreover, 2009 and 2010 are characterised by the reduction in the amount of loans from credit institutions, while the amount of interest-free loans from individuals increased.
5. Latvian chemical substances and products manufacturing enterprises should apply pro-cyclical financial policy. Exceptions are investment grade and large companies – these enterprises can use counter-cyclical policy, because of their ability to raise capital even in the downward phase. Since international and Latvian average structure ratios and its dynamics differ greatly, it is recommended to companies to avoid rapid and sudden increases of debt ratio and it is also advisable for the average debt ratio not to exceed 60%.



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6. The cost of equity is greater than the cost of debt in Latvian companies of chemical substances manufacturing industry (corresponds to norms mentioned in specialized literature). As the payment of dividends occurs without changes in the circumstances of the recession, too, but companies are replacing the more expensive debt provided by the credit institutions with cheaper (interest-free) debt provided by other companies, individuals and founders, the weighted-average cost of capital in 2010, compared with 2009, has decreased.
7. There is a medium strong correlation between the proportion of debt and the weighted-average cost of capital, as well as between the debt proportion and the cost of equity. In its turn, the correlation of debt proportion with the cost of debt is weak and negative.

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INCOME INEQUALITY AND ECONOMIC GROWTH IN LATVIA OVER THE LAST DECADE

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Keywords: income inequality, economic growth, Gini coefficient, GDP growth rate, Latvia, I390.

Abstract

The link between income inequality and economic growth is the research object of many studies. Critical literature review shows two main directions. On the one hand there is evidence that income inequality is connected or even strongly connected with the changes in economic growth. Mostly these studies show that higher inequality prevents economic growth. Nevertheless some studies prove that there is no connection between inequality and growth or this connection can not be taken into account.

The author analyses income inequality and its connection with economic growth in Latvia from 1996 till 2010. Gini coefficient is used to determine economic inequality as the most widely used indicator of inequality and GDP growth rate to reflect changes in the economic growth. The main finding shows strong positive correlation between Gini coefficient and GDP growth rate in Latvia particularly within the period from 1999 till 2007. With the economic crisis from 2008 macroeconomic situation changed and the link between inequality and economic recession disappears. There was a rapid decrease of GDP growth rate, at the same time Gini coefficient remained comparatively high. The economic justification of such macroeconomic situation is discussed. According with Kuznets theory, the migration of the workers from the agricultural sector to the industrial sector explains increasing of income inequality at the initial phase of the economic growth. In Latvian case there are some differences first it was the transition period from command to free trade economy. Second the economic activity in the agriculture and in the manufacturing has fallen. It led to significant structural changes: agricultural and manufacturing share in GDP has been decreased while service industry is being increased. Hence given both different way of economic development and the impact of global financial crisis we can not use Kuznets theory to explain increasing of income inequality and this forecast whether income inequality increases or decreases at the phase of the economic growth in the nearest future in Latvia.

The inequality is important macroeconomic phenomenon which has nature of inexhaustible actuality both in length of time, and in aspect of geographic. Literature review



shows that effects of income inequality mainly have negative character. Wide range of scientists such as economists, politicians, socialists, scientists whose fields are related to criminology, health care, education, etc., have interested in inequality and its connection with various phenomena in the different fields of science.

First it should be useful to mention three income inequality levels (or three inequality concepts as pointed out by Milanovic [7]) are recognized: within-country inequality – income inequality among population or groups of population within one nation or region, between-country or international inequality – inequality among countries, global inequality – inequality among the world's inhabitants. In this article the author focuses on inequality at the national level, i.e. within-country inequality.

Briefly noted several scientists argue the violence is more widespread in societies with bigger income differences [3; 5; 9; 6]. Wilkinson [19] shows that higher inequality deals with lower efficiency of health care. Less public participation, less reliant on each other is one more effect of income inequality [18; 13]. In this article the author focuses on income inequality and its connection with economic growth.

The link between income inequality and economic growth is the research object of many studies and frequently discussed issue today. However there is no unambiguous explanation. Critical literature review shows two main research results. On the one hand there is evidence that income inequality is connected or even strongly connected with the changes in economic growth. Mostly these studies show that higher inequality prevents economic growth. Nevertheless some studies prove that there is no connection between inequality and growth or this connection can not been taken into account.

Further the author first reflects a brief overview of the literature on connection between income inequality and economic growth. Then describes and analyzes income inequality and its forming determinants; the link between inequality and economic growth in Latvian from 1999 to 2010. The author used data from the Statistical Bureau of European Commission *Eurostat* [15] and Central Statistical Bureau of Latvia [16]. Data of the indicators of income inequality are not completed during the time period from 1999 till 2000. The article ends with summary and conclusions.

Theoretical Aspects

One of the first well-known research on connection between income inequality and economic growth was study of American economist Kuznets [4]. According with the economist advanced hypothesis income inequality increases at the initial phase of the economic growth and then reduces forming the inverted U – shape dynamic curve called Kuznets curve.

There are following assumptions in the basis of the idea of the economist:

- Dual economy exists where one – agricultural sector is more backward in technological way than second – industrial sector;
- Initially agriculture is prevalent field.

The rising of inequality at the initial phase of the economic growth Kuznets pointed such explanation: the migration of the workers from the agriculture sectors to the industrial sectors (rural-to-urban migration as well). Specific weight of industrial sector increases, higher wages



of the workers consolidating and that has involved labour force. Besides Kuznets observed the inequality within industrial sector can be higher than in agriculture sector because of the initially influx of the low skilled labour force to industrial sector. As the economist pointed out these factors encourage the increasing of income inequality both in the overall economy and in the industrial sector. Kuznets indicates that differences between wages of rural and urban sectors are the significant component in the common inequality in the poorer countries.

Kuznets theory about connection between inequality and economic growth was approved by Williamson and Lindert [20] in the 20th century 70-ties. They carried out a fundamental analysis of income inequality dynamics in the US and in the UK enveloped all industrialization period of both countries.

Mostly scientists recognize that higher income inequality lead to slower economic growth [2; 11; 12]. Based on an extensive research on development of South Asia countries Myrdal [8] found that increasing of income inequality may cause social inequality which all expression forms are harmful to productivity. Thereby income inequality is reason of economic development slowdown.

Barro [1] has come to a conclusion that higher income inequality in poor countries is moved to preclusion of economic growth while in developed regions it encourages growth. However Ravallion [14] argued there is a little correlation between income inequality and economic growth or not at all. At the same time he found that income of the poor economic development contribute to an increase not as much as the rich income.

Temple in his study [17] used the Lorenz curve and Haris-Todaro model in dual economy. He concludes that capital accumulation and technological progress in the agricultural sector reduce income inequality, at the same time the impact of manufacturing development on inequality is ambiguous.

Nissanke and Thorbecke [10] examine the causal chain of openness-growth-inequality-poverty. Inequality is treating as the filter between growth and poverty reduction. They formed a schema based on extensive literature analysis. In this schema the scientists reflect possible channels through which income inequality prevents economic growth. For example high initial income inequality entails social tensions and political instability that cause increasing uncertainty, lower investment. And its consequences – lower investment lower economic growth.

Literature review shows complicated nature of link between inequality and economic growth. The next section devoted to analysis of both income inequality and economic growth and connection between them in Latvia over the last decade. The author shows the main income inequality forming determinants in Latvia.

Inequality and Growth in Latvia

Analysis has covered Latvian situation within the period of time from 1996 till 2010. The author used data from the Central Statistical Bureau of Latvia and Statistical Bureau of European Commission *Eurostat*. Further author analyses numerical indicators of income inequality to show changes of the within-country inequality over the last decade and the main income inequality forming factors which show the distinct way of economic development in Latvia. To compare dynamics of income inequality in the Baltic States see Appendix Figure A.1.



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During the last fifteen years Latvia has experienced significant changes affecting its future development. First Latvia was on the transit way from command economy to free trade economy. It led to significant structural changes: agricultural and manufacturing share in GDP has been decreased while service industry is being increased. Second Latvia entered the European Union in 2004. It meant to Latvia higher openness of economy and trade liberalization. Third there were external factors that influenced the economy as well. Impact of the Asian crisis in 1997 reduced economic activity but not so strong as impact of global financial crisis in 2008.

Gini index (or Gini coefficient if expressed as a percentage) is widely used quantitative indicator of inequality as the author mentioned above. At the absolute equality Gini is zero. The higher it is (closer to 1 or 100) the more unequal is income distribution.

Income inequality characterized by Gini coefficient was gradually increasing in Latvia from 29% in 1996 till 39.2% in 2006 according to unpublished data of Central Statistical Bureau of Latvia (Figure 1). There was substantial decreasing of Gini coefficient to 35.4% in 2007 and then it goes up again to 36.1% in 2010. In 2009 Gini coefficient (37.4%) in Latvia was the highest among European Union countries.

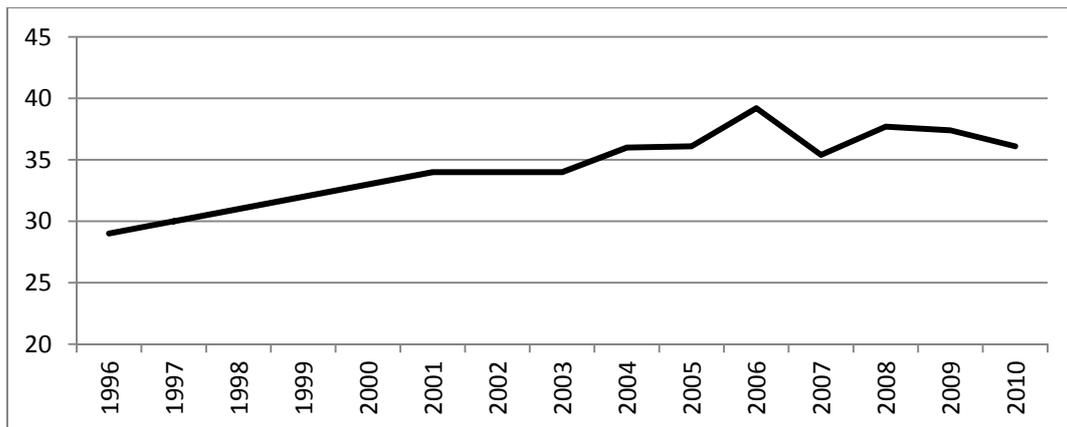


Figure 1. Gini coefficient in Latvia, %, 1996-2010

Source: Eurostat, unpublished data of Central Statistical Bureau of Latvia

Other income inequality index – S80/S20 – income quintile share ratio or inequality of income distribution shows how much higher is 20% richest people incomes than 20% poorest incomes. In Table 1 income quintile share ratio is shown for Latvia in 2000 and from 2005 to 2010. Inequality of income distribution has increased significantly in Latvia from 5.5 in 2000 to 7.3 in 2009. While in average in EU 27 countries income quintile share ratio was 4.9 in 2009. In Estonia income inequality decreased from 6.3 in 2000 to 5.0 in 2010 reaching average level for EU 27 (Appendix Table A.1). It was the case with the largest equalization of income distribution in European Union.



Table 1

S80/S20 income quintile share ratio, 2000, 2005-2010

	2000	2005	2006	2007	2008	2009	2010
Latvia	5.5	6.7	7.9	6.3	7.3	7.3	6.9

Source: Eurostat

According with Kuznets differences between incomes in rural and urban areas is the significant factor which forms inequality. In Figure 2 is shown disposable income per household member in urban and rural areas in Latvia. We can see there are significant differences between incomes of rural and urban inhabitants. Dynamics of incomes in rural and urban areas is similar thus inequality range from 2004 to 2009 is remained comparatively similar.

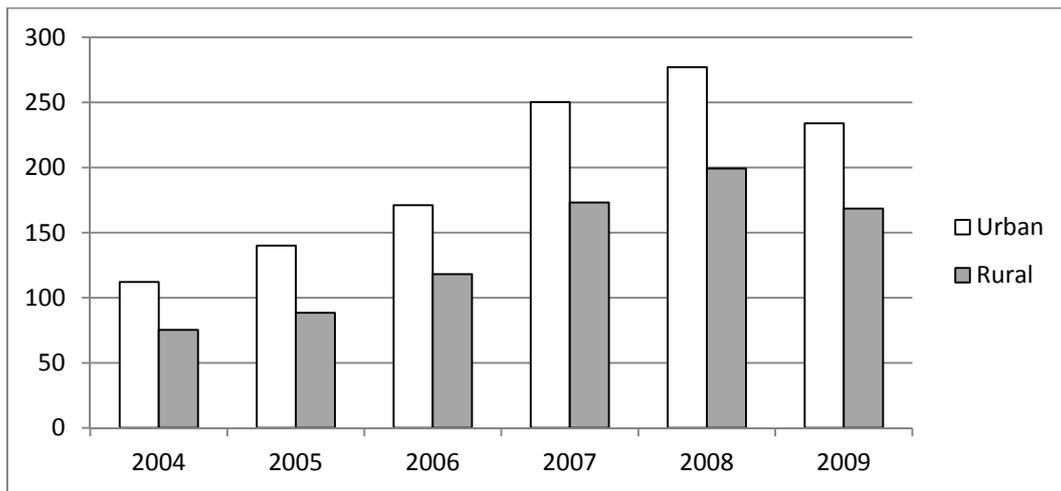


Figure 2. Disposable income per household member per month in urban and rural areas in Latvia, 2004 – 2009, Ls

Source: developed by the author from the data of Central Statistical Bureau

Another income inequality forming factor is differences of wages in the public and private sectors. In Figure 3 we see the average gross monthly wage in the public and private sectors in Latvia from 1995 to 2010. It is clearly visible that wages in the public sector has grown faster than in the private sector till 2008. The largest difference was reached in 2007 and 2008 in the public sector wages were accordingly 474 Ls and 564 Ls, in the private sector – 362 Ls and 438 Ls. The wage growth in the public sector was 35.4% in 2007, at the same time the wages in private sector increased by 30.7%. In its turn in 2009 and 2010 the wages in Latvia fallen in the public sector accordingly by 10.6% and 6.7% while in the private sector wages decreased slightly – by 1.1% and 1.4%. Thereby difference between the wages in the private



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and public sectors decreased to 43 Ls per month reaching the 2002 level. The wages convergence between the public and private sectors was contributed by government implemented measures to reduce the budget deficit particularly the wage reduction in the public sector. The author's opinion is that this is the main factor which expounds the dynamics of income inequality in Latvia over the last decade.

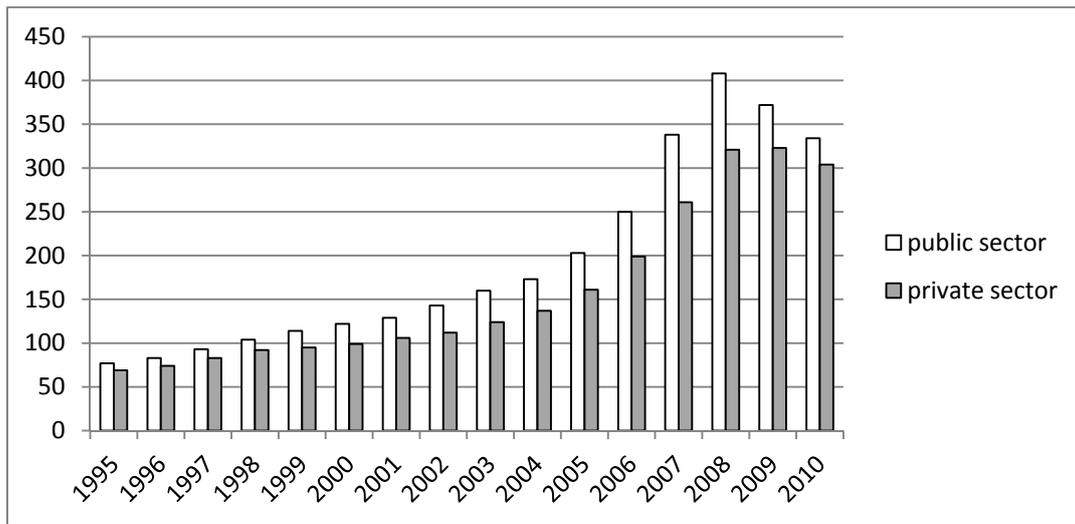


Figure 3. The average gross monthly wage in the public and private sectors in Latvia, 1995 – 2010, Ls

Source: developed by the author from the data of Central Statistical Bureau

Although this is a brief insight into the income inequality Latvian situation analysis confirms the complex nature of income inequality. Also important is differences between the wages of the skilled and unskilled labor, income inequality between inhabitants by their age group, gender and other factors.

Until 2008 economic growth has been observed (Figure 4). There was some decline in GDP growth rate in 1998 and 1999 caused by the Asian crisis and rapid growth from 2003 caused by the huge inflow of capital. The global financial crisis affected the economy of Latvia very strong. In 2008 GDP growth rate decreased by 4.6% and in 2009 by 18%. But in 2010 GDP growth rate decreased by only 0.3% that pointing to economic recovery after a severe blow.

Correlation analysis was performed to clarify what coherence exists between indicators of inequality and economic growth. For these reasons the author mentioned above analysis covers data from 1999 till 2007 because before 1996 and after 2007 Latvia's economy was unstable which was reflected in the different economic indicators. For example GDP growth rate decreased by 32.1% and 18% accordingly in 1992 and 2009, inflation was 1051% in 1992.

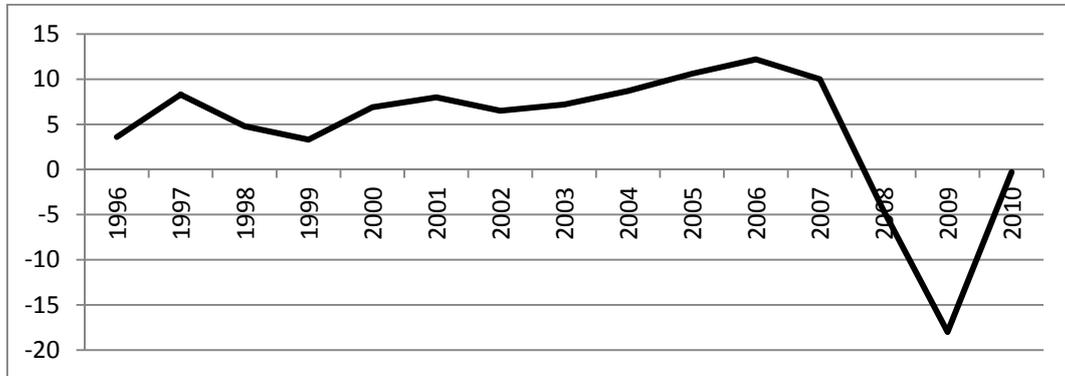


Figure 4. GDP growth rate in Latvia, %, 1996-2010

Source: Central Statistical Bureau of Latvia

In Figure 5 see a strong positive linear correlation between Gini coefficient and GDP growth rate (correlation coefficient is 0.920; Appendix Table A.2). The higher income inequality has been observed in the periods of higher GDP growth rate.

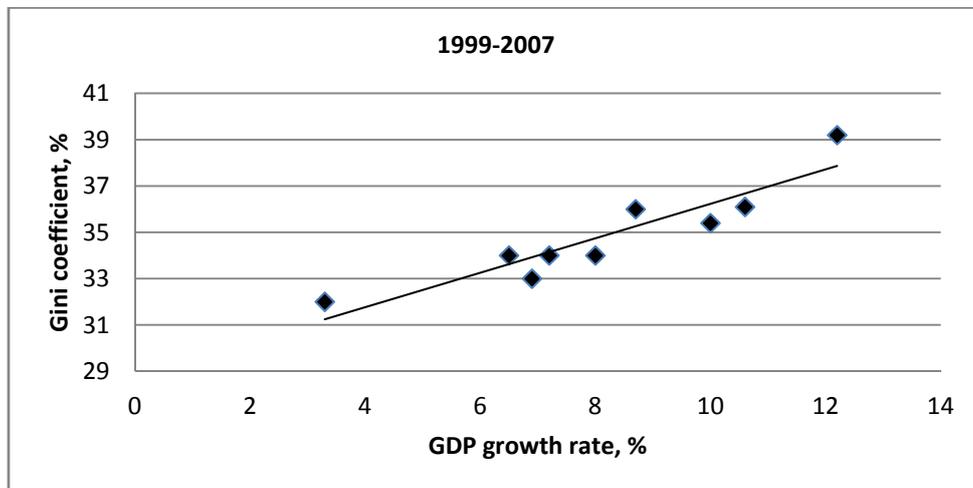


Figure 5. Gini coefficient and GDP growth rate (correlation diagram and linear regression) in Latvia, 1999-2007

Source: author's calculations from the Central Statistical Bureau of Latvia and Eurostat data

At the end of 2008 were the significant changes in economic of Latvia as a whole world. As listed before there was a rapid decreasing of GDP growth rate. At the same time Gini coefficient remained comparatively high (Appendix Figure A.2).



Summary and Conclusions

Income inequality is a complex socio-economic phenomenon whose causes and effects are interrelated and complex. Income inequality mainly has negative effect on the socio-economic situation in the state. The high income inequality can contribute to social unrest and hinder economic development. While low inequality can hinder people to engage in economic activities and encourage corruption in the formation of the redistribution system. Therefore the government should follow the changes in income inequality indicators and, if necessary, to carry out its regulation.

Literature review shows various findings on connection between income inequality and economic growth. On the one hand there is evidence that income inequality is connected or even strongly connected with the changes in economic growth. Mostly studies show that higher inequality prevents economic growth. Nevertheless some studies prove that there is no connection between inequality and growth or this connection can not be taken into account.

There are the highest income inequality indicators in Latvia between European Union countries. Government measures taken to mitigate the financial crisis and stabilize the national economy have contributed to income inequality decrease in Latvia. According with Temple [17] the capital accumulation and technological progress in the rural areas would be desirable to reduce income inequality. However it should be emphasized that it is not the author intention to analyze such problem as a dilemma of the justice and efficiency in this article. In this area much research remains to be done.

Strong positive correlation between Gini coefficient and GDP growth rate has been observed in Latvia particularly within the period from 1999 till 2007. With the economic crisis from 2008 macroeconomic situation changed and the link between inequality and economic recession disappears. According with Kuznets theory, the migration of the workers from the agricultural sector to the industrial sector explains increasing of income inequality at the initial phase of the economic growth. In Latvian case there are some differences first it was the transition period from command to free trade economy. It led to significant structural changes: agricultural and manufacturing share in GDP has been decreased while service industry is being increased. Second the economic activity in the agriculture and in the manufacturing has fallen. These circumstances led to the gradual rise of economic activity and high income inequality as well. The global financial crisis is entailing significant impact on economy of Latvia. Hence given both different way of economic development and the impact of crisis we can not use Kuznets theory to explain increasing of income inequality and to forecast whether income inequality increases or decreases at the phase of the economic growth in the nearest future in Latvia.

For further research it should be useful to analyze income inequality and it's forming determinants in similar countries such as Lithuania and Estonia: both are transition economies like Latvia. This gives an explanation on different ways of economic development, income distribution and more evidence to make clear conclusions about the link between income inequality and economic growth.



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Appendixes

Table A.1

S80/S20 income quintile share ratio, 2005-2010

	2005	2006	2007	2008	2009	2010
EU27	5.0	4.9	5.0	5.0	4.9	...
Estonia	5.9	5.5	5.5	5	5	5
Latvia	6.7	7.9	6.3	7.3	7.3	6.9
Lithuania	6.9	6.3	5.9	5.9	6.3	7.3

Source: Central Statistical Bureau, *Eurostat*

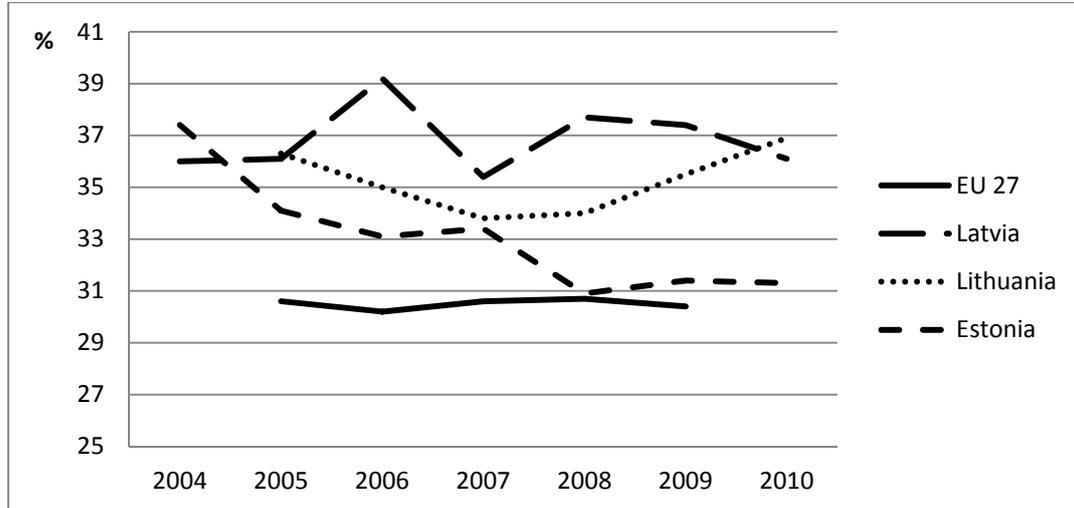


Figure A.1. Gini coefficient in Latvia, Lithuania and Estonia, %, 2004-2010

Source: *Eurostat*

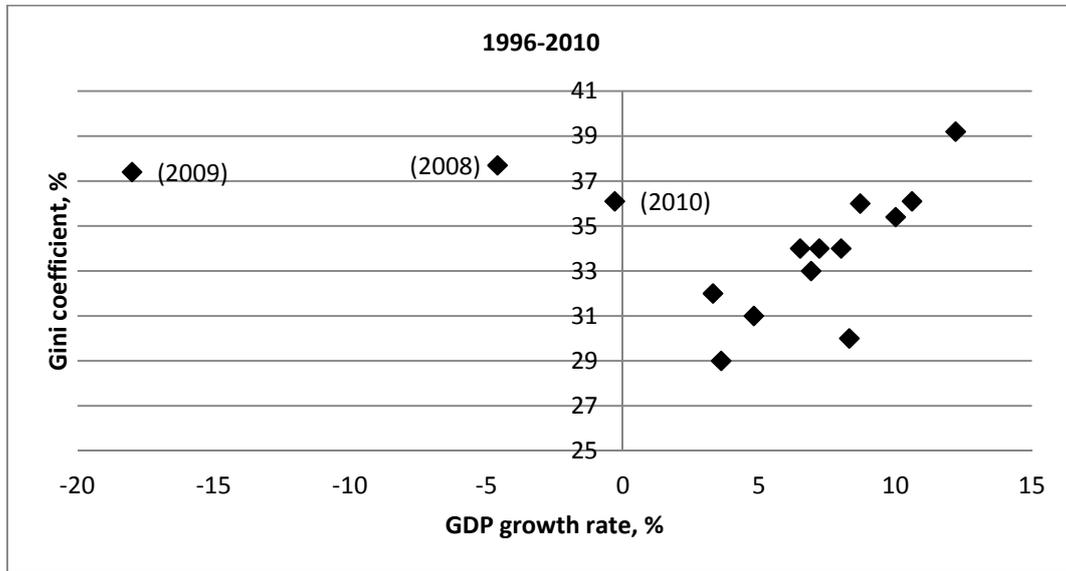


Figure A.2. Gini coefficient and GDP growth rate (correlation diagram and linear regression) in Latvia, 1996-2010

Source: author's calculations from the Central Statistical Bureau of Latvia and Eurostat data

Table A.2

Descriptive statistics and correlation coefficient, Latvia, 1999-2007

GDP growth rate		Gini coefficient	
Mean	8.16	Mean	34.86
Standard Error	0.87	Standard Error	0.71
Median	8	Median	34
Mode	#N/A	Mode	34
Standard Deviation	2.62	Standard Deviation	2.12
Sample Variance	6.86	Sample Variance	4.48
Kurtosis	0.45	Kurtosis	1.31
Skewness	-0.31	Skewness	0.92
Range	8.9	Range	7.2
Minimum	3.3	Minimum	32
Maximum	12.2	Maximum	39.2
Count	9	Count	9
Confidence Level (95.0%)	2.01	Confidence Level (95.0%)	1.63
Correlation coefficient	0.920387809		

Source: author's calculations from the Central Statistical Bureau of Latvia and Eurostat data



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EMPLOYEE SATISFACTION: NOT FORTUNE, BUT APPROACH DEVELOPMENT OF THEORETICAL FRAMEWORK

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Keywords: working circumstances, employee satisfaction and leadership style.

Abstract

Numerous studies and authors support the idea that there is a link between employee satisfaction and leadership styles. The main hypothesis of the underlying research paper is that employee satisfaction is not fortune but approach.

Based on literature review this paper tries to develop the interactions between working circumstances, leadership style employee satisfaction.

In the paper “Job design, opportunities for skill utilization, and intrinsic job satisfaction” David Morrison, John Cordery, Antonia Girardi, and Roy Payne from the University of Western Australia, Crawley, Australia made a theoretical framework linking the key job characteristics of perceived control and perceived cognitive demand to perceived skill utilization and intrinsic job satisfaction is presented. Results from one cross-sectional study and one longitudinal study are reported that support the meditational influence of perceived skill utilization on the perceived job control – job satisfaction relationship only. The relationship between perceived job demand and perceived skill utilization was mixed but no mediating effect was evident. It is argued that the level of both perceived demand and perceived control dictates the nature of the joint influence of both job characteristics on perceived skill utilization and work attitudes such as job satisfaction. [16, p. 59-79]

The paper “Well-being at work: a cross- national analysis of the levels and determinants of job satisfaction” [60] analyses the levels and determinants of job satisfaction in a cross-national setting. By using a bottom-up psychological model, in which Sousa-Poza Alfonso and Sousa-Poza Andres A. compare work-role inputs (e.g. effort, education, working time) with work-role outputs (e.g. pay, fringe benefits, status) the paper tried to explain cross-national differences.

In their investigation they tried to explain why job satisfaction levels differ in the considered countries. The main contribution of this paper was to show that job-satisfaction levels differ across countries and that these differences can be partially attributed to differences in work-role inputs and outputs. Furthermore, they showed that there are some determinants of job satisfaction that apply to all countries (namely, having an interesting job and good relations with management) and others that are country specific (such as pay and job security).



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The main results were:

- Workers in all countries are quite satisfied.
- Denmark was the country with the highest job satisfaction level. The USA was ranked seventh, Germany thirteenth, Great Britain fifteenth, Japan nineteenth and Russia twentieth.
- A comparison with the 1989 ISSP (International Social Survey Program) data set reveals that job satisfaction has declined in Germany and the USA in the 1990s.
- Countries with high work-role outputs, in general had a high job-satisfaction ranking, and vice versa.
- Having an interesting job and having good relations with the management are the two most important work-role input and having an exhausting job is the most important work-role input
- Workers in Eastern European countries tend to value high income.

→ Managerial implications: With the increased importance of multinational companies, it is mandatory for managers that they know how job satisfaction can be influenced in different cultures and how to deal with it. [62, p. 517-538]

In the paper “Does Performance Pay Increase Job Satisfaction?” Colin Green and John S. Heywood from the Lancaster University and University of Wisconsin – Milwaukee and University of Birmingham investigated the influence of performance-related pay on several dimensions of job satisfaction. In cross-sectional estimates performance-related pay is associated with increased overall satisfaction, satisfaction with pay, satisfaction with job security and satisfaction with hours. It appears to be negatively associated with satisfaction with the work itself; yet, after accounting for worker fixed effects the positive associations remain and the negative association vanishes. These results appear robust to a variety of alternative specifications and support the notion that performance-related pay allows increased opportunities for worker optimization and does not generally demotivate workers or crowd out intrinsic motivation [15, p. 710-728]. The use of performance pay schemes by employers has been shown to increase workers’ productivity, effort and earnings [44]. However, it remains unclear a priori what effect performance pay schemes have on worker satisfaction with the job. While increased earnings will increase worker satisfaction, other aspects of performance pay schemes may have less beneficial effects on job satisfaction. Pay schemes based on performance may introduce large variations in periodic earnings, reducing the utility of risk-averse workers. The performance monitoring associated with pay schemes may result in increased effort that workers dislike. While some types of performance pay (such as profit sharing) may increase job security, others will increase earnings dispersion within the firm and may reduce perceptions of fairness or lower morale and motivation. In this way, performance pay schemes may increase worker satisfaction with pay while reducing their satisfaction with other dimensions of the job, such as effort, risk or perceived fairness. This paper presents evidence on the impact of performance pay schemes on job satisfaction in the United Kingdom. Specifically, they used the British Household Panel Survey (BHPS) to investigate the impact of profit sharing, bonuses and performance pay on several dimensions of job satisfaction, including overall satisfaction and satisfaction with pay, with hours, with job security and with the work itself. The paper of Colin Green and John S. Heywood



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provides the first evidence of the influence of performance pay schemes on several of these different aspects of job satisfaction. In traditional cross-section estimates, they demonstrate that performance-related pay schemes are positively related to satisfaction with pay, to satisfaction with job security and to a lesser extent with satisfaction with hours and overall satisfaction. Performance-related pay schemes appear negatively related to satisfaction with the work itself. Next, they utilize the panel nature of the BHPS and demonstrate that controlling for individual fixed effects confirms the positive influences of performance pay. Including the fixed effects, profit sharing and/or performance pay remain associated with higher satisfaction overall, with pay, with job security and with hours. The negative influence on satisfaction with the work itself vanishes in the fixed effects estimates. A series of robustness checks confirm these general patterns but show that results vary by gender and by union status. This work expanded on previous research by investigating the role of performance pay in determining many separate dimensions of job satisfaction. Moreover, it uniquely controls for individual fixed effects when examining the dimensions of job satisfaction. Indeed, the only previous study using longitudinal data and fixed-effects estimates examined just overall satisfaction [34, 523-40], even as the individual dimensions prove critical for examining competing hypotheses. This study is also unique in the extent to which subsamples are separately examined by gender, union status, presence of children and occupation. It is also novel in allowing interactions between performance-related pay and profit sharing. Colin Green and John S. Heywood have provided evidence that profit sharing/bonuses tend to increase overall job satisfaction. Moreover, performance-related pay increases satisfaction with both pay and job security. The latter finding is not necessarily intuitive. Performance-related pay may decrease job security in so far as it is indicative of a culture of monitoring work effort. Conversely, linking pay to productivity may increase job security as wages fluctuate positively with the output of the firm [66], reducing the need for firms to lay off workers in periods of weak product demand. It may also attract workers who are willing to tolerate risk and so are more likely to be satisfied with their degree of security. Our findings suggest that the latter two effects dominate. A concern with performance-related pay is that it can lead to work intensification [29, p. 709-41], and this in turn may lead to dissatisfaction with hours worked. In this study they found no evidence of performance-related pay adversely affecting satisfaction with hours worked, even for low skilled workers whom it has been suggested are adversely affected by performance pay schemes. Indeed, in the fixed-effects estimates we found evidence of greater satisfaction with hours among those receiving performance pay. A related concern is that the explicit incentives of performance-related pay may crowd out intrinsic motivations. In the cross-section estimates there was, indeed, a suggestion that performance-related pay was associated with reduced satisfaction with the job itself. Yet the fixed-effects estimates revealed that this was the result of sorting, as the association did not persist. Thus, they remain unable to confirm any negative influences of performance pay on job satisfaction, and unable to dislodge a series of positive influences. Several caveats remain. First, these general tendencies do not mean that the job satisfaction of all workers will increase should their firms adopt performance pay. By its nature, performance pay is suited for some types of production technologies and not for others. Thus, they emphasized in their early discussion that performance pay can, in some circumstances, be counter-productive and can decrease surplus [19]. It makes sense that workers in such cases may not enjoy increased satisfaction. Indeed, they presented evidence hinting that the influence of performance pay on satisfaction may be less evident in



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service industries. Second, other dimensions of job satisfaction may still present negative correlations. Satisfaction with management, coworkers or stress may all be lowered by performance pay. They do not have access to those dimensions in their data. Finally, they recognize that their measures of performance pay may aggregate individual practices that have offsetting influences. Thus, piece rates may lower satisfaction even as earnings based on a broader formal appraisal increase satisfaction. They cannot identify whether or not such differences exist. Despite these caveats, the many suggestions that worker welfare will be reduced by performance pay received no support in their inquiry.

Another interesting research about performance pay was done by Benjamin Artz from the Department of Economics, University of Wisconsin, Milwaukee. "The Role of Firm Size and Performance Pay in Determining Employee Job Satisfaction".

Job satisfaction reflects the on-the-job utility of workers and has been found to influence both the behavior of workers and the productivity of firms. Performance pay remains popular and widely used to increase worker productivity and more generally align the objectives of workers and firms. Yet, its impact on job satisfaction is ambiguous. Whereas the increased earnings increase job satisfaction, the increased effort and risk decreases job satisfaction. This paper finds empirical evidence that on net performance pay increases job satisfaction but does so largely among union workers and males in larger firms [4, p. 315-343]. A lot of research shows that performance pay schemes may increase job satisfaction in several ways. Certainly workers' job satisfaction will increase as a result of increased earnings (Parent, 1999). In addition, employees may feel that performance pay creates a workplace that rewards hard work and effort thus increasing job satisfaction (Brown and Sessions, 2003). Another positive effect is that workers may also find confidence, esteem, and self-worth in high-performance work organizations (HPWOs). These organizations usually include performance pay as an important element and are generally small firms that promote shared decision making among management and typical employees. Bauer found out that workers in these organizations feel a greater sense of belonging and so workers may show a higher level of satisfaction in HPWOs (Bauer, 2004). Lazear worked out that performance pay has been shown to increase productivity in some settings (Lazear, 2000), which may itself increase job satisfaction if workers can witness this and gain in pride, confidence, and self-worth. [11, p. 543-569; 51, p. 71-86; 6; 45, p. 1346-1361]

There are also studies which show that performance pay can also decrease job satisfaction.

- Performance pay increases not only earnings but also effort and the associated disutility. Coupled with this, the greater stress that comes from performance pay and the associated monitoring can also lower satisfaction (Fernie and Metcalf, 1999).
- Performance pay generates greater earnings risk. Indeed, some of the determinants of productivity are beyond workers' control such as injury, sickness, or even bad weather.
- Performance pay leads to a wider distribution of earnings among employees (Lazear, 2000). This may, in turn, lead to discontentment among the less productive workers and an overall reduction in worker morale (Kennedy, 1995). Indeed, workers are generally more satisfied with their jobs if they believe their compensation is 'fair' and many workers take equality to be a type of fairness (Brown, 2001).
- Frey and Jegen (2001) explain that performance pay may be viewed by workers as an element of control rather than support. In this case, the intrinsic reward an employee



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might get from the job itself is ‘crowded-out’ or ruined by the controlling aspect of the performance pay scheme. [18, p. 23-68; 45, p. 1346-1361; 42, p. 251-258; 10, p. 879-896; 25, p. 589-611]

Also there can be made a correlation between firm size, performance pay and job satisfaction.

Some literature made a research about HPWOs (Applebaum & Berg, 2001; Baurer, 2004). HPWOs mark a change in workplace culture from a hierarchical, task specialization structure to a more flexible structure involving self-responsible teams, more low-level employee involvement in decision making, and an overall more horizontal communication and management style. In HPWOs, the distance between decision makers and typical employees is decreased and so less productivity monitoring is needed. These authors find that workers involved in this more open and flexible work environment are generally more satisfied with their jobs. In addition, Idson (1990) finds that small firms organize in a way resembling an HPWO whereas larger firms are organized in a more hierarchical and inflexible work environment. This implies that employees in smaller firms are more satisfied with their jobs, all else being equal. Previous job satisfaction research has found this relationship to be true (Clark *et al.*, 1996; Green and Heywood, 2007; McCausland *et al.*, 2005). [3, p. 271-293; 6; 35, p. 1007-1018; 28; 48, p. 636-659; 14, p. 359-381]

The main findings out of the research of Benjamin Artz were: Performance pay is an often used method to align the interests of the employee with those of the firm. However, its impact on job satisfaction is ambiguous as it generates not only greater earnings but also greater effort. Performance pay’s impact on job satisfaction is important as workers will leave their jobs if unsatisfied, defeating the firm’s original purpose of aligning employee and firm objectives. This paper shows that performance pay increases job satisfaction only in big firms. It is only in these firms that performance pay is able to decrease the distance between workers and decision makers and give workers the opportunity to optimize their effort. In small firms, where productivity is easy to monitor, there can be no gain in job satisfaction from individual performance pay as productivity is already transparent and workers are able to optimize their effort at the small firm level. In contrast, job satisfaction of workers increases when big firms use individual performance pay schemes. Performance pay acts as a mechanism that increases worker sense of belonging, decreases worker distance from decision makers, and allows the worker to choose the optimal amount of effort while providing a method for managers to monitor worker effort. Union workers and males in particular report higher job satisfaction when paid based on performance in big firms. Individual performance pay significantly increases male and union worker satisfaction with their promotion prospects, which is a significant portion of overall job satisfaction. Therefore, when pay based on individual performance in big firms, union workers and males achieve higher job satisfaction. As a result, these workers become more content with their jobs and reduce the chance of job turnover caused by low job satisfaction. [4, p. 315-343]

There exist a lot of literature regarding training, education and seminars and their relevant influence on employee and job satisfaction. Yannis Georgellis, Brunel Business School, Brunel University and Thomas Lange, AUTUniversity, Faculty of Business did a research about “Participation in continuous, on-the-job training and the impact on job satisfaction: longitudinal evidence from the German labour market”.



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A number of studies in the human resources literature acknowledge the importance of workplace training for inducing organizational commitment on the part of workers. However, small sample sizes and the absence of relevant panel data have raised concerns about the general validity of results and highlighted the need for further research to explicitly include on-the-job training as an important facet of job satisfaction. A similar empirical gap exists in the economics and industrial organization literature, where, despite the importance of both on-the-job training and job satisfaction to influence labour productivity, the relationship between the two has received surprisingly little attention. The aim of this paper was to bridge this gap and assess the impact of further training on job satisfaction in the western regions of Germany. [64]

In recent years, analysts' renewed attention to job satisfaction has also been extended to educational achievements. Verhofstadt and Omeij (2003), for example, examined the impact of education on job satisfaction in the first job and found that higher educated people seem more satisfied than lower educated people, primarily because the former get a better job. [65]

The main findings out of the research of Georgellis and Lange were:

- The job satisfaction of employees has grown in importance. In a world where capital is mobile as never before and where the nation state seems impotent in the face of economic change, attracting, developing and retaining a skilled, motivated and satisfied workforce seems to be all an organization has going for it if it wishes to maintain and improve its productivity and competitiveness. In fact, 'it seems intuitively likely that on average a more highly trained labour force will be better equipped to meet the rapid change in technology, tastes and organisations, which are characteristic of modern economies' (Lange, 2006: 73-4).
- German firms committed to providing funded training opportunities for employees may encounter rather different results for different target groups. Specifically, when designing and implementing further training programs they need to be aware that significant gender inequality issues may arise.
- The participation of German workers in further training has an impact on job satisfaction
- Participation in training depends heavily on individual labour market characteristics, such as age, gender, previous qualifications, marital status, and nationality of the individual and the size of the firm in which the employee operates.
- There is a relationship with age and a statistically significant relationship between job satisfaction and health, marital status and earnings.
- Employer-sponsored further training has a positive, statistically significant effect on the job satisfaction of men, but that the same does not hold true for women.
- By drawing on such established approaches as discrepancy theory, equity theory and social exchange theory, Yannis Georgellis and Thomas Lange interpreted their findings by reference to Germany's well-documented labour market segmentation, which may result in a perceived breach in the psychological contract between the sponsoring firm and female trainees, and an occupational lock-in effect for women. Compared with their male counterparts, women's lower levels of job satisfaction post training were explained on this basis. [27]



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Another very interesting approach is the research of Melanie K. Jones, Richard J. Jones, Paul L. Latreille and Peter J. Sloane School of Business and Economics, Richard Price Building, Swansea University. They did a different research for this item for the Britain labour market.

“Training, Job Satisfaction, and Workplace Performance in Britain: Evidence from WERS 2004”.

Their paper analyses the relationship between training, job satisfaction, and workplace performance using the British 2004 Workplace Employee Relations Survey (WERS). Several measures of performance are analyzed including absence, quits, financial performance, labour productivity, and product quality. Although there is clear evidence that training is positively associated with job satisfaction and job satisfaction in turn is positively associated with most measures of performance, the relationship between training and performance is complex, depending on both the particular measures of training and of performance used in the analysis.

Most of the literature of the effect of training on job satisfaction has focused on the impact of education and skills on job satisfaction rather than the effect of training as such. One exception is Siebern-Thomas (2005) who, analysing 13 countries in the European Community Household Panel (ECHP) 1994–2001, found that job satisfaction tended to be higher where there was access to workplace training. Hersch found for the USA that over-educated workers were less satisfied than adequately educated workers (Hersch, 1991) and that over-educated workers received less on-the-job training, but were more likely to be promoted (Hersch, 1995). Yet Battu *et al.* (2000) found a negative relationship between over-education and promotion for UK graduates and no evidence of employers upgrading tasks given to the over-educated [57, p.31-36; 31, p. 140-144; 32, p. 611-624; 5, p. 82-93; 12, p. 263-275]. Buchel (2002) found no significant difference in job satisfaction between over-educated and adequately educated employees in his study of German firms. Training can have an indirect effect on performance if it increases job satisfaction by, for example, making it easier for employees to perform the job or feel more valued (as in Akerlof's 1982 conceptualization of the labour contract as a gift exchange). Petty *et al.*'s (1984) meta-analysis confirms such outcomes. In contrast, if workers feel dissatisfied they may react in a number of ways (Farrell, 1983): through a sense of loyalty they may stick it out; use a voice mechanism (Freeman, 1978; Freeman and Medoff, 1984); neglect their responsibilities to the employer by absence, lateness, striking, or reduced effort (Akerlof and Yellen, 1986); or exit (Burdett and Mortensen, 1998; Jovanovic, 1979). [1, p. 543-569; 52, p. 712-721; 17, p. 596-607; 20, p. 135-141; 21; 2; 13, p. 257-273; 38, p. 972-990]

The main findings of Melanie K. Jones, Richard J. Jones, Paul L. Latreille and Peter J. Sloane were that there is clear evidence that training is positively and significantly associated with job satisfaction and that job satisfaction is also positively and significantly associated with the workplace performance on most measures of performance. The relationship between performance and training is more complicated, with the relationships depending on the features of training and measure of performance considered.

Employers may be able to improve establishment performance by increasing the volume of training and taking action to raise the job satisfaction of the workforce, but to succeed in this they also need to pay attention to the quantity and type of training offered. [36]

The leadership style and the influence on job satisfaction is evident. The leadership style is the basement of creating an environment in which employees are satisfied and likes to work.



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In the research “Participative Management and Job Satisfaction: Lessons for Management Leadership”. Soonhee Kim from the University of Nevada, Las Vegas, explores the relationship between participative management in the context of the strategic planning and job satisfaction in local government agencies.

This study examined the positive relationship between participative management and job satisfaction. It also points out the positive relationship between a participative strategic management process and job satisfaction. Furthermore, the study emphasizes effective supervisory communications as a factor affecting employee satisfaction.

Besides all limitations and directions for further research it seems evident that participative management and participative planning processes have a positive effect on job satisfaction. [59]

In the paper “An Investigation of National Trends in Job Satisfaction in Britain and Germany” from Francis Green and Nicholas Tsitsianis, Department of Economics, University of Kent a general approach for job satisfaction and dissatisfaction was done.

Trends in job satisfaction in Britain and Germany are described, and potential explanations investigated. Contrary to what might be expected from popular commentary, changing job insecurity does not explain the fall in job satisfaction in either country. It was found that intensification of work effort and declining task discretion account for the fall in job satisfaction in Britain. In Germany there was a modest fall in the proportion of people working the number of hours that they wanted to. However, while working too many or too few hours is a significant source of job dissatisfaction, the changes were too small to account for the fall in job satisfaction. [9, p. 401-429]

In this article Francis Green and Nicholas Tsitsianis did an inquiry into potential explanations for declines in overall job satisfaction in two countries for which a substantial run of data is available, namely Britain and Germany. Historically, the concept of job satisfaction has been developed theoretically and empirically within sociology and industrial psychology (e.g. Blauner 1964; Herzberg *et al.* 1957) as well as within the field of organizational behaviour (Spector 1997). Following Hamermesh (1977, 2001) the concept has become recognized as relevant also to economics (Bryson *et al.* 2004; Clark 1997; Clark and Oswald 1996; Sloane and Bender 1998). Little attention has been paid, however, to recent revelations emerging from consistent series of nationally representative survey data (Blanchflower and Oswald 1999; Oswald and Gardner 2002). Prior to the 1980s, job satisfaction data showed little or no trend. However, since the mid 1980s a selection of new repeat survey series and longitudinal panel data has shown a selective picture of change in job satisfaction in some countries (Hamermesh 2001; Jürges 2003). [8; 33; 63; 30, p. 53-72; 14, p. 341-372 / 359-381; 58, p. 222-240; 7; 49, p. 1815-1831; 26; 39, p. 489-518]

The paper’s central objective, then, is to investigate whether changes in the intrinsic and extrinsic characteristics of jobs can account for the observed changes in job satisfaction.

The major findings and managerial implications out of the research of Green and Tsitsianis were:

1. The intensification of work effort and declining task discretion account for the fall in job satisfaction in Britain. The modest rise in participation in organizational decision-making only mitigated the downward pressure on job satisfaction to a small extent.
2. Contrary to the arguments of some popular commentary, job insecurity is not a plausible explanation of declining job satisfaction in Britain. Perceptions of insecurity decreased during the



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1990s, following the falls in the aggregate unemployment rate. In Germany, by contrast, insecurity increased during the 1990s. Nevertheless, taken over the whole period of decline in job satisfaction, from 1984 until the late 1990s, job insecurity fails to account for the change.

3. Changes in the worker-job match are relevant, but not substantial enough to explain the declines in job satisfaction. While working too few or too many hours is a significant source of job dissatisfaction, the proportion whose hour's preferences were well-matched to their jobs was stable in Britain, and fell only modestly in Germany. The increasing proportions of over-educated workers had a small downward impact on job satisfaction in Britain. [9, p. 401-429]

Comparing to the research of Alfonso Souza-Poza and Andres Souza-Pouza, 2000 "Well-being at work: a cross-national analysis of the levels of determinants of job satisfaction", this paper brings not a different sight to this topic but an additional one. [61, p. 517-538]

Conclusion and managerial implications:

- This study gives evidence that there are different possibilities for influencing employee or staff satisfaction.
- Employee and job satisfaction can be managed in different ways.
- Managers should have a strategy how to organize their workplace environment and which leadership style fits best.
- Very important for managers is the sight on different countries and cultures to adopt the management and leadership style. With the increased importance of multinational companies, it is mandatory for managers that they know how job satisfaction can be influenced in different cultures and how to deal with it.
- This research shows also evidence that employee satisfaction may lead to better company performance and financial results, therefore managers have to give their employees a workplace environment which leads to staff satisfaction.
- The research about employee satisfaction and company performance was made in different countries, therefore managers have to verify if these methods also fit to their country and culture where their company is located.
- Investigations about other HR practices like recruitment/ selection/ training and other reward systems should be done.

Regarding this study and the managerial implications it is mandatory for managers to deal with it. This paper shows evidence that employee satisfaction is not fortune but approach. Employee satisfaction can be managed and improved. Out of these different approaches for getting satisfied employees methods can be evaluated and implemented for improving the workplace environment to systematically go to a "Great Place to Work".

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IMPLICATIONS FOR PUBLIC ADMINISTRATION WITHIN EU RESEARCH POLICY – STUDY OF ETHICAL ASPECTS IN THE GOVERNANCE OF EU 7TH FRAMEWORK TECHNOLOGICAL PROJECTS

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Abstract

The paper is devoted to the public administration issues in the implementation of European Union (EU) research policy, specifically dealing with the ethical aspects in the governance of EU 7th Framework Program (FP7) technological projects. The present research primarily was carried out within the framework of the EU FP7 Project “The Ethical Governance of Technologies” (EGAIS, <http://www.egais-project.eu/>) under the supervision of Professor Philippe Goujon, research director at University of Namur, Belgium. The analysis of the ethical framing within EU FP7 from the historical and normative point of view and regarding the practical implementation has allowed to determine how efficiently the respective EU FP7 ethical framing is being implemented by public administrations.

Introduction

Ethics is becoming an increasingly important issue in the public administration of technological research, due to the fact that the results of technological research today are almost ubiquitous (e.g., the ambient intelligence, personal data processing, surveillance issues) and have influence on the lives of people. The public administrations have to effectively manage the potentially non-unambiguous impacts of technological research, if only to remember the GMO case¹ which caused much controversy and public protest. The tasks for public administrations have been pointed out, for example, also in the Communication of the European Commission on the Precautionary Principle [27]. The ethical aspects that the public administrations face have been much represented also in academic discourse. As pointed out by Makrydemetres, administrative systems in western societies as well as emergent administrative cultures in

¹ A case on genetically modified foods



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developing countries often experience and are confronted with a number of opposing values and ethical dilemmas concerning the shape, conduct and orientation of public services [3].

The focus of the paper is on the ethical framing of the EU FP7 – how ethics is being conceived and implemented by public administrations in the field of technological research. The aim of our research was to study public administration issues in the implementation of EU research policy regarding the ethical aspects in the governance of EU 7th Framework Program (FP7) technological projects. Our intention was to find answers on 1) the relationship between the conceived and implemented approaches to ethics in EU public administration of FP7 technological projects, and 2) if ethical reflexivity is present in the governance of FP7 research projects.

The aim of the research: to study the effectiveness of the implementation of EU research policy by public administrations regarding the ethical framing of EU FP7 technological projects

Research methods applied: study of scientific literature and research project results, analysis of policy papers and normative documents, case studies, as well as the application of qualitative research methods: structured interviews of EU experts and officials.

Approach to the Research and Data Collection

To do this, we had to obtain data for analysis regarding the conception, legitimation and implementation (as well as the assessment) of the FP7 ethical framing. Throughout our paper we will refer to the 1) historical contextualization – analysis of emergence of the problem of ethics in FP7 from the historical point of view; 2) normative contextualization – analysis of the respective problem of ethics from the normative point of view and 3) process contextualization – analysis of the respective problem from the process (implementation) point of view.

The data collecting process was carried out through textual analysis (policy and legal documents, etc.) and through questionnaire based interviews of EU officials – in compliance with the theoretical background of our overall major research within the EGAIS project². Additional data were collected through a case study of the already performed research within the EGAIS project – on data (feedback) obtained from funded P7 projects.

By using the methods of textual analysis and structured interviews of EU officials we identified: 1) the conceived EU research policy approaches regarding ethics in FP7 (in terms of policy papers, reports and views expressed during the interviews); 2) the legitimation (actual legal and policy framework) of the FP7 put in place (in terms of institutions, primary and secondary legal acts and other binding documents); 3) the results of the actual implementation (as well as the assessment) of the FP7 ethical framework from the perspective of EU officials.

In addition to this, through the EGAIS project case study, we identified opinions on the implementation of the FP7 ethical framework from the perspective of EU Framework program projects – in order to be able to compare the respective views of the EU officials and the actual beneficiaries of the program.

² Our main research interest referred to the conditions for ethical reflexivity in relation to the efficiency of an ethical norm in the context of FP7 ICT research projects. Our approach was pre-determined by the EGAIS project, since our research was part of this project.



Based on our findings, we were able to analyse the conceived or existent institutional arrangements and governance approaches regarding the ethical framing of EU Framework program. However, given the limited scope of the present paper, we will represent the key findings and conclusions of our analysis without going into greater detail of the analysis of these findings. The interviews were meant as a supportive resource for a deeper and more comprehensive understanding of the conception and actual implementation of the respective EU research policy by public administrations³. Namely, by the interviews and their analysis we intended to go beyond the available written documents and have a deeper insight into the actual problem. For information purposes, below is enclosed a more detailed information regarding the representation of the interviewees⁴.

Thus, the rationale behind our research approach was as follows: 1) first, we need to look at the relevant policy developments in research ethics from a historical perspective, in order to see the roots of the issue; 2) secondly, based on this, we saw it important to analyse the specific ethical framing of the FP7 from the normative perspective – how the EU policy makers conceive “it should be”; 3) thirdly, as a logical sequence, we saw it important to analyse the actual implementation of the respective policy, in order to be able to compare how the conceived ethical framing and the actual outcome relate – both, from the EU officials perspective (via interview material) and from the perspective of the projects themselves (via the EG AIS case study).

The Emergence of the Issue of Ethics in the Field of Research – Historical Contextualisation

In this part of the paper we will present our research on why and how ethics became part of the EU policy agenda regarding research and technological development, and what the general ethical framing of EU science and research policy is – as a historical contextualisation for the analysis of our research problem. In legal terms this issue is being addressed by the Charter of the Fundamental Rights of the European Union (CFREU)⁵.

There is generally an increasing concern and evidence among stakeholders that the basic human values, as the respect, dignity and even security of an individual, might be threatened in an unknown and often unpredictable way (one should continuously be aware of the complex motivations that government has to contract, including ideology, the desire for reduced costs, the development of capacity, the self-interest of government contract managers, and the political calculus of each contracting initiative [4]). Also in most interviews within our empirical study

³ To analyse our research problem of the conditions for ethical reflexivity in the governance of the EU FP7 ICT research projects, we had to comply to the general approaches of the EU EG AIS project.

⁴ Our intention was to select a target group which is not homogenous as to their status, roles and responsibilities, as well as their competence and functions: 1) *present or former* involvement with the EU policy making or implementation regarding ethics in science and technology; 2) *status* as an EU official or contracted expert, or member of relevant EU body; 3) *function and role* regarding the particular aspect in implementation of the relevant EU policy.

⁵ CFREU (2000/C 364/01) has become part of the Lisbon Treaty.



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reference was being made to the traditional European values⁶. The interviewees were referring to the consequences of the new societal developments and the new technological culture which, among other things, is being characterised by an unprecedented degree of risk and uncertainty.

When questioning the interviewees specifically on the main reasons for ethics becoming part of the EU research policy agenda, we were able to trace numerous general and specific causes. The reasons for ethics emerging in EU policy agenda were linked to the interests or concern of the society at large. At the same time, during the interviews we could notice a certain contradiction – the existing institutional and legal framing for addressing ethical issues not always corresponded to the high degree and specificity of awareness expressed in the relevant policy documents, opinions, reports and interviews. Our observation was that there is an ongoing political discourse regarding the ethical framing of the EU research policy. At the same time it has become evident that the ethical discourse on science and technologies is not any more a prerogative to any particular social, religious, academic or political group, but has become contingent on multiple stakeholders, and that there is a tendency for ethics in public policy and administration to become part of a broader discourse. According to Cappuro [28]⁷ “political ethics conceived as a discourse in between public policy and society opens possibility not only to reflect publicly on the foundations of morality including its legal fixation, but also to give politicians a space of reflection beyond the constraints of political parties”.

As part of the historical contextualisation, we would like to underline also the institutionalisation and legitimation of the ethical framing of the EU research policy – how this new ethical challenge for public research policy has been addressed in practical terms. We saw it important to link the relevant EU bodies and structural units of EU institutions with their respective functions and competences to the process of legitimation⁸ of ethics in EU research policy. Thus, we are linking the issue of institutional framework with the issue of the legal framework – the EU and member state bodies with their relevant and respective authority⁹. However, this should not be viewed as an overlap with the normative contextualization presented in the next chapter, but as an additional angles of analyses.

We will specify here the main bodies and their competence with regard to respective policy issues with the aim of presenting the overall EU approach to the institutionalization and

⁶ Thus, on the one hand, the overall aim of ethics in EU research policy, as our empirical analysis has shown, is to secure the fundamental European human values. On the other hand, there have to be specific reasons that have made the EU policy makers to become aware that these fundamental human values might be challenged through modern research and technological development.

⁷ (Professor em. Rafael Capurro is the former EGE member, and he also kindly agreed to an interview in the framework of our research).

⁸ Here we will not be dealing with the role of the Council of the EU or the EU Parliament as the legislative institutions in EU, instead we will refer to the key bodies that are authorised to pass an opinion or decision on ethical issues in the implementation of European research and technological development issues as part of the respective EU policy.

⁹ By the bodies and structural units we are primarily referring to: 1) European Group of Ethics in Science and New Technologies to the European Commission with its Secretariat; 2) European Research Advisory Board; 3) Unit of Ethics and Governance within Research DG with its Ethics Review Sector (European Commission), 4) National Ethics Committees (Councils); 5) Forum of National Ethics Councils; 6) European Research Advisory Board.



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legitimation of ethics – as a historical background for a more specific EU FP7 ethical framing. Before this, however, it is important to clarify the distinction between what we would call ‘legally binding documents’¹⁰ (in our context we primarily refer to the CHREU and to three EU directives¹¹) and ‘legally non-binding documents’, as both these types of documents have a key importance for the implementation of the ethical framing of the EU research in their own specific way¹². For the link of the institutional and legal framing, see footnote¹³.

More specifically, regarding the issue of legitimation, it is important for our research problem to point out that: 1) there is no and cannot be a uniform EU ethical framing or legislation, in terms of certain rules or legal norms, primarily due to the reason of the diversity of European values (since ethics is linked to values); at the same time, there should be and there are certain principles that refer to the whole of the EU, and they are legally binding; these principles have been enclosed in the CFREU which is part of the Lisbon treaty and thus binding to all of the EU member states; 2) one of the key legal principles, as stipulated by the primary legal sources of EU, is the principle of subsidiarity; thus, when decisions have to be taken on activities (including research activities and their ethical aspects) that are to be performed in a particular member state, in principle the decision is to be taken by the respective member states¹⁴.

¹⁰ Here by legally binding sources we are primarily referring to the Charter of Human Rights in the European Union (which has acquired its legal status since 2009 as part of the Treaty of Lisbon), with its implicit or explicit reference to ethics for science and technological development. In the second place we are referring to EU directives.

¹¹ Here we are referring to the following areas covered by specific directives: 1) data protection, EU Directive 95/46/EC of 1995 on data protection; 2) clinical medicine, EU Directive 2001/20/EC of 2001 on clinical medicine; 3) animal welfare, EU Directive 86/609/EEC

¹² In regard to the legally binding relevant documents we primarily refer to primary and secondary EU legal acts and decisions; in regard to the non-binding relevant documents we primarily refer to 1) opinions and reports of relevant bodies – having advisory role, primarily for the use of the EU Commission, but also for other EU institutions and bodies; 2) policy documents and reports – mostly representing the strategic planning and strategic visions of professionals of the field (also as a resource for future policy making or as a normative vision – “how it should be” in an ideal situation), but also including assessments and impact analysis.

¹³ 1) to the reports and opinions¹³ by EGE, especially to their latest report of activities 2005 - 2010; 2) to the policy papers and reports drawn on behalf of the EU Commission as managed by the Unit of Ethics and Governance (UEG) within Research DG with its Ethics Review Sector (ERS) within the European Commission. Through our empirical analysis we identified the UEG and the ERS as one of the key actors within our field of studies, and the reports and policy documents produced by UEG and ERS as key to the strategic approaches in the development and implementation of the overall ethical framing of the EU research and development; 3) to the opinions and other documents produced by the National Ethical Committees (NECs) which in themselves may not be legally binding but a) have been drafted taking into consideration the respective legally binding national legislation; b) serve as a basis – as we shall demonstrate further in the work – for the respective EU bodies (e.g. EU Commission) to take a legal decision on the conditions of funding an EU research project (taking into account its ethical aspects) or rejecting the project proposal as ethically unsound, for example.

¹⁴ There are a few exceptions to this overall approach, especially regarding research on humans. For example, there is a uniform EU approach regarding human cloning.



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These findings and conclusions bear relevance to our analysis regarding the role and impact of the relevant bodies and relevant legal and policy documents for the implementation of ethical approaches in EU research, and specifically the FP7 research. It is relevant also regarding the inherent question – whether ethics can be reduced to law, and if not, if there are also alternative approaches for ethics to be effectively implemented in practice, with particular emphasis on ethical reflexivity.

Further on in the paper, we will analyse how the existing conceptual, institutional and legal framework is being put to practice specifically in FP7 (how law, ethics and politics is being connected and implemented by public administration). We will have to see whether ethics is not being reduced to a purely operational positivist approach, since such an approach could not be viewed as truly ethical approach (keeping in mind that the task of ethics is to test and show the difference between the “ideal” and the actual practice). We will have to see the actual regulatory framework, the role of EU and member state institutions, as well as experts in regard to decision making on ethics in FP7 ICT research. At the same time, we will have to see the role of the broader spectrum of stakeholders, the public opinion and the EU citizenship at large. Thus, further on, we will present our empirical findings regarding the normative conception of the ethical framing of the FP7.

Normative Conception – the Conceived Approach

Here will analyse the normative conception of the P7 framing and see our research problem in this particular context. We will identify the respective governance arrangements applied and see how these relate to the issue of ethical reflexivity which is our main research interest. To this end, the results from our textual analysis and interviews will be used. Respecting the length criteria of the present paper, we will present only our key findings, as relevant to our research problem.

We were viewing the normative conception of the ethical framing of FP7 in context with its institutional framework within the EC. We attempted to see how the organisational and institutional aspects contributed to the initiation and implementation of specific relevant governance arrangements. Regarding the relevant structural units in the European Commission here we are referring to: 1) the Unit of Ethics and Governance (UEG) with its Ethics Review Sector (ERS) within Research DG; 2) the Evaluation and Monitoring Unit (EMU) in the Information, Society and Media DG. Regarding the institutional approaches with implication to the decision making process for ethics in FP7 (as part of governance arrangements), our attention was targeted at: 1) experts and expert panels; 2) national ethics committees; 3) various other relevant governance arrangements and tools¹⁵.

The above mentioned structural units were relevant for our research particularly because of their specific competence and functions in relation to FP7 ethical framing. In later stages of our empirical study it was found out, however, that apart from their function in the

¹⁵ As we found out during our empirical study, although there is a clear and precisely defined institutional and legal framing with regard to the decision making procedure on ethics in FP7, the decision making procedure involves various arrangements and tools that go beyond the strictly defined legal and institutional framing.



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implementation of the FP7 ethics normative framing, these units have also a significant role in the policy deliberation process on ethics in EU research, (FP7 including), as well as in search of innovative policy solutions and administrative solutions¹⁶.

In the analysis of the normative framing of FP7 (according to the parameters within our overall theoretical approach) we have found that:

1) on the one hand, the FP7 ethical framework is being implemented by means and within the legal framework of EU and the EU member states); the responsible EU officials explicitly referred to this legal framework, when discussing the decision taking procedure for ethical compliance of FP7 projects; thus, in general terms, we could conclude that ethics in FP7 is being implemented by means of law;

2) on the other hand, as we found out during our empirical study, in practice, in the decision making procedure, various tools and approaches that go beyond the existing legal framework are widely used; these approaches and tools can also be tacitly shaped through experience, exchange and mutual learning; awareness was explicitly shown among the EU officials on the complicated nature of decision making regarding ethics in research (that ethics can hardly be equated with legal or moral authority, and that clearly there is much more to it);

3) thirdly, we came to the conclusion that there is a clear awareness and definite opinions among the EU officials regarding both, the successful aspects and the limitations of the existing ethical framework of the FP7; regarding the successful aspects, reference was often being made to the raised awareness among the relevant stakeholders; regarding the limitations, these were being interpreted as challenges to be addressed by future policy making and as part of the current policy deliberation process.

As a result of our empirical study we were able to identify the normative framing and the governance approaches of ethics in FP7 and further on, by the analysis of them, produced material for the interpretation of these findings with respect to our research problems. Our key observations, based on our interview and textual analysis are represented in footnote¹⁷. These findings will serve further on as a basis for analysis of the existing EU ethical governance approaches in relation to our research interest on ethical reflexivity in the FP7 governance procedures.

¹⁶ Thus, for example, the UEG among other functions, manages the production of high level expert reports regarding the policy approaches to EU research ethical framing, FP7 ethical framing including.

¹⁷ 1) ethical issues are present if FP7 research projects and they need to be addressed, as evidenced by the rules and procedures for ethical evaluation introduced and implemented by the relevant authorities; 2) the key approach for the evaluation procedure is based on respective EU and member states' legal framework and expert evaluation; 3) the key documents and procedures used during the ethical evaluation are the Ethical guidelines, the Checklist and Ethics review (with ethics review report); 4) expert evaluation depends to great extent on the scientific and professional background of the particular expert, and ethical expertise is much related to the approaches within risk assessment; 5) NECs have the key deciding role as to the ethical compliance of the particular research to the national legislation; 6) The awareness among the NECs is raising regarding their role to promote public discussion and policy deliberation on ethics in EU research policy; 7) various relevant stakeholders are being involved in the decision making process, if necessary; 8) the public debate is part of the ethical framework implementation.



Process Contextualisation – Implementation of the Ethical Framework of FP7

Through our interviews during our empirical study we were aiming at obtaining the opinions and analysis by the respective EU officials (present and former public administrators) regarding the results of the implementation of the ethical framing of FP7. We were particularly interested in their opinion on the success in the implementation of the FP7 ethical framing, as well on the perceived drawbacks and challenges. Furthermore we were interested in their opinions regarding the relevant governance procedures and the presence (or lack) of reflexivity in their implementation. We received a wide variety of answers, ranging from broadly general to strictly specific. We carried out the analysis of our empirical findings according to a set of parameters developed within the analytical grid in compliance with the overall EGAIS methodological approach. Following our analysis of the findings, we have found that:

1) the respective EU officials regard the implementation of the FP7 ethical framework as a success, however, the arguments are basically related to the organisational, managerial, statistical and legal aspects; 2) there is clear evidence on the respective governance arrangements put in place for the implementation of this ethical framework; 3) there is awareness present among the respective EU officials on the necessity for reflexivity within these governance arrangements (there has been an explicit reference to the policy deliberation procedures, involvement of stakeholders, public discussion and the function of learning, there was also clear reference made on the complicated nature of the issue of “ethical expertise” – in terms of non-existence of clear “ethical authority”¹⁸; 4) the respective EU officials have explicitly referred to a range of challenges to be addressed regarding the ethical framing of FP7 and its implementation, and these challenges mostly concern the problems raised by the diversity of European values, by the difficulty to translate normative assumptions into policy and legal documents, by the complexity of the issue of “ethical expertise”, the coordination of approaches among various structural units of the EC and expert panels and the difficulty to secure a continuous and effective policy deliberation and public discussion process with the involvement of multiple stakeholders, with the implicit learning function.

We will also briefly refer to the results of the case study – analyses of ethics in the governance of technological projects. According to the EGAIS analysis we have found that in FP7 ICT projects ethical thinking in most cases is reduced to the use of ethical guidelines or deontological codes for the evaluation of the emerging technologies. Within the very technology development, the need for ethical consideration prior to the funding or implementation of the project today is not the current practice. EGAIS case analysis indicate that ethical thinking in FP7 ICT projects traditionally is applied after the development of the technology. Ethical thinking is reduced to the question of justification (legitimation) of ethics, but hardly used to provide a real

¹⁸ We would like here to refer, for example, to the interview with the ex-member of the European Group of Ethics Rafael Capurro regarding the role of ethics councils: "Ethics councils within the sphere of public policy have the function of reflecting on the moral and legal foundations of specific controversial issues without being itself neither a legal nor a moral authority. Their task is reflection, not decision-making or dogmatic proclamation. They should counterbalance ethical arguments and give an opinion on matters that remain controversial and subject to revision. Today's public policy has a need for such counsels particularly with regard to new developments in science and technology".



solution. We found that the projects basically adhere to the formal requirements in terms of ethical guidelines, checklists and other procedures, and ethical reflexivity in most cases is still missing.

Following our main findings and conclusions within the empirical study, in the following part of the paper we will reflect on the key issue of our research interest – to what degree ethical reflexivity is present in the implementation of the FP7 ethical framing by respective public administration bodies.

On Reflexive Ethical Governance

Before dealing specifically with ethical reflexivity issues in FP7, it should be noted once again that ethics is a complex notion to be addressed by in public administrations. According to Haq, technical, conceptual, interpersonal skills along with emotional and social intelligence contribute to proper understanding of ethical dilemmas, ethical decision making and dissemination and establishment of ethical values [2]. It bears direct link with governance issues and leadership, as leaders enriched with these skills can show the way towards enhanced ethics oriented public service [2].

When reflecting on the results of the empirical data analysis of our study at the policy level, we have come to a particular finding – that there are two mutually contradictory sides of the issue. On the one hand, based on the findings of our FP7 normative analysis, we have seen that ethics in its implementation (though to a varying degree and occasionally in a relative way) is subject to certain limits. On the other hand, however, our empirical text analysis and interview materials indicate to the EU public administrators' awareness of these limitations, and to their awareness that ethics cannot be reduced to a mere moral or legal authority. Moreover, the policy discourse and the involvement of various stakeholders not only are an inherent part of the ethical framework of EU research today, but must include the element of reflexivity and continuous learning (if ethics is to be taken seriously). To justify this awareness, we will refer to the findings of our empirical study with regard to existing challenges or drawbacks in the EU (FP7) research ethical framing as perceived by our interviewees¹⁹. We will also refer to justification of this from relevant policy documents and reports analysed during our empirical study²⁰. Consequently, we would like to argue that alongside with the above mentioned awareness on the complicated nature of ethics in EU research, in practice in the implementation of this framework, the identified challenges and resulting limitations (as related to our previously discussed challenges in public policy and deliberation) are still to be overcome.

Based on our empirical findings, we can conclude that there is a high awareness among EU research policy makers that ethics cannot be reduced to scientific expertise or legal

¹⁹ The key challenges and drawbacks referred to by EU policy makers in their interviews have been varied, for example, the unprecedented level of uncertainty in research has created a new technological culture and also ethics needs to be addressed in a new way; ethics as a questionable field for legally binding norms; limitations by individual decision making and other.

²⁰ E.g., according to Von Schomberg “The need for a differentiation of authorized discourses stands at odds with the impossibility of such differentiation on the level of actual problems” (Von Schomberg, 2002, p. 231), and moreover, “as a minimum we would require an ethical framework that addresses both the aspect of unintended side consequences (rather than intentional actions) and the aspect of collective decisions (rather than individual decisions) with regard to complex societal systems” (Schomberg, 2007).



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frameworks only. Consequently, scientific expertise is not an answer, legal frameworks cannot guarantee ethically sound research. We have found evidence also on the increasing awareness on the existing divide between the scientific and ethical communities, which on many occasions preconditions that ethics is addressed in a fragmentary way or by a purely sectorial approach, also regarding the issue of expertise²¹. We have also found evidence that key classical ethical theory approaches are increasingly unable to give answers to the ethical challenges of today, and clearly there are new needs regarding adequate ethical frameworks.

Moreover, in our analysis of the policy deliberation on ethics in technological development, we have found evidence of opinions (especially in report analysis) that risk assessment is just one aspect (and often incomplete) in ethical issue determination which often is not sufficient to offer solutions²²; and technology users are also frequently not aware of the potential ethical aspects in new technologies or of ethical aspects in their use of these new technologies²³.

For this reason, the traditional sociological approaches, although highly relevant, in addressing the ethical issues, alone may not be able to give all the answers, and alternative approaches might be needed to see ethics from some different or alternative complementary perspective, in order to secure true ethical reflexivity.

Conclusions

Based on our textual (report) and interview analysis we have been able to draw certain conclusions.

Regarding the institutional and legal framework we have concluded that: 1) the society, the public policy makers and administrators in research, as well as the academic society are aware of the impending ethical problems in technological development; 2) there are certain institutional measures and policy instruments put in place to address ethical issues regarding technological development in EU, still, the question is, how effectively the respective ethical challenges are addressed in terms of the implementation by public administrations of the respective EU policy; 3) there is no and cannot be a uniform EU policy regarding ethics in technological development, since the moral and ethical issues are contingent to the national tradition and legislation; at the same time, there are common European values as part of the

²¹ Regarding the role of experts – there is a growing uncertainty regarding who are the ethical experts regarding technological developments, and “the move towards participation in science recognizes the limits of experts”, as pointed out in the Report on Global Governance p. 28.

²² Here we would also like to refer to the findings of the EU FP7 ETICA project, arguing that most forms of technology assessment have some sort of stakeholder input, using various tools to gauge the concerns of users, stakeholders, interest groups and other. (ETICA, deliverable 4.1).

²³ In terms of justification that ethics cannot be reduced e.g. to risk assessment – as stated in the report “Taking European Knowledge Society Seriously. Report of the Expert Group on Science and Governance to the Science, Economy and Science Directorate, Directorate-General for Research, European Commission. European Communities, 2007” (TEKSS Report), “ethics has become an important political resource in the European Union” and at the same time, further on, it has been argued that “ethical discourse has been introduced in Europe as a warrant for, and a putative regulatory control over scientific and technological power – and as a means to establish a closer link between science and society” (TEKSS Report, p. 47).



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European cultural heritage, and for this reason we can refer to certain universal principles addressing general human values; 4) in practical terms, the key challenges today are – making relevant information more accessible; promoting European dialogue on ethics in science; promoting awareness and integrity of researchers; facilitating exchange between national ethics committees of the member states; 5) on the operational side – we have found that ethics has been closely related to law (which is inherently contradictory, since law cannot determine what is good and what is bad); 6) the divide between the scientific and ethical communities still exists and needs to be addressed; this bears relevance to the issue of ethical expertise (if there is such an expertise and what its characteristic features might be); 7) the principle of subsidiarity is important in dealing with ethical issues in EU research and technological development; since ethics is related to values, we have to count with the diversity of European values.

Regarding the governance arrangements and the issue of ethical reflexivity we have concluded that: 1) there is a high awareness among EU research policy makers and public administrators that ethics cannot be reduced to scientific expertise or legal frameworks only; 2) there is an increasing awareness among public administrators on the existing divide between the scientific and ethical communities; 3) it has been recognized by public administrators that the key classical ethical theory approaches are unable to give answers to the ethical challenges of today, and there approaches are needed in creating adequate ethical frameworks; 4) even if certain governance arrangements are put in place with the involvement of various stakeholders in the decision making process, including the larger society, since the technology users are also frequently not aware of the potential ethical aspects in new technologies or of ethical aspects in their use of these new technologies; for this reason, the traditional sociological approaches, although highly relevant, in addressing the ethical issues, alone may not be able to give all the answers; 5) an alternative approaches is needed to implement ethics in technological research; ethical reflexivity should become part of the decision making process with all the stakeholders and at all levels, thus potentially securing the best possible result.

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ADOPTING CUSTOMER SATISFACTION SURVEYS TO MEASURE EMPLOYEE SATISFACTION

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Abstract

The “War for Talent” is becoming a reality for more and more organizations. Competition in finding, hiring and maintaining the most talented employees has become stronger and the value of human capital has grown significantly. To attract the “best talent”, more companies are creating initiatives targeted towards the acquisition of highly qualified specialists and managers. This growing trend encourages employees to think about continuing their career in another organization.

Under the light of these limitations, there should be a stronger focus on retaining employees already working for the organization. Therefore, employee satisfaction is becoming a crucial indicator for a company’s success and it is important to accurately measure it on a regular basis to ensure a “healthy” workforce for the survival of the organization. Considering the importance of these indicators, current measurement methods are very extensive and need a lot of time to evaluate. Results need to be interpreted by professional market researchers and to be carefully communicated. As supplement to these measures, there should be an indicator, which is quick and easy to assess, clear to understand within the whole company to give a permanent pulse check to management, similar to current customer satisfaction research.

In this paper, I will cover the research approaches of quantitative customer satisfaction surveys, which are far more advanced than employee satisfaction surveys, evaluate them on their adaptability to employee satisfaction factors and provide potential ways of adapting these methods to employee satisfaction research. Goal is to deliver a conceptual framework on how employee satisfaction surveys could be adjusted by the model of customer satisfaction surveys to provide faster but still accurate results. However, these suggestions will not be implemented and tested for the presentation of this paper. This will have to be done in the next step.

1. The Influence of Human Capital on the Success of Modern Organizations

Today, experienced management and talented employees are a crucial factor for the success of modern organizations and the value of human capital has grown significantly. “Human resources are strategically the most important company resource, even though it cannot



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be expressed in numbers from a financial point of view.” [1] Also, the competition for finding and recruiting qualified employees has grown and keeping the most talented employees is also getting more and more important. “All developed economies face a strong and increasing demand for skilled labor, fostered by technological change, population aging and a subsequent decline in the future native European workforce.” [2]

In the light of an increase in workforce mobility and an increase in the diversification of the workforce especially in the first world countries, more companies are working with experienced recruiting agencies and executive recruiters (so called Headhunters) creating initiatives targeted towards the attraction of the “best talent” in any career level. External Employer Branding plays a very important role and many companies, especially international corporations provide significant budgets and create dedicated positions and teams to work on the task of attracting talent. Most companies invest a significant portion of resources and effort in hiring new talent.

However, this focus on “new Talent” might lead to a neglect of the potential of the existing workforce of a company. The tendency to underestimate the abilities of the employees already working in the company and to glorify outside talent might lead to frustration within the organization and increase workforce fluctuation. Also, there is an emphasis on individual performance and a de-emphasis on working on the company systems and structures, which is also an important factor for the success of a company. [3] Under the light of these limitations, there should be a stronger focus on developing, motivating and retaining employees already working for the organization.

In order to be successful, an organization should nurture internal talent and the potential of the (already hired) existing workforce. Employees within the company are already integrated in the organization; they are familiar with policies and procedures and have acquired a unique set of skills for the tasks required in their current position. “The task is the motivation of employees to produce high-quality output. Motivation is closely linked to Employee satisfaction (Kaplan, Norton 1996), which is one of the main motive forces of future company output. Moreover, a content employee has no reason to change his/her occupation reducing workforce fluctuation. Consequently, the costs of training new employees are reduced and revenues are maximized by using trained employees (Belcourt, Wright 1998).” [1] Depending on the stage of the career cycle and the potential for growth of the employee, a movement in the “inner circle” of an organization is also part of career-development. This dimension adds to functional and hierarchical career dimensions. [4] To grow in this dimension, an employee also needs to stay within an organization for a longer period of time. Other factors which should not be neglected are the safety of company information [1] and the external network that might be lost when an employee leaves. Of course, this only applies to special positions.

But not only the focus on external Talent in general, also the focus on the kind of talent to be acquired sometimes is not really beneficial for the long-term interest of an organization: Mostly, the “War for Talent” is targeted towards acquiring A-performers. However, not all positions in a company are A-positions: “While conventional wisdom might argue that the firms with the most talent win, we believe that, given the financial and managerial resources needed to attract, select, develop and retain high performers; companies simply can't afford to have A-players in all positions.” [5] Depending on the requirements of the tasks, also B-performers are needed in a company to execute operational tasks and to be managed as well-performing



professionals who support the organization through their operational work. In rare cases, even C-performers might be needed to provide for certain positions. A-performers are easily bored by repetitive and operational tasks, they might not have the talent to be a people-manager and also A-performers often require higher salaries. Therefore, it is important to focus on all employees on every performance level to maintain a well-performing workforce. A well-performing workforce in this case is less about attracting new talent or creating an organization of all top-performers, but it is more about employees who are satisfied with their job and therefore work productively within the organization.

2. Definition of Employee Satisfaction and Its Effect on the Organization

Research on employee satisfaction comes from Organizational Psychology. In psychology, particularly in organizational psychology, employee satisfaction has been analyzed since the 1970s, e.g. by Bruggemann (1974, 1976). It is evident in the corporate culture, communication and leadership style, and of course the company's success. Several studies prove that employee satisfaction has a positive influence on employee involvement [6], performance of employees [7], their customer satisfaction [8] and many other factors. A positive attitude towards the company can result in higher creativity of employees, more innovation, more participation in workshops and discussions, decline in sick leave times and higher loyalty [9] Employee satisfaction definitions are based on various sociological terms and are often connected towards motivational theory. Classic Theories like the Maslow-pyramid (1954), the Motivation-Hygiene model of Herzberg (1959) or the ERG-Theory (Existence-Relatedness-Growth-Theory) of Alderfer (1972) are the underlying theories for employee satisfaction. They vary from basic, operational definitions to very complex models, based on individual values, considering affective and cognitive aspects. "What is important for the well-being of employees is connected with economic, social and political conditions of the current situation. It is also dependent on the level of education of the individual, the prevailing values and the content of socio-political discussion. Something what was important in the past can be irrelevant today and can regain priority tomorrow." [10]

For this article, I would like to use the definition of employee satisfaction by Professor Weiss (2002) as "a positive (or negative) evaluative judgment one makes about one's job or job situation". [11]

This definition does not consider the reasons why an employee makes an indication whether he/she is or is not satisfied with their current job situation. Also, it does not take into consideration whether the judgment of the employee is only temporary or long-term. However, for the creation of a satisfaction-indicator, these factors are only of preliminary relevance, since this inaccuracy will affect the variance of the indicator in the same way across time.

3. Measuring Employee Satisfaction

Since employee satisfaction is – scientifically proven - linked to a lot of positive effects on the performance of the organization, it is an important factor that should be closely measured. Moreover, a continuous indicator should be introduced to permanently track the



development of this factor representing the “health” of the organizations workforce. “Based on different methodology, a large number of measuring instruments for job satisfaction were developed. The reasons for this diversity in measuring instruments are subject to the different objectives in drawing up the criteria and the measures of job satisfaction. A further difficulty is that there are different operational definitions, the respective designs of the instruments have been based on.” [10]

Besides tracking indirect indicators such as staff turnover, churn rates, sick leave, absenteeism and error rate, which could also be influenced by other factors, employee satisfaction is tracked through questionnaires. Organizations collect information either through 360-degree feedback or employee surveys in written and oral form. These surveys vary by organization and by goal of the measurement. A 360-degree feedback provides a detailed assessment of skills and services of specialists and managers from different perspectives such as employees, supervisors, colleagues or team members; it is not directly focused on employee satisfaction. Oral interviews with open questions are more flexible than questionnaires. The interviewer is more flexible. He / she can pose more questions and record observations made during the conversation. This flexibility could also go at the expense of comparability. Questions can be evaluated biased or made suggestive. It is also the most expensive and planning-intensive survey method. [12] Therefore and also because of the high costs of individual interviews, written questionnaires are more commonly used. Depending on their design, written employee surveys consist of a set of various questions on the status of the workforce in the company. For written surveys, most often closed questions are used. These questions can also be posed in the form of scales e.g. Likert Scales, rankings or semantic differential. [10] They are anonymously evaluated to generate benchmark values to compare with past results or between departments.

These current measurement methods are very extensive and need a lot of time to evaluate. Since the results are very complex and multifaceted. They need to be interpreted by professional market researchers and to be carefully communicated to avoid misinterpretation and in consequence wrong conclusions and actions upon the inappropriate interpretations. Considering the importance of employee satisfaction on the overall performance of the organization, there is a need for an easy to assess, quick to evaluate and clear to communicate indicator, which can be used throughout the organization. Goal of this indicator is to give a permanent pulse check to management. It should be tracked on a regular basis, with a quick turnaround and easy reportability to and understanding by the management. Of course, this indicator cannot replace the above mentioned surveys and performance indicators. It is rather an addition to these measures and should be used to create awareness of changes and developments in employee satisfaction, a transparent tracking of this crucial performance indicator and ensure the appropriate visibility of this significant aspect for the organization. Therefore, it would also be advisable, to introduce the factor into overall performance monitoring of the organization such as balanced scorecards.

4. Customer Satisfaction Research as Best Practice

Within the last decades, organizations have become more customer-centric and have started to systematically gather customer feedback. Customer satisfaction is defined as “the



number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals.” [13] It is seen as an indicator for future re-purchase and also promotion to other customers via word of mouth. Customer satisfaction surveys to measure customer satisfaction have hence become common business practice. In these surveys, customers are asked about their satisfaction with the product – so whether the product has met their expectations. Mostly questionnaires using Likert Scales or Semantic Differentials are used.

Employee satisfaction research shows some parallels with Customer satisfaction research, especially for services: Both types of research assess the judgment of an individual on the aspect of an organization and his/her expectation of it. Both types of feedback are indirect indicators for the performance of an organization whilst they cannot be tracked directly by performance indicators but through questionnaires.

In the last decades, a lot of attention has been put to the most direct assessment of Customer satisfaction. Direct in the sense of an easy and efficient data collection and the identification of the questions that are the most predictable regarding future use or purchase of the organizations’ products or services. This knowledge could be leveraged and adapted for the creation of the above mentioned indicator for employee satisfaction. This factor is often already used in scorecards as an indicator to measure business performance and it is widely accepted in management: In a research where nearly 200 senior marketing managers were interviewed, more than 70 % of the respondents replied that customer satisfaction metrics are very useful in managing and monitoring their business. [13]

5. Requirements for an Employee Satisfaction Indicator

Besides the fulfillment of scientific standards, the following benefits - similar to customer satisfaction surveys – should be assessed:

1. Comprehensive and short questionnaire, so data can be collected easily.
2. Quick collection and analysis of data, to ensure results in a timely manner.
3. Simple to understand output, so data can be comprehensively communicated.

All three benefits need to be considered to provide an employee-satisfaction indicator which fulfills all the requirements mentioned above and can be used by management to continuously and transparently monitor the status of the organizations workforce.

Comprehensive and Short Questionnaire

The questionnaire to be created for the new indicator should cover all important aspects of employee-satisfaction and at the same time be easy and quick to answer, not to take too much time from the employees’ work. The base and reference for the new satisfaction index should be an already proven standard employee satisfaction measurement. There are several models, that have been widely used like the “Job Descriptive Index (JDI) by Smith et al. (1969) or the Arbeitsbeschreibungsbogen (ABB) by Neuberger and Allerbeck (1978) – the German language counterpart. The scale to measure work satisfaction “Skala zur Messung von Arbeitszufriedenheit (SAZ)” by Fischer and Lück (1978) would be another option.



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To define the most probable indicator, the questionnaire-results then must be linked to staff turnover, churn rates, sick leave, absenteeism and error rate or other performance indicators (e.g. performance score for projects completed). Connecting these values might lead to difficulties since the employee satisfaction surveys are mostly anonymous and employees might feel inclined to give socially desirable answers. But this is also similar to customer satisfaction surveys, where the purchase and re-purchase data also cannot be connected to the respondent and his/her data.

However, this generally is the case for anonymous questionnaires: "According to Rosenstiel it is questionable if this approach will derive the real reasons for satisfaction or dissatisfaction. The result in most studies, that 70-80 percent of respondents are satisfied with their jobs, strengthens the presumption (see Semmer & Udris (1995), and references. after v. Rosenstiel, 200 S. 398)." [10]

Environmental conditions might also be investigated in terms of their interaction with employee satisfaction. To calculate this bias, it is important to have previous data of the research conducted with the same group of respondents and see if there has been a significant change in the results.

Since current questionnaires are quite extensive, one of the challenges of the new indicator will be to create a new questionnaire which provides the required comparability of the research data of previous questionnaires with the new data whilst significantly reducing the questionnaire length. This requirement might also call for a certain consistency in the formulation of the questions, the sequence of the topics inquired, the structure of the scaling etc.

Quick Collection and Analysis of Data

Regarding data collection, there have been many debates on online compared to paper questionnaires. There is a strong trend towards online-questionnaires. Besides making it easier to download and analyze data, and the evidence of slightly lower non-response rates "... there is also evidence of some greater willingness of respondents to complete open-ended questions online and to express their thoughts and feelings through an online technology." [14] Therefore, the best way to collect the employee-satisfaction data for the suggested employee-satisfaction index should be generated through online-questionnaires sent directly to the employees, which should be anonymously evaluated. Discretion is very important in this process to ensure truthful answers by the employees.

Since the data is generated online, data-analysis can widely be automatized. Therefore, also complex calculations can be automatically computed and visualized. Slaini and Kennet suggest the use of Bayesian Networks to graphically represent the set of variables for customer satisfaction, [15] which could also be adapted for employee-satisfaction. Another current method to better analyze and categorize customer satisfaction which could be suitable to adapt for employee satisfaction would be the MUSA method. With this method, an Action Diagrams can be created, enabling the researcher to derive results based on a performance / importance matrix to prioritize the feedback of the respondents and create prioritized action plans. [16]

However, as refined as such methods might be, there is also a high potential for putting an emphasis on the wrong factors and maybe getting lost in the multitude of criteria. Simple



methods like the Net Promoter Score, introduced by Frederick F. Reichheld, are reducing the evaluation and collection to one single question.

The basic concept of the Net Promoter Score was presented in December of 2003 in an Article in the Harvard Business Review titled “The One Number You Need to Grow”. The measurement to assess customer loyalty was based on research across companies in multiple industries in cooperation with Satmetrix. Results derived in this research have led to the theory that customer satisfaction surveys can be reduced to only one question – “How likely is it that you would recommend our company to a friend or colleague?” – measured on an 11-items scale from “very likely” to “not likely”, deriving a score by the ratio of promoters (respondents voting 10-9) versus detractors (respondents voting 6-0). [17] This question was excerpted from a battery of questions usually asked in customer satisfaction surveys. Even if the Net Promoter approach has been controversially discussed in the scientific community, it has been adopted by several companies (e.g. E.ON, Philips, GE, P&G, and eBay) as the key metric for customer satisfaction, which is also reported to senior management and even shareholders.

This new research method – adapted to the needs of employee satisfaction – does fulfill the requirements of a comprehensive and short questionnaire and the quick collection and analysis of data. A single question can be easily answered by employees and is analyzed in a very short timeframe. Most companies also add an open question to this very short questionnaire, which would still result in a fast evaluation and quick turnover of survey results.

Simple to Understand Output

The third criterion to be fulfilled by the new employee satisfaction indicator is an easy translation of its meaning into a single figure. Results need to be understandable to every employee at any level in the organization and should be easy to read for management in scorecards and other high-level company-reports.

The calculation is a simple deduction of so called “Detractors” or “Demoters” (respondents evaluating the question negatively) of “Promoters” (respondents evaluating the question positively) on a scale from zero to ten. Below find the example with the question “How likely are you to recommend your company to a colleague or friend?”:

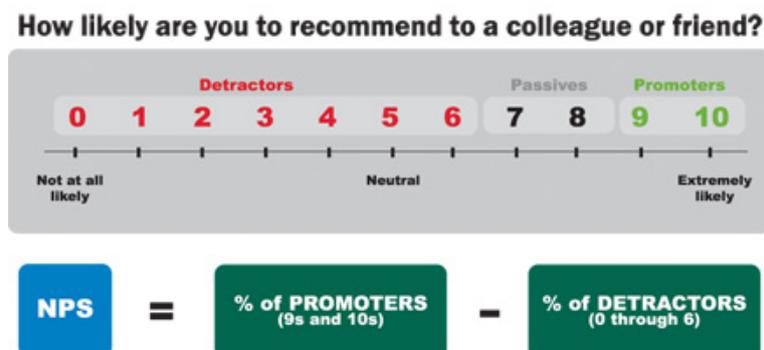


Figure 1. The Net Promoter Score Calculation [18]



Of course, this indicator will not replace in-depth employee satisfaction research or 360° feedback questionnaires. As mentioned before, it only serves as a permanent figure to show the current “temperature” of employee satisfaction.

6. Adoption of “Net Promoter Score” to “Employee Net Promoter Score”

Having identified the Net Promoter Score as potential indicator for employee satisfaction, further research, similar to the in-depth analysis being undertaken by Reichheld, needs to be undertaken to identify the “one question” for the field of employee satisfaction.

In a first step, potential significant questions need to be identified. The suggested approach would be to analyze sets of data of conducted employee satisfaction surveys of the past and correlate the questionnaire-data of the time with the secondary measures of employee satisfaction: staff turnover, churn rates, sick leave, absenteeism and error rate or other performance indicators such as completion times for projects etc. To eliminate the bias of industry, nationality or organizational structure, this data analysis should be conducted for various organizations across different industries (≥ 3), countries (≥ 3) and company sizes (medium, large), always researching at least 3 organizations of the same industry, size and country (to generate intra- and inter-category comparability).

Now conditional relations need to be analyzed. Goal is to identify questions in the existing employee satisfaction surveys, which correlate most with the secondary data. In this analysis, questions about the intent of continuing working in this company, happiness with singular factors of the workplace as well as questions about coworkers and management should be considered. Maybe, additional questions need to be introduced. In that case, more evidence needs to be collected, that these questions truly reflect employee satisfaction.

As third step, environmental conditions have to be investigated and taken into consideration in terms of their interaction with employee satisfaction. Depending on the results, it needs to be analyzed whether the one question which is correlating with the above mentioned indicators is not influenced by other factors. Therefore, the history of the organization needs to be analyzed for other factors. Also overall economic factors might play a role. Many of these issues can be avoided by the right choice of the participating organizations. Also, the definition of “promoters” and “demoters” need to be set in regards to the scaling for the answers. Here, the feedback to the “original” Net Promoter Score should be taken into consideration and the input of the critics could be used to create a valuable “Employee Net Promoter Score”. The scaling could be tested through experiment, running parallel groups with the same question but different Likert scales for answering.

A last important point is the choice of the open question, which can be added to the “one question”. Here also, the open ended questions posed in the regular employee satisfaction survey should be used as model to choose one of the questions which generate the most valuable qualitative input.

After evaluating the findings and deriving the final “Employee Net Promoter Score” the score and the employee satisfaction survey will need to be run parallel for a certain period, while consciously watching factors that influence employee satisfaction and tracking their impact on both measurement methods. Of course, there are certain downsides of just using “one question” to measure employee satisfaction, therefore, it is highly recommended, to use the



“Employee Net Promoter Score” only as a complimentary measurement to get the ongoing pulse of the organization. It cannot replace an annual / bi-annual extensive employee satisfaction survey.

Once this testing is done and researchers can confidently support the “one question” tracking employee satisfaction, this indicator can be introduced to management scorecards.

7. Conclusion

Human capital nowadays is a crucial factor to ensure the organization’s survival. Therefore, it is vital to ensure a satisfied workforce and hence guarantee the best possible results and best employee performance.

To properly monitor employee satisfaction, an indicator needs to be created, which provides a constant “pulse” of the workforce. The three main criteria to be fulfilled by this indicator are a comprehensive and short structure of the questionnaire, a quick collection and analysis of data and a simple to understand output. Since customer satisfaction research has brought some advanced methods in evaluating customer satisfaction which is very similar to employee satisfaction, I have analyzed current research methods for this field and derived a recommendation for the best fit of method to fulfill the criteria mentioned above.

The recommendation derived is an adoption of the Net Promoter Score. Even if the identification of the “one question” will need more intense input in the beginning, the method will be very easy to assess, analyze and communicate in the final adoption.

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MULTISTATUS LIFE TABLES FOR MODELLING HIGHER EDUCATION: METHODOLOGICAL ISSUES

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Abstract

Multi state life table is an extended model of the classical life table technique. The application of the multistate method includes diverse subject matters related to various fields in demography. There is a high potential for applying multistate models to the education progression analysis, but it has not been done extensively so far. The author defines and describes three complementary specifications of multistate model for modelling study career and analysing student progression through Latvian higher education system. The three developed models allow computing tertiary schooling time expectancy, dropout rates by study years, completion probabilities and other life table parameters for studies in Latvia. The author discusses the methodology, assumptions, limitations, and data requirements.

The developed approach is applied on University of Latvia student data by computing education life tables (common for both genders, and for genders separately) hence testing the fit and obtaining results for LU. In this article the author provides examples of the results.

1. Introduction

The objective of this article is to develop a theoretical multistate model for modelling study career and analysing student progression through higher education system. To do that, the author reviews multistate life table (MSLT) method and emphasizes the methodological innovation and potential utility of this method to population education studies. The author defines three model specifications for higher education.

Multi state life table is an extended model of the classical life table technique, which in contrast to the simple model distinguishes more than two possible states of existence (the most straight forward example: a person can be a student, alive, but not student; or dead), and multidirectional transitions between (at least some) of the states are possible (between being a student and non-student). The author's methodological innovation is in development of the technique for higher education system studies, whereas the practical novelty is application of the technique to actual database and obtaining results for University of Latvia (LU). Was there a



national database available of the similar kind, the author could answer the same questions for Latvia – for instance: what are the dropout probabilities in first, second or third year of studies?

This paper consists of the following sections. Section two reviews origin and most important earlier applications of the multistatus life table models in different fields in demographic research. Section three describes methodology and provides technical details for computation of models. Section four defines models for higher education in Latvia. Section five gives critical evaluation of assumptions and limitations of the model. Section six describes data requirements for the technique. Section seven presents a few examples of application of the model to real data, and the final section concludes.

2. Origin and Applications of Multistate Life Table Models

Survival analysis is a traditional way of analysing cohort development and dynamics using age specific probabilities computed within life tables.

The basic life table has been known in mathematical demography since the first tables were introduced more than 300 years ago when John Graunt comprised first life table for a hypothetical London birth cohort of 100 people [1]. Since that, life tables have developed and are used as a separate technique in demography. It has been developed to include different statuses, which change over time, as well as increments and decrements from the statuses.

The multistate life table is also referred to as an increment-decrement life table. Multistate demography studies the dynamics of multistate populations, i.e. populations stratified by a set of attributes. Multistate populations have also been referred to as multigroup populations [2] or multidimensional demography [3]. The founding father of multistate demography, Andrei Rogers, considered a population stratified by region of residence and hence defined the field as multiregional demography [4, 5]. The term ‘multidimensional demography’ is also used (e.g. [3]).

Schoen (1988) [2] found that the earliest work on multistate life table models have been done by DuPasquier (1912), who studied disability insurance using a model with two active states, healthy and disabled. There were a few subsequent studies [6, 7], but multistate approach did not attract much attention until 1970s, when computers became available to carry out calculations.

The contemporary multistate method originated in the early 1970s with Rogers who generalized classical demographic models – the life table, population projection models, and the stable population model – from two states (alive and dead) to multiple states of existence. As a specialist in urban and regional planning, Rogers’s interest was mainly in regional population dynamics and migration, and the generalization was to a system of regions: a multiregional system. His first results appeared in the journal *Demography* in 1966 and in book form only in 1975 [4]. Schoen (1975) [8] and Schoen and Land (1979) [9] applied it to the analysis of population marital habits. The National Science Foundation recognized the development of the field and in 1981 sponsored a conference “Multidimensional Mathematical Demography” in Maryland, USA (organized by Land and Rogers). Proceedings published [3] constituted the reference basis for any subsequent research in multistate demography.



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Since that time, the field has expanded and developed, as multistate methods have been found to be both powerful and flexible enough to capture the movement of the complex behaviour of a cohort [10]. Willekens [11] argues: “the life table has made a transition from a method for estimating the length of life to a technique for describing the structure of life.” The key to development of this method was the use of the Rogers’ mathematical demography, especially the application of matrix algebra in the life table.

The methods of multistate population dynamics were developed in and associated with International Institute for Applied Systems Analysis (IIASA) in Austria during the 1970s and 1980s [12] and have since become a standard component of the demographic tool box. Nowadays, development of multistate methods is largely, but non-exclusively concentrated around IIASA and the Netherlands Interdisciplinary Demographic Institute (NiDi).

Development of multistate methods and applications have been empowered by development of computer technologies and software for statistical data analysis that have made it possible to compute complicated mathematical models at high speed. Calculation of multistate life tables involves matrix calculus, which are not overly difficult but are time consuming if attempted to do it by hand, especially if more than three states are involved. Nowadays various computer programmes exist to perform the calculations. Specially developed programmes, for example, GSMLT v.90, ImaCh, LIPRO, SPACE, are available for use. General software packages such as STATA, MATLAB and MATHEMATICA contain pre-programmed routines such as matrix inversion and can be supplemented by user-defined commands. Calculations with MS Excel are slightly lengthier, as its current version includes the predefined operations with matrices, but setup has to be done manually.

The application of the multistate method includes diverse subject matters related to the family ([13], [14], [15], [16] and [17]), labour force participation ([18], [19]), migration ([20]), spatial population distribution ([21]), marital status ([22], [23]), fertility ([13], [24]; [25]), active life expectancy ([26], [18]), transition to adulthood ([27]), mortality and morbidity projections ([28]), health status and life expectancy ([29], [30]), [31], [32], [33]) and education ([34], [35]). Life tables are nowadays used by two main groups of users: the demographers to analyse population processes and to make projections; and insurance companies, for which life tables constitute a tool for premium setting policies.

There is a high potential for applying multistate models to the education progression analysis even though it has not been done extensively so far. As will be shown, it can be with good success used to obtain crucial indicators for policy decisions in higher education. In author’s opinion, the reason for the sparse use so far is the combination of two factors. First, education progression analysis is on the margin between population studies, sociology and higher education management in contrast to other social factors like health, nuptiality, fertility and migration. The actual number of demographers working on education research is not large. Secondly, multistate analysis is an advanced mathematical demography technique, hardly ever used outside demographers league. Often education is used as a stratification variable in multistate models to define subgroups of population (for instance, [36], [37]). Land and Hough [38] have attempted to use multistate methods to compute tables of school life.

While conventional life tables are used for total population size projection by gender, multistate life tables can be used for subpopulation projections – be it geographical locations, marital status, health status, education or any other defined subpopulation that is analysed



within this framework. Only recently multistate-based projection methods are accomplished. A huge step in terms of methods and applications in using multistate method in education analysis was done by IASA ([39], [40] etc.) that started and are effectively using multistate life tables for population projections by age, gender and level of education. Their approach consists of modelling four education categories (no education, primary, secondary and tertiary), and based on the obtained transition probabilities and assumptions about global education developments, estimate scenarios for population developments for 120 countries, including Latvia.

Any demographic investigation of renewable events, like education, may benefit from application of the increment-decrement life table model and hence multidimensional demography methods. "Education analysis is one possible field of application of multi-dimensional demography" [41]. The author of this paper attempts to tailor this technique for application to education analysis in Latvia.

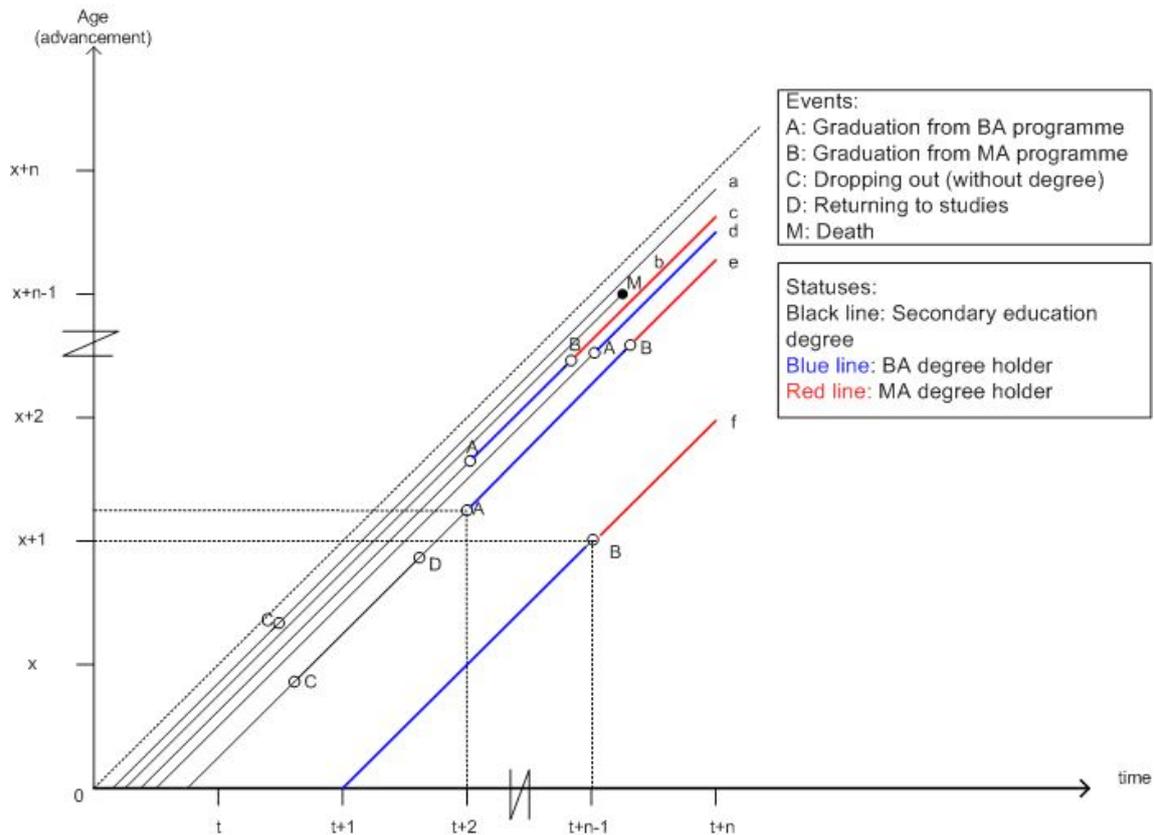
3. Methodology for Modelling Higher Education Progression in Multistate Life Table Environment

Multistate life tables construct the individual biography based on partial observation, and the information is gathered during the observation period, and this information can be displayed graphically in a Lexis diagram.

The construction of Lexis diagram is analogous to that of conventional life table – historical time represented on the horizontal axis, and person's age on the vertical (Figure 1). Each diagonal line represents one person's lifeline (a, b, c, d, e and f). Points on the line (A, B, C, D and M) are events or transitions. The line between two events represents the status of the person (line between A and B says that the person is a bachelor degree holder). For convenience, different statuses can be represented by different colours (here: black for secondary degree, blue for BA degree and red for master degree holder). For example, consider the representation of a student cohort in the above chart. Individuals *a*, *b*, *c*, *d* and *e* all belong to the same cohort, enrolled in undergraduate studies in year *t* (between 0 and *t*), individual *f* belongs to a different cohort (some cohort starting graduate studies on year *t*+1). Individual *c* was enrolled in a bachelor programme at *t*, acquired Bachelor degree at *t*+2 (event A), continued studies and acquired Master degree at time *t*+*n*-1 (B). For the rest of the observation period his status was "holding a master degree" (red line). An individual *e* was enrolled at the same time, interrupted studies at *t*+1 (between *t* and *t*+1, on the *x*th year of studies) (event C), re-enrolled at *t*+2 (D), and graduated at *t*+2 (A), at (*x*+2)th year of studies. He continued studies and acquired MA degree at *t*+*n*. The individual *b* studied all through time 0 to *t*+*n*, when died at *t*+*n* (event M, filled dot represents absorbing state). Four out of the five cohort members survived to the end of the observation period, the survivors are distributed among three different statuses (holding: secondary (1), bachelor (1) and master (2) degrees).



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Note: This diagram represents an example of status definitions. Under alternative definitions of states and events the points and lines in the diagram would have different meaning.

Figure 1. Lexis diagram for multiple statuses in higher education

Source: Author's figure.

The Lexis diagram is convenient for visualization of the research problem. It helps the researcher to establish the basic relationships and define statuses. In author's model year t is year 2002, and the entrant cohort is observed through period of 8 years ($t+8$) because LU data are used.

Life tables are closely related to Markov processes¹ and the description of the model typically starts with introduction of the Markov concept, and it will be followed here. The model in this study is based on Markov process with discrete state spaces, and it can be

¹ Markov process is sequence of possibly dependent random variables (x_1, x_2, x_3, \dots) – identified by increasing values of a parameter, commonly time – with the property that any prediction of the next value of the sequence (x_n), knowing the preceding states (x_1, x_2, \dots, x_{n-1}), may be based on the last state (x_{n-1}) alone. That is, the future value of such a variable is independent of its past history (Britannica Online Encyclopædia, <http://www.britannica.com>).



described as time-inhomogenous, finite-space, continuous time Markov models, in line with Schoen (1988). In nontechnical language, the time-inhomogeneity means that the forces of decrement can vary within the age intervals. The finite state space of the model contains J ($j=1, 2, \dots, J$) states where J is greater than 1 and a positive integer. The J th state is absorbing state from which there are no decrements, e.g. death.

We define the stochastic process $\{S(x):x \geq 0\}$, where the continuous time parameter x denotes the exact age attained [2]. The $S(x)$ is the individual's position in the state space at age x . The transition probability between states i and j is:

$$\pi_{ij}(x, n) = \text{prob}\{S(x+n) = j \mid S(x) = i\} \quad (1)$$

where $\pi_{ij}(x, n)$ denotes probability that a person in state i at age x will be in state j at age $x+n$. The transition intensity $\mu_{ij}(x)$ from state i to state j is defined as:

$$\mu_{ij} = \lim_{n \rightarrow 0} \pi_{ij}(x, n) / n, \text{ where } i \neq j. \quad (2)$$

Equations (1) and (2) specify the Markov process as the probability of transition from one state to another only depends on the state the person occupies at the particular age, but not on any previous moves between the states. This assumption is a simplification (Schoen (1988) calls it "oversimplification"). The Markovian assumption ignores any history of how the person has reached the particular state and does not take into account the duration in the state that has proven effects on likelihoods of happenings, i.e., there is no path dependence. In real life, social behaviour is known to depend on length of state occupation. Some authors have developed methodology to relax the restrictive assumption by introducing duration-dependence in the models, hence duration-dependent multistate life tables (DDMSLT) [42,43]. Still, models with Markovian assumption continue to prevail in the literature.

This study proposes to construct MSLT using individual level information. First, the age specific transition probabilities are estimated from the observed occurrence rates. When this is done, the other life table statistics are easy to calculate. The calculation process is therefore described in two steps: first, calculation of transition probabilities, and second, estimation of other parameters and construction of MSLT.

Since the MSLT can be described as Markov process, it can also be described with the equations that are used in Markov model. Therefore, a set of all transition probabilities between the J states can be represented in a matrix $\Pi(x, n)$ (each row sums to 1):

$$\Pi(x, n) = \begin{pmatrix} \pi_{11}(x, n) & \pi_{12}(x, n) & \dots & \pi_{1j}(x, n) \\ \pi_{21}(x, n) & \pi_{22}(x, n) & \dots & \pi_{2j}(x, n) \\ \dots & \dots & \dots & \dots \\ \pi_{j1}(x, n) & \pi_{j2}(x, n) & \dots & \pi_{jj}(x, n) \end{pmatrix} \cdot \quad (3)$$



Willekens [41] have shown that $\Pi(x,n)$ can be calculated as follows:

$$\Pi(x,n) = \left[I + \frac{1}{2} M(x,n) \right]^{-1} \left[I - \frac{1}{2} M(x,n) \right], \quad (4)$$

where $\Pi(x,n)$ is the transition probability matrix defined by equation (3), $M(x,n)$ is the matrix of observed (empirical) rates of transition from i to j at age x to $x+n$, I is the identity matrix, and the superscript “-1” denotes inverse of the matrix.

$$M(x,n) = \begin{pmatrix} \sum M_{1j}(x,n) & -M_{12}(x,n) & \dots & -M_{1j}(x,n) \\ -M_{21}(x,n) & \sum M_{2j}(x,n) & \dots & -M_{2j}(x,n) \\ \dots & \dots & \dots & \dots \\ -M_{j1}(x,n) & -M_{j2}(x,n) & \dots & \sum M_{jj}(x,n) \end{pmatrix}, \quad (5)$$

where $M_{ij}(x,n)$ is the observed occurrence/exposure rate of transfer from state i to state j between ages x and $x+n$, and the summations over j run from 1 to J , excluding the case where $j=i$. Each column in the matrix $M(x,n)$ sums to 0. Each element of the matrix is:

$$M_{ij}(x,n) = D_{ij}(x,n) / P_i(x,n), \quad (6)$$

where $D_{ij}(x,n)$ represents the observed number of transitions from i to j in the age interval x to $x+n$, and $P_i(x,n)$ represents the observed (mid-period) population in state i between ages x and $x+n$.

This interpretation involves a number of assumptions. First, the earlier introduced Markovian assumption states that the transition probability during certain interval depends only on the state in which the person is at the beginning of the interval and is independent of history. The second is the linearity assumption, that transitions and deaths are distributed uniformly over the interval x to $x+n$. The mean duration of transfers is therefore $\frac{1}{2}$ of n , or in the middle of interval x and $x+n$. This allows for estimate of $\Pi(x,n)$ as set out earlier. Linearity assumption can provide grounds for critique if there are reasons to think that transitions tend to happen in a different time than middle of the interval. Palloni (2001) argues that under general conditions, the linear method is to be preferred on the grounds of simplicity and ease of calculations. For derivations and discussion on the calculation models based on observed rates the author refers to Schoen (1988: 70-76) [2]. The third important assumption is that annual age-specific life table rates are equal to annual age-specific rates of observed population, i.e., $m(x,n) = M(x,n)$. This assumption implies that the observed rates provide adequate estimates of the life-table rates to be used for longitudinal analysis [2]. Again, this assumption can be criticized if transition rates in the year of observation can be proved to be unsustainable or believed to change over years.



In the second step, when the age specific transition probabilities between the defined states are obtained, the other life table statistics are obtained: number of years in education, number of transitions between states (i.e. graduations, dropouts, entering another level programme), total number of years studied by the cohort, expected years in education.

4. Multistate Models for Higher Education in Latvia

The previous sections provided a general framework and theoretical background for multistate modelling. This section defines and describes the multistate models for higher education. In the core of interest are higher education students.

The number of model specifications that could be constructed for education is nearly infinite. The setup depends on the desired result or research question, and availability of input data. It can be from very simple two state model with high abstraction containing only two states – person being in education, or outside, to a complicated and detailed model that fully represents all statuses a person could occupy regarding education. An example of such model is the well-known scheme of Latvian education system by Academic Information centre (see www.aic.lv). This is a very complicated model for practical computation purposes with some 18 states, but represents the closest-to-reality model. The author thinks that it is a very important link that illustrates the closeness of multistate modelling and all the undertaken exercise with real life education structure in Latvia.

The models in this study ignore any parallel statuses such as marital status or employment. It is possible to model, for example, labour market status as additional state and interactions with the education transition and career, or family status changes. The author concentrates on education statuses only, with option that the method can be extended to wider applications in the future.

The author has selected three specifications for application and construction of life tables, starting from a simple state space and ending with a more complex one. All constructed models are increment-decrement life tables. This model variation allows individual members of the life table population to move into states (increment) and out of the states (decrement). All three are cohort life tables – describes development of one particular cohort (2002 university entrants) over time (longitudinal approach). They are uni-radix – the initial cohort is concentrated in one stage, and complete as contain full information for each single year in the observation period. Real cohort – 2002 university entrant cohort – is modelled. The author looks at three model specifications – two focusing on enrolment and one on educational attainment. These models are complements for determining dropout rates.

Specification (a): 2-state process (enrolment) model

The simplest variation of the model applied to data is a two-state model. The state space is {inside tertiary education (student); outside tertiary education (not studying)} (if he/she is in the process of acquiring education or not, hence *process* model). (Figure 2(a)). Belonging to a state is defined by administratively registered status in institutional registers, and transition does not require graduation. Both states are transient, non-absorbing, recurrent i.e., individuals can pass in all directions between states. Transitions are defined by change in the student status as registered in LUIS (im-matriculation or ex-matriculation).



Specification (b): 3-state process (enrolment) model

The three-state model splits the status of being a student into two – in undergraduate or graduate level. State space consists of three states (Figure 2(b)). In the three-state model, the state of being inside higher education is divided into two states – in undergraduate or in graduate and postgraduate programmes. The state space therefore is {in bachelor level programme; in master level or doctoral programme; outside education/dead}. All three states are transient and recurrent, i.e., individuals can pass in all directions between states. There are no absorbing states. Similarly to Specification (a), transition between states is defined by registered change in the student status – im-matriculated as an undergraduate (bachelor) student, im-matriculated as a graduate (master or higher level) student, or ex-matriculated from any.

Specification (c): 4-state attainment model

This specification significantly differs from the first two because the status is defined by the *highest level of education attained* (hence ‘attainment model’). There are no reverse flows, the states are consecutive and no return to lower level is possible. The Specification (c) is a hierarchical model, state space consists of four states (Figure 2(c)). State space consists of {secondary education; bachelor degree; master of doctoral degree; death}. States are non-recurrent, only one-directional transitions possible, death is absorbing state.

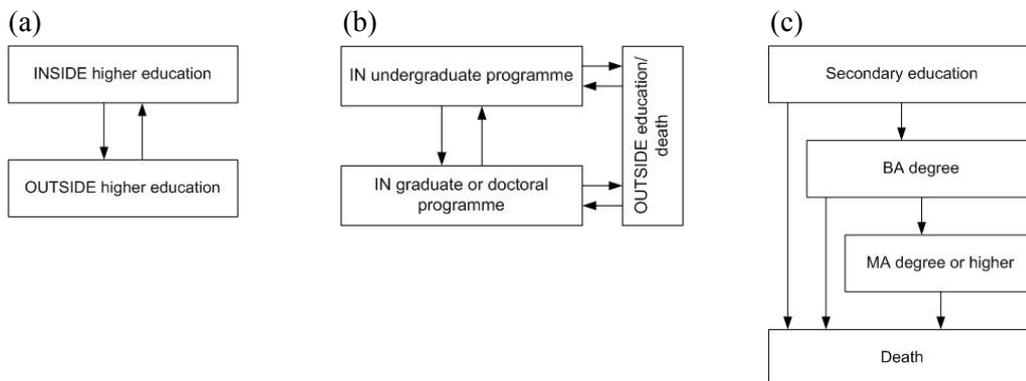


Figure 2. Multistate models for higher education in Latvia

Source: Author’s figures.

These simplified variations can be easily developed into more complex models with more than four states (modelling separately different levels of education, or introducing employment or marital status as other possible states). This research exercise however concentrates on establishing the methodology for use in education analysis, and applying it to the available data for testing its applicability and accuracy. It should be stressed that the three models are complementary: merging the results allows assessing some crucial measures such as dropout rates.



5. Critical Assessment of Models

Despite the overall utility of the method and its widening use, there are limitations to the use and applicability that is often a source of critique. Some limitations are arising from the model itself while others are connected to application of methods for calculation and assumptions. The most important criticisms are as follows:

(1) Markovian assumption. Markov model ignores past experiences and examines the effect of most recent experiences. Most real-world problems are not fully Markov in nature – they are often non-stationary and history-dependent. In education, duration of studies is important and determines probability of graduation.

(2) Linearity assumption that transitions are uniformly distributed over the time interval, and the transition happens in the middle of interval used. For education analysis, strictly speaking, this is not true as transitions between states, esp. graduations, typically happen in the end of the academic year, i.e., in the end of the period.

(3) Representativeness of observation scheme, i.e., assumption is that annual age-specific life table rates are equal to annual age-specific rates of observed population may not hold, implying that the observed rates do not provide adequate estimates of the life-table rates to be used for longitudinal analysis. It may be possible that for the sample used transition rates in the year of observation are unsustainable or believed to change over years.

(4) Single move per unit time interval assumption [16] is an implicit assumption in multistate models. If this assumption does not hold true, the survivorship in states and transition between states measures gets imprecise. In education analysis this may be the case that changes between statuses happen more than once in a period, for example, a student takes academic leave for a year, but returns to studies right before the end of semester, passes final examinations and graduates. In this case, the changes from his/her status in the beginning and end are captured.

(5) Homogenous population within each group is yet another implicit assumption. Essentially it means that there are no distinct subpopulations within the stratified groups of age and gender category. For example, a particular student group (ex. minorities, foreign students) may exhibit some special study path pattern.

(6) High data demands is a technical criticism for the method. Multistate methods are demanding regarding data requirements. It requires age-specific gross flow data among the various states considered in the analysis. This kind of data is typically only available from registries or surveys. Registries are the best-fitted source of information for multistate analysis, but the problem is that they usually represent selected population groups and not total population. Surveys are appropriate if they include precise retrospective information.

(7) Mathematically complicated method entails that not only it takes resources to compute the multistate life tables, but also they are difficult to follow and verify by peers and referees.

The author judges that the Markovian assumption (ignorance of the path dependence) is probably the most problematic of the described. It was noted earlier that duration dependent multistate life tables are possible to be applied. This would be a release of assumption at the expense of increased data demands and computation difficulty. Overall though, the criticisms



are confused and multistate life table analysis is perceived as a powerful and appropriate tool for education analysis.

6. Data Requirements for Multistate Life Tables

Multistate methods are demanding regarding data and put a heavy burden on data availability. Study of individual life histories requires individual data and repeated measurements (longitudinal data). “Data requirement is a major drawback of multidimensional analysis” [41]. With advancement of the multidimensional techniques and more frequent applications, the issue of data availability is raised and discussed at statistical offices. Steps are taken towards solution, but it is far from completeness. Unavailability of data in appropriate form has been and still is one of the factors hindering more frequent application of multistate models.

Multidimensional demographic analysis requires age-specific longitudinal data among the various states considered in the analysis. Conventional demographic analysis of populations subdivided into subpopulations focuses on size of each subpopulation and on changes in size. This stock perspective makes use of prevalence rates, which indicate the extent to which a particular characteristic is prevalent in the population (e.g. labour force participation rate, proportion of married population, proportion of students or proportion of population with higher education). In multidimensional analysis, population size is of secondary importance. The emphasis is on flows, i.e., passages among various states. The size of each subpopulation is merely an outcome of an initial condition and the stochastic process. The rationale for adopting the flow perspective is that the dynamics underlying population change can more readily be represented. Entrances to and exits from each subpopulation are considered explicitly. The adoption of the flow perspective requires existence of flow data (i.e. longitudinal data at individual level).

The main sources of information for accounts are registries and censuses or retrospective surveys. Registry systems represent the best-fitted source of data for multidimensional modelling because each change of status is accounted for and is therefore easy to transform in the required form. The problem with registries is that they do not always exist for all problems researcher is interested in. Also, they seldom represent total population as in the case of student registries (they contain only information on those involved in education). Generalization to all population is usually difficult. Where registries do not exist, surveys are sometimes used with retrospective information.

The application of the multistate life table technique involves advanced matrix mathematics calculations, that are performed with MS Excel and SPSS 16.0 programmes.

7. Examples of Application

The aim of this article is to develop methodology for using multistate life tables for modelling higher education. Hence, in this section the author shows some examples, at what results it is possible to arrive. The three developed model specifications are applied to the University of Latvia student register LUIS data, surveying study paths of the year 2002 entrant



cohort, and the results are as follows. Provided a similar database was available for Latvia, the same type of indicators would be available for the country in general.

7.1. Observed event occurrences

Over the eight years of observation 43% of those who entered university (32% of the males and 48% of the females, see Table 1) acquired and retained first level higher education (bachelor degree or equivalent), and 23% (21% of the males and 24% of the females) attained second level higher education (master degree or equivalent professional degree²). 33% of the individuals, who took up first level higher education, did not attain it within 8 years. If the observation period is considered end of the study process, these 1/3 can be thought of as dropouts, and the male dropout proportion (47%) significantly exceeds that of females (28%).

Table 1

**Outcome statistics from 8-year education history – attained education
at the end of observation period**

	Secondary	Bachelor level	Master level or higher	All education levels
Males	47%	32%	21%	100%
Females	28%	48%	24%	100%
<i>All students</i>	33%	43%	23%	100%

Source: author's table

In the end of period, 9% of the initial entrants (12% of the males and 8% of the females) were still registered as students in some programme. 7 percent of individuals were students in undergraduate programmes, and 2 percent of the initial cohort in graduate programmes. For them the education lifecycle cannot be considered completed.

7.2. Probability of Graduation

The life table offers a simple method for the calculation of probability of graduating within a certain period of time. The probability of acquiring an undergraduate or graduate degree within a period of 8, 7, 6 or 5 years, given entrance in higher education system on the year of acquiring secondary degree, is presented in Table 2. For the synthetic cohort, derived from transition rates of 2002 enrolment cohort in University, the probability of acquiring an undergraduate degree within an eight-year period is 62%³, of acquiring a graduate degree or qualification – 20%. This essentially means that only about six out of any 10 entrants in the

² Even though theoretically it is possible to acquire also a third level (doctoral) degree during the particular time frame, there were no such cases registered in database.

³ i.e. 62 percent of people entering University at bachelor level will received that bachelor degree within 8 years.



higher education system finish at least the first cycle education, and the dropout rate is 4 out of 10. Only one out of five students, who start up education at bachelor level, completes also the second cycle.

The probability of completing any level of education, once started, differs between genders. 67% of females, but only 50% of males, who enter the University, complete undergraduate education. For graduate level the gender gap is smaller, still existent – 21 vs. 18 percent of entrant cohort respectively. The same proportion of males and females acquire undergraduate education within 4 years, which may be considered the minimum time required to complete the first level education. For females and males probability to complete within 5, 6 and 7 years differ significantly (53 vs. 42, 61 vs. 46, and 64 vs. 48 percent respectively). The distribution of probabilities to complete the second cycle higher education (master degree or equivalent) or higher between years of progression is somewhat similar for both genders with slightly higher number for females.

Table 2

Probability of acquiring undergraduate or graduate degree (percent of entrants)

		Within 3 years	Within 4 years	Within 5 years	Within 6 years	Within 7 years	Within 8 years
Undergraduate	Male	1.8	29.5	41.6	45.9	47.3	49.6
	Female	2.8	30.4	53.3	60.7	63.3	66.3
	<i>Both genders</i>	2.5	30.1	50.2	56.6	58.8	61.6
Graduate	Male	0	0	1.0	11.8	16.4	17.3
	Female	0	0	1.2	11.9	19.0	20.1
	<i>Both genders</i>	0	0	1.2	11.9	18.3	19.3

Source: author's table, computed based on education life tables

7.3. Dropouts

One of the main empirical results from the above exercise is the possibility to estimate cohort dropout probabilities by years of studies – information that was not obtainable from other available statistical sources. Dropouts are interruptions of studies without acquisition of degree or qualification. The dropout probabilities here are computed accordingly by merging model (b) and model (c) results.

The first observation is that dropout probabilities are increasing over time, both in undergraduate (Figure 3) and in graduate study programmes (Figure 4). In undergraduate studies the probability of dropping out from the programme is about stable in the first three years: between 0.04 and 0.07 for females, and between 0.07 and 0.10 for males. After the first three years the probability to interrupt studies without diploma grows. The risk of dropping out reaches the peak in year 6 as high as 59 percent for males and 47 percent. This means that every next year when a student does not graduate, the chance that he/she discontinues studies increases. In years 7 and 8 for males the dropout probability drops. In graduate studies the



tendency is similar with constant increase of risk of discontinuing, being as high as 78 percent for females and 70 percent for males in year 8.

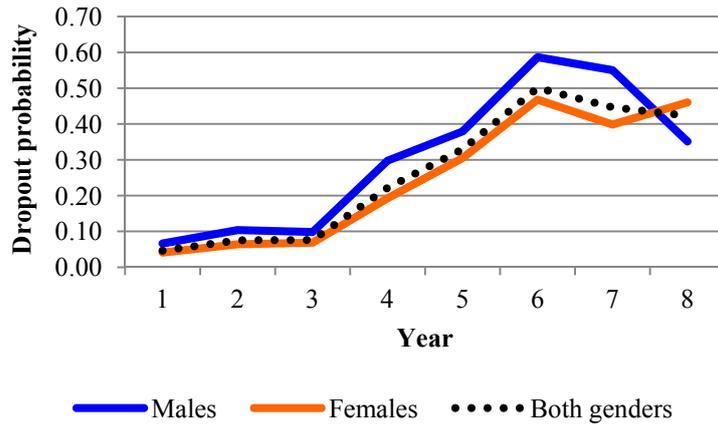


Figure 3. Dropout probability from undergraduate studies

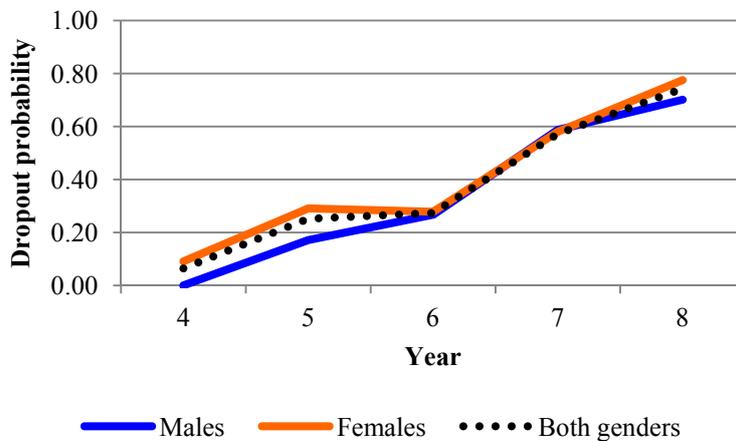


Figure 4. Dropout probability from graduate studies

The second important conclusion is the obvious gender difference in dropout rates. In undergraduate studies the dropout risk is higher for males at all years but the year 8, besides the difference appears increasing every period. In graduate studies female dropout probability is higher than that of males in almost all years, but the difference is smaller than in first level higher education studies.



8. Conclusion

The author has developed multistate life table model for application in higher education studies. The origins and earlier applications of the method in demographic research are shown. The author also describes mathematical technique to arrive at results. Three models are seen as most appropriate, given the information about data availability, hence the three models are described in detail and applied to the University of Latvia data as a pilot study. The final section of the article shows results and shortly discusses them.

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CHANGES IN MORTALITY AND MORBIDITY FROM INFECTIOUS DISEASES DURING THE TRANSITION IN THE THREE BALTIC COUNTRIES: COMPARATIVE STUDY

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Keywords: infectious diseases, mortality, morbidity, Baltic countries.

Abstract

The purpose of this study is to give a comparative analysis about changes in mortality and morbidity from infectious diseases in Latvia Estonia and Lithuania, compared with Poland, Finland, Sweden, Belarus and Russia, to point main trends and define main causes of the changes. For the study main infectious diseases: HIV, AIDS, Tuberculosis, Diphtheria, Hepatitis B, C had been selected.

Socio-Economic Changes since the Beginning of Transition to Market Economy

Since 1991, when Estonia, Latvia and Lithuania regained independence from the Soviet Union, significant changes were experienced. Social and economic reforms of the 1990s have had a dramatic impact on almost all aspects of life – labor market, pension system and health-care system. Everything has changed significantly.

Table 1

Gini coefficient for selected countries

Year	Lithuania	Latvia	Estonia	Belarus	Russia
1988	22.5	22.5	23.0	22.8	23.8
1993	33.6	27.0	39.5	21.6	48.3
1996*	32.4	31.6	30.1	28.8	46.2
2002	32.3	35.9	36.8	29.7	35.7
2008	34.0	37.7	30.9**	27.2	42.3
2009	35.5**	37.4**	31.4**
2010	36.9**	36.1**	31.3**

* Estonia and Belarus 1995

** Data: <http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do>

Data: <http://www.indexmundi.com>; <http://search.worldbank.org/data?qterm=gini&language=EN>



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With the independence renewal income inequality has increased substantially (Table 1). In 1988 the Gini coefficient was 23 in all three countries, and rose to 32 in Latvia, 30 in Estonia and 32 in Lithuania in 1995/1996. The same way income inequalities were increasing in Belarus and Russia.

Economic growth was low or negative in the early 1990s, but started from 1995 (1996 for Latvia) to 1998, economic situation has improved significantly (Table 2), but the Russian financial crisis slowed economic improvement down and led to negative growth in Estonia and Lithuania in 1999. [1]

Correlation between income level, social status and life expectancy had been proved and studied a lot. In average life expectancy in countries with low social stratification is 5-10 years longer than in those with high inequality rates. [2]

Fast transition to market economy had a negative impact on population well-being and caused life expectancy decrease in many countries of post-communist space, Baltic countries weren't exclusion. During 1990-1995 life expectancy for both sexes fell by 2.2 years in Estonia, 2.4 years in Lithuania and 3.2 years in Latvia. [3]

But how transition influenced infectious diseases prevalence?

Table 2

Consumer price changes and annual GDP growth for selected countries

Year	Annual Consumer price changes, %				Annual GDP growth, %			
	Estonia	Latvia	Lithuania	Russia	Estonia	Latvia	Lithuania	Russia
1992	1076.0	951.2	1020.5	...	-21.2	-32.1	-21.3	-14.5
1993	89.8	109.2	410.4	874.6	-5.7	-5.0	-16.2	-8.7
1994	47.7	35.9	72.1	307.4	-1.6	2.2	-9.8	-12.6
1995	29.0	25.0	39.6	197.4	5.0	-0.9	3.3	-4.1
1999	3.3	2.4	0.8	85.7	9.6	6.9	3.3	10.0
2008	10.4	15.4	11.1	14.1	-5.1	-4.2	2.9	5.2
2009	-0.1	3.5	4.2	11.7	-13.9	-18.0	-14.7	-7.8
2010	3.0	-1.1	1.3	6.9	1.8	-0.3	1.3	4.0

Data: <http://www.sjsu.edu/faculty/watkins/russianinfl.htm>; <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>; <http://www.stat.ee>; <http://www.csb.gov.lv>

The studied period from a socio-economic view is not homogeneous: rapid decrease of socio-economic indicators in the first half of the 1990s was followed by the consequent increase during the next years. But the Financial crisis of 2008 hasn't fully influenced the mortality and morbidity indicators yet.

Tuberculosis

Tuberculosis is a contagious disease. Like the common cold, it spreads through the air. Left untreated, each person with active tuberculosis disease will infect on average between 10 and 15 people every year.



In Europe, wealth inequality is directly related to tuberculosis notification ($R^2 = 0.69$). However in countries with lower tuberculosis rates the proportion of tuberculosis case-patients that are foreign-born increases. So with increasing wellbeing status, tuberculosis rates drops, but the proportion of foreign-born TB case-patients increases. [4] Was it so in Baltic counties?

Tuberculosis incidence rates have for many years remained low and relatively stable in Sweden and other Nordic countries. Since the year 1980 Poland's tuberculosis rates improved significantly and even during the 1990s faced a decrease. For Latvia (Table 3), Estonia, Lithuania, Russia and Belarus morbidity and mortality from tuberculosis became a serious public health problem after the Soviet Union collapse in 1991 (Figure 1, Figure 2). Among determinants of such rise were economic recession, malnutrition, poor living conditions and overcrowding in prisons what had a great impact on the spread of multi-resistant tuberculosis.

Table 3

Mortality and morbidity from tuberculosis in Latvia

	1990	1995	1997	1998	2000	2001	2002	2006	2009	2010
Morbidity from tuberculosis (case number)	731	1274	1689	1820	1715	1729	1540	1144	825	830
Of them children (case number)	46	63	89	130	144	162	111	93	45	40
Morbidity from tuberculosis (per 100 000)	27.4	50.4	68.4	74.0	70.5	72.9	65.4	49.7	36.6	36.6
Mortality from tuberculosis	185	359	320	362	300	283	214	175	89	...
Mortality from tuberculosis (per 100 000)	6.9	14.2	12.9	14.7	12.3	11.9	8.3	7.3	4.5	3.5

Data: <http://www.lic.gov.lv>, Infectology Center of Latvia; Analytical division of Tuberculosis and Pulmonary Diseases clinic; tpi.mk.gov.lv/ui/documentcontent.aspx?Type=attach&ID=760

In the Nordic countries and Germany, the decrease in incidence among residents was counterbalanced by an increase in the tuberculosis cases among immigrants arriving from developing countries. The two main risk groups in mentioned countries are resident elderly persons and young immigrants. [4]

Human Immunodeficiency Virus (HIV) and AIDS

HIV, hepatitis B and C infections significantly influences morbidity and mortality among injecting drug users and therefore are a heavy burden on the social budget. In addition injecting drug users exposed to an increased risk of tuberculosis. HIV-infected injecting drug users are susceptible to the disease, even if the prevalence of tuberculosis is relatively low. Tuberculosis causes about a half of all AIDS-related deaths. Prevalence of mentioned diseases being a burden on budget, also characterizes community development degree.



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During the years 1990-1995 Baltic countries, Poland, Russia and Belarus have experienced stable and relatively low figures of HIV incidence per 100 000 (Figure 3). Among these countries, highest incidence rates were found in Sweden. First country with HIV case increase in 1996 was Belarus followed by Russia with rapid HIV increase started since 1999. At the same time dramatic increase experienced Estonia and Latvia while the number of HIV cases in Lithuania as well as in Finland, Belarus, Sweden and Poland has remained relative low.

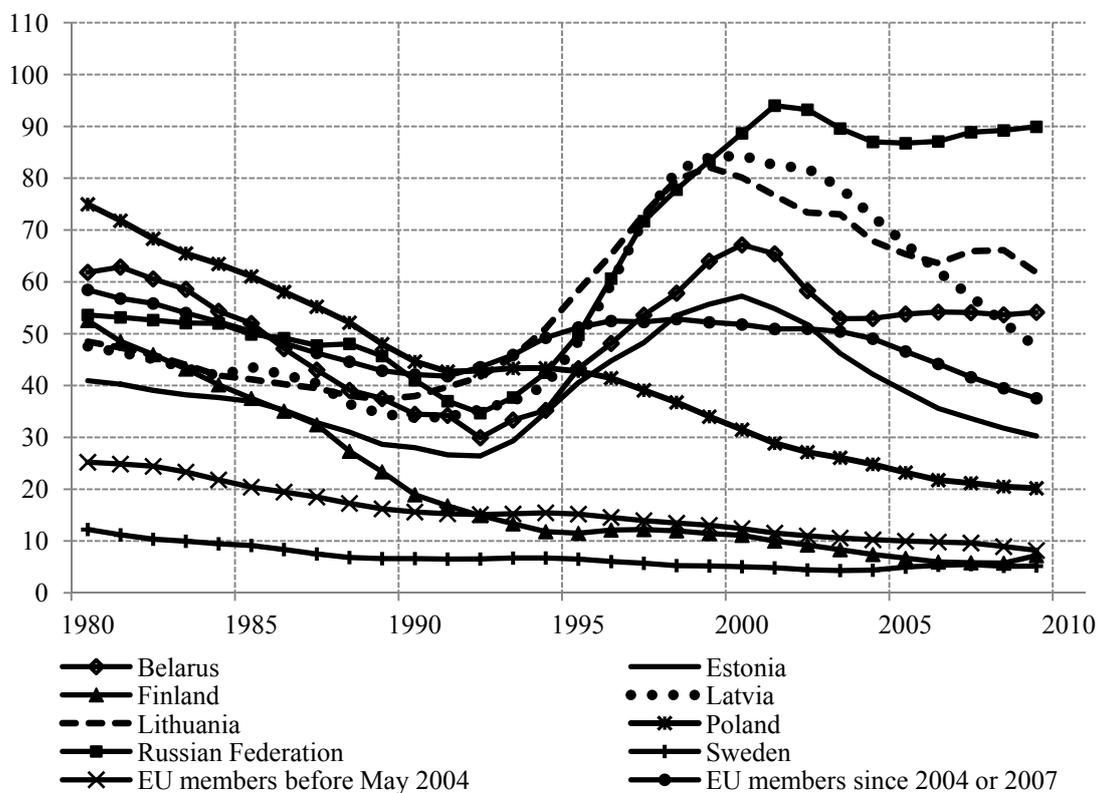


Figure 1. Tuberculosis incidence per 100000 population in selected EU countries, Belarus and Russian Federation

Source: European Health for All Database

In Estonia situation have started to change dramatically since the year 2000 and in year 2001 when the number of diagnosed HIV cases per 100 000 reached 108, HIV epidemic was declared. The epidemic was characterized by high infection rate, young age, male gender, increasing heterosexual transmission and increasing proportion of women. While in 1988-1999 hetero- and homosexual transmission were the main modes of HIV transmission, the epidemic in 2001, was caused mainly by injecting drug use and transmitted mainly through the sharing of contaminated needles and syringes. HIV infection prevailed among people within age group



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under 25 years and in addition the proportion of women among newly infected persons had been increasing year by year.[6] Despite the significantly improved situation by the year 2009, Estonia still had the highest HIV case number in Baltic region.

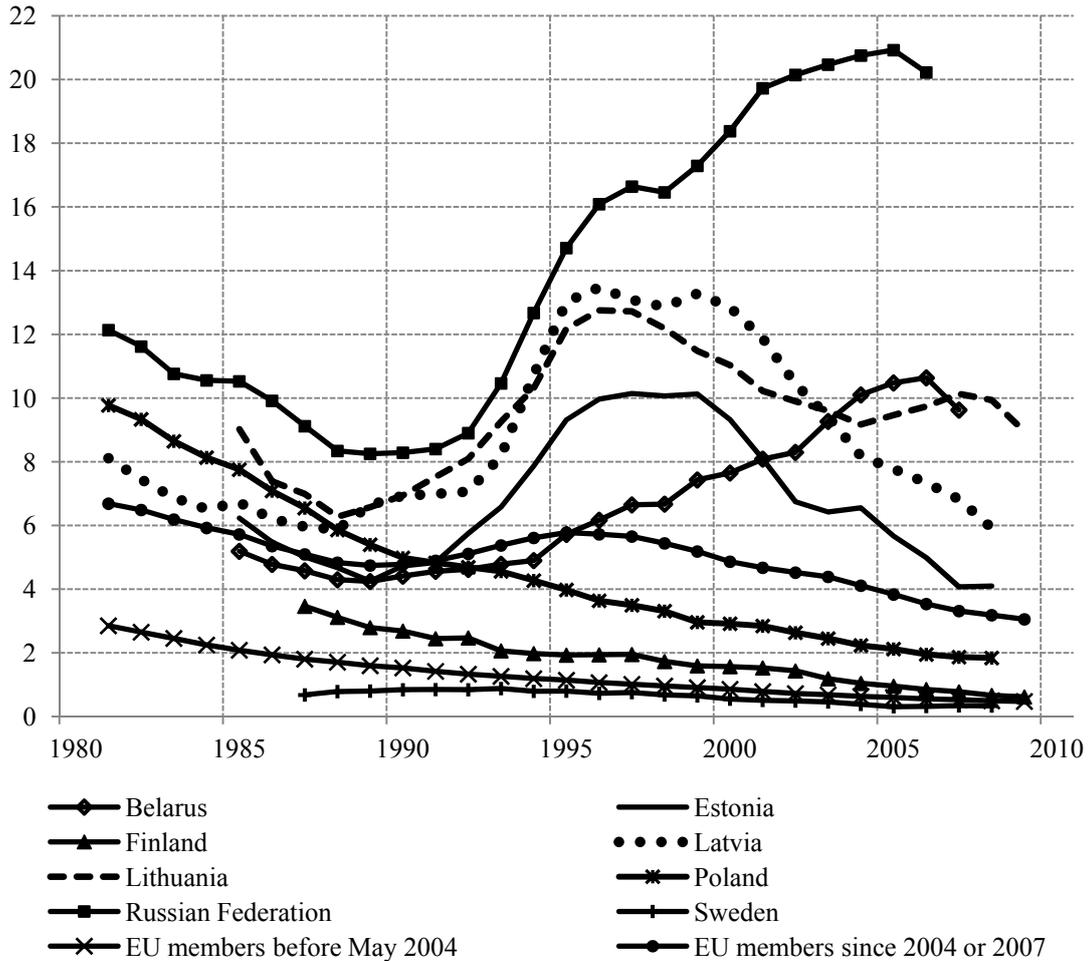


Figure 2. Standardized death rates for tuberculosis in selected EU countries, Belarus and Russian Federation

Source: European Health for All Database

The HIV epidemic peaked in Lithuania during the year 2002 due to HIV outbreak in one correctional facility. But nevertheless, the high number of HIV cases per 100 000 was declared only in year 2002, while Latvia and Estonia faced dramatically high HIV statistics for several years and still haven't reached pre-epidemic level.



During 1996-2005 the incidence rate in Lithuania has increased from 0.33 per 100 000 to 3.51 per 100 000 with peak in 2002 at point 11.44. Like in other countries HIV infection among the male injecting drug users prevailed. A rise in new cases among women also was observed. [7] By the year 2009 HIV incidence rate decreased to 2.83.

The first case of HIV infection in Latvia was registered in 1987 but the first case of AIDS detected in 1990. Until the end of 1997, HIV in Latvia was transmitted solely through sexual contacts, mostly among male homosexuals. Like Estonia and Russia Latvia have faced HIV incidence peak in 2001 with 34.27 cases per 100 000. By the year 2009 it has improved to 15.8 per 100 000.

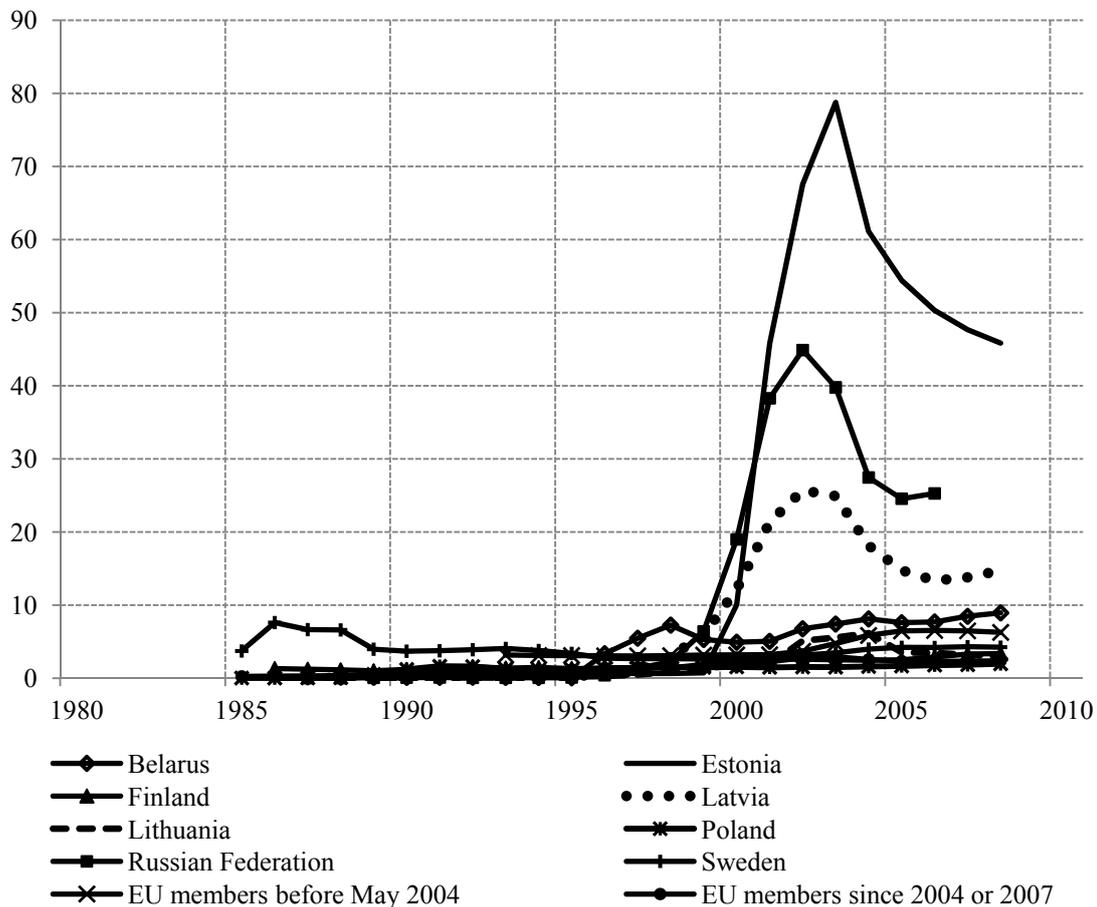


Figure 3. HIV incidence per 100000 population in selected EU countries, Belarus and Russian Federation

Source: European Health for All Database



Despite dramatic HIV prevalence increase in early 2000s, AIDS incidences remained generally low (Figure 4). This may partly be caused by the long incubation period. Other possible reasons are under-diagnosis and under-reporting.

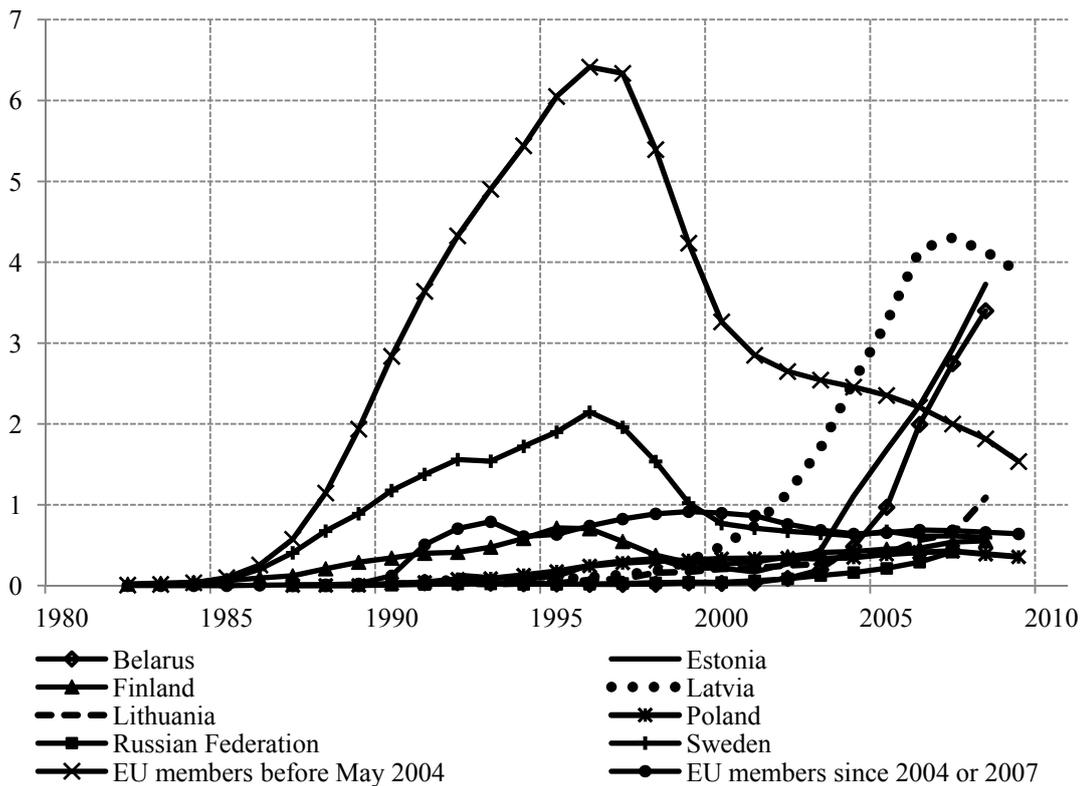


Figure 4. AIDS incidence per 100000 population in selected EU countries, Belarus and Russian Federation

Source: European Health for All Database

Hepatitis B, C and Diphtheria

In the Nordic and Baltic countries the incidence rates of hepatitis B fell dramatically in the early 1980s. [8] The main causes of such a decrease were introduction of targeted immunization programs among high-risk groups such as drug users and homosexual males and introduction of HIV preventive measures such as disposable syringes. In the 1990s, many of the countries re-experienced hepatitis incidence increase. Since the early and mid-1990s, a growing number of intravenous drug users had caused high incidence rates of hepatitis B in Northwest Russia and the Baltic countries.



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In Estonia a dramatic increase of injecting drug users within age group 15-29 in the early 1990 caused a rapid increase of B and C hepatitis cases. The incidence of hepatitis B increased from 5.74 cases per 100 000 population in 1992 to maximum of 40.37 cases per 100 000 population in 1997. Since 1998 the situation began to improve and by the year 2009 Estonia's B hepatitis rate was 2.16 per 100 000 population. The incidence of hepatitis C was relative stable till the year 1997 when it faced a dramatic increase with highest rate of 26.65 cases per 100 000 in the year 2000. By 2009 the rate decreased to 5.00. From the year 1996 injecting drug use was the most common risk factor among young people and more than half of all new hepatitis C cases were caused by injecting drug use.

The situation with hepatitis B rates in Latvia was relative stable till the year 2000 when a sharp increase was detected with peak in 2001 at the rate 35.63 per 100 000 population. From 2000 to 2001 growth of hepatitis B infection was observed among both general population and injecting drug users. A similar situation was with C hepatitis rates with maximum at 12.52 per 100 000 in the year 2000. By the year 2008 B and C hepatitis rates had improved significantly till 6.18 and 5.12 per 100 000 population relatively.

As for Lithuania, after independence renewal in 1990, situation with B and C hepatitis infections was rather stable with trends for improvement and while C hepatitis rate faced a slight increase, B hepatitis case number compared to 1990 had improved significantly and in 2008 was 2.68 per 100 000 population.

In the early 1990s, a sharp increase in reported cases of diphtheria was observed in the Baltic countries and Northwest Russia. Mainly it was caused by a drop in vaccination coverage and inadequate vaccination. In most of the countries the epidemic reached its peak around 1995. Vaccination campaigns have greatly improved the situation, however Latvia faced another epidemic in the year 2000. Non-immune children and adults, especially alcoholics and homeless people, were and remain the main risk groups of contracting diphtheria in the region. [9]

Conclusion

Compared with the situation in the late 1990s and early 2000s, the epidemiological situation for most communicable diseases in the Baltic Sea area has improved significantly. The decrease in incidence rates has been most notable in the eastern part of the area, especially due to blood-borne and sexually transmitted infections such as HIV and viral hepatitis. A combination of effective preventive measures and decrease in numbers of drug users was the main reason of this improvement. In contrast to other communicable diseases, the incidence of tuberculosis has remained high in the area. The spread of tuberculosis and HIV infection still represent one of the most important public health challenges in the Baltic Sea area.

Epidemiological situation for most of the communicable diseases in the region can be improved by collaboration and exchange of experience between health authorities, infectious disease control professionals and non-governmental organizations, exchange and dissemination of surveillance data within the region and economic growth stimulation. As in Europe, wealth inequality is directly related to tuberculosis notification, improvement of population's well-being and level of life will lead to decrease of mortality and morbidity from the disease.



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KEY FACTORS AFFECTING DEVELOPMENT OF THE ENTERPRISE INNOVATION CAPACITY

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Abstract

Innovation is one of major relevance for firms, as it can be treated as a the source of additional revenues from new products or services, and along with this it can help to save costs or even improve the quality of existing business processes [1]. In reality, innovation is the most effective way for enterprises to improve their competitiveness in a highly turbulent environment. Innovation is a source of competitive advantage for businesses [23]. Under the conditions of increasingly intensified globalization, fast changing technological landscape and continuous market and customer needs for new products/services, academics as well as practitioners agree that enterprises have to innovate if they are eager to prosper and survive, in the modern dynamic environment [8]. That is why it is quite vital to find those factors, which significantly contribute to the innovativeness of organizations. A wide range of scientific published articles, which aimed to provide different theoretical findings and practices of innovative economies, revealed that organizational culture, entrepreneurship and market orientation are the most vital factors that affect on the organizational innovation capacity and sustained competitive advantage in modern economy [3]. Research on innovation has been conducted to investigate and examine what policy initiatives and infrastructure may originate innovation, what organizational culture is appropriate to innovation and what recourses are needed to wake up the innovative potential.

In the context of the paper there were applied such economic science quantitative and qualitative **research methods** as monographic, grouping, reference, generalization, graphical analysis and content analysis.

The purpose of the paper – to analyze the theoretic aspects of the factors have an impact on enterprise innovation creation.

The main tasks of the paper are stated as following:

- to investigate of the main theoretical aspect of the concept of innovation;
- to analyse those factors, which significantly contribute to the innovativeness of enterprises;
- provide the review of the empirical findings of factors impact on innovation creation;
- summarize pilot research findings.



In the context of the paper main attention was driven to analysis of the definitions of the innovation. The second part revealed the nature of the most important factor influence on the innovation capability. The paper reveals the wide range of innovation definition as well as stress out the importance of analysis of key factors that may have a high impact on enterprise innovation creation on the basis of pilot research analysis.

Introduction

A highly developed system of innovation is not only a major source of competitive advantage of a company; in general, improved state innovation policy leads to the increase of the competitiveness of that state, on a wider scale ensures the wealth of nations, and in the economic environment of today innovation is especially called for to overcome the struggle with the severe economic situation and social challenges. To ensure competitive advantage in the modern global market, companies should acquire external knowledge through partnerships, alliances and collaborations with external organisations, investment in R&D and patent licensing [10].

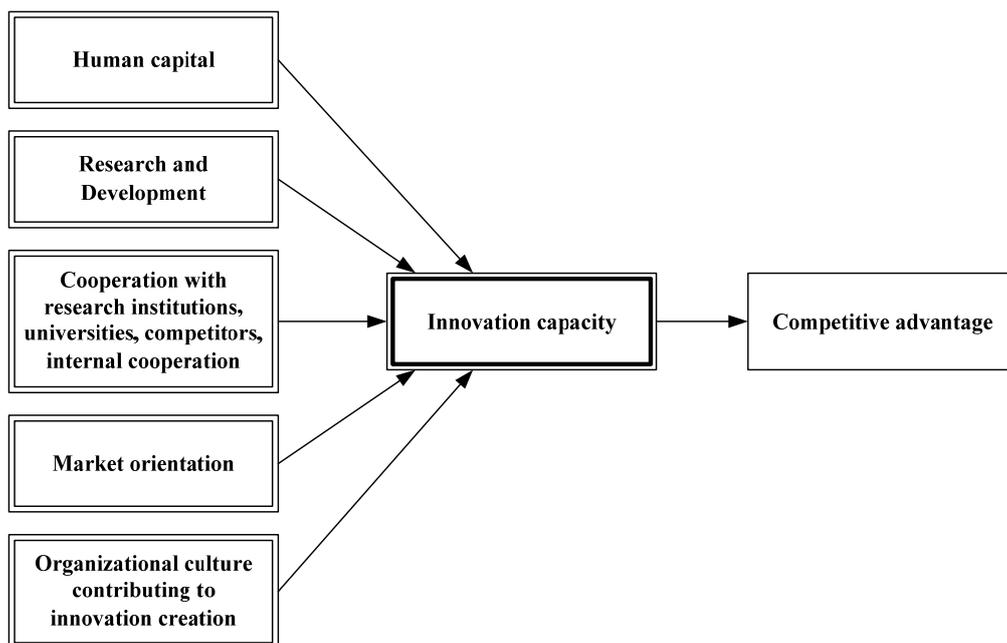


Figure 1. The Conceptual Model of Innovation Determinants

In the context of the paper there would be revealed wider understanding of the factors that influence on the innovative power of the organizations. According to detailed review of the specific literature on innovation creation on the organizational level it should be admitted that the key factors that might influence on innovation intensity are: human capital, research and development, cooperation with research institutions, universities, competitors, internal cooperation, market orientation and organizational culture contributing to innovation creation.



On the basis of the literature analysis, the author of the paper would like to provide own created innovation process model (Figure 1).

Innovation is often treated as a source of competitive advantage for organizations. Taking into consideration the conditions of increasingly intensified globalization, constantly changing technological landscape and inconsistent customer demands for new products/services, both practitioners and theoreticians made up their minds that enterprises have to innovate [30].

Human Capital

The accumulation of all the societal, organizational and personal investment in schooling, education, and training at the individual level is in the form of improved skills and performance, at the organizational level in the form of increased profitability, and at the societal level in the form of societal benefits is labelled as the human capital [25]. Human capital in the individual level is presented through four main components:

- genetic inheritances;
- education;
- experience;
- attitudes about business and life [18]

Human capital on the organizational level is presented as “the source of innovation and strategic renewal” [4].

Research and Development

Cohen and Levinthal argued that own R&D generates not only new knowledge in the sense of innovations but also contributes also to the absorptive capacity of the company by increasing the skills of the employees who were involved in R&D process [7].

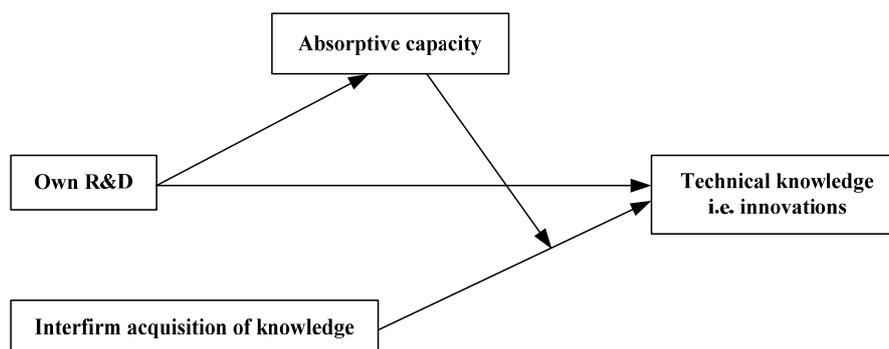


Figure 2. Model of absorptive capacity and R&D incentives

Cohen and Levinthal announced that R&D budgets determines the absorptive capacity by increasing the firm’s stock of knowledge, however, it must be admitted that absorptive capacity is also dependent on individuals working in the organization[7]. Harabi stated that informal



networks of R&D cooperation seem to be more important for firms innovative behavior than formal ones [16]. Veuglers finds in the Flemish manufacturing industry that R&D cooperation and external R&D have a positive effect on the internal R&D, but only if the absorptive capacity takes the form of full-time staffed R&D department [29].

Cooperation with Research Institutions, Universities, Competitors, Internal Cooperation

University – industry partnership is considered as one of the main factors contributing to successful innovation and growth [15].

According to Lee survey of more than 400 research joint ventures in order to identify the motivations in participation in an university-industry partnership it was concluded that participants ranked their reasons as follows (the latest the most important) [21]:

- 1) Access to new research;
- 2) New products development;
- 3) Sustaining a stronger relationship with the university;
- 4) New patents acquisition;
- 5) Solving specific technical problem.

Collaboration in innovation processes is considered as a first-best option, instead of last resort because of firms potentially access to information, resources, markets and technologies. Knowledge creation through collaboration between government, industries, universities, and research networks promote firm innovation capacity and competitive advantage [31].

Market Orientation

As the matter of fact, there is no surprise that one of the most important impact on innovation creation at the firm level mainly concerning product and process innovation is based on the company's capability to focus on social, business and natural environments [3]. In reality, market oriented organizations tend to concentrate their attention on:

- collection of information about target – customers' needs and competitors' capabilities on a constant basis;
- usage of this kind of information in order to create superior customer value. [3]

Also Bolwijn and Kumpe admitted that innovative organization is associated with learning organization that creates and integrates market knowledge by learning about customers and competitors [5]. Li and Cavusgil argued that learning about customers creates knowledge that allows enterprises to investigate product innovation opportunities generated from emerging market demand and reduces the potential risk of missing the customer needs. That is why the process of learning about customer needs is vital to product innovation and due to this fact it allows a firm to:

- find out idiosyncratic characteristics of customer segments with the purpose to clear up product attributes;
- understand emerging markets needs, which often underpin new product functions;
- design customer knowledge itself as a part of a new product offering [22].



As to process of learning about competitors it must be admitted that it implicates the set of behavioural activities that form knowledge about competitors' products and strategies. Moreover it should be mentioned that a firm with wide information capacity about its competitors can transform its knowledge into product advantage [22].

Organizational Culture Contributing to Innovation Creation

Organizational culture is characterized by a mixture of shared values, norms and beliefs [14]. According to Chandler et al. research of 429 SMEs it is argued that supervisory guidance and reward system support is beneficial to the creation of an innovative culture. [6] Taking into account business visions and setting up strategic objectives senior executives can spread up a clear message to the staff and develop an organizational innovation culture within the firm [30]. Moreover, senior management can further promote networks to explore social, technical and intellectual resources needed for innovations and struggle with internal conflicts between organizational units in order to ease the innovation process. [30]. According to Tushman and Nadler "to encourage innovation, organisations must base rewards on actual performance and make innovation an important dimension of individual and group performance" [28].

Innovation Capacity

It is widely stated that innovation is vital for firm success, survival, development and future independence. The increase of market share and profitability of the firm highly depends on its innovative activities. That is why firstly it is needed to analyse the wide range of innovation definitions. According to Hill and Jones successful innovation of products or processes [or services] gives a company something unique that its competitors lack [17]. Ahuja and Lampert argue that innovation refers to the commercializing of the innovation [1]. Innovation is can be treated as the source of additional revenues from new products or services, can help to save costs and improve the quality of existing process [10].

Accordingly to Eurostat firm is involved in innovative activity taking into consideration the fact that firm introduces new or significantly improved products (goods or services) to the market or enterprises that implement new or significantly improved processes. Innovations are based on the results of new technological developments, new combinations of existing technology or other knowledge acquired by the enterprise. The term covers all types of innovator, i.e. product innovators, process innovators and enterprises with only ongoing and/or abandoned innovation activities. At European level, the Community innovation survey defines four types of innovation [11]:

Product innovation means introduction to the market of new goods or services or of goods or services with significantly improved capabilities, such as improved software, user-friendliness, components or sub-systems.

Process innovation means introduction of a new or significantly improved production process, distribution method or support activity for goods or services. Purely organisational innovations are excluded.



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Organisational innovation means introduction of new or significant changes in a firm's structure or management methods that are intended to improve the firm's use of knowledge, the quality of its goods and services or the efficiency of its workflows.

Marketing innovation means introduction of new or significantly improved designs or sales methods to increase the appeal of goods and services or to enter new markets [11].

Accordingly to Oslo Manual 1997 innovation is a new or significantly improved product (goods or services) introduced to the market or a new or significantly improved process introduced within an enterprise. Innovations are based on the results of new technological developments, new combinations of existing technology or other knowledge acquired by the enterprise [11].

Table 1

Characterization of factors influencing on innovation creation

Determinants	Characterization
Human capital	Personal learning and training programs with the purpose of increasing of their skills both on individual and organizational level [26] Enterprise human resources are very intelligent and creative, professionals of own job, create new ideas and knowledge, are best enables [2], [24]
R&D	R&D expenses, personal, project choice, capacity, R&D department [26], [24]
Collaboration: a) external with knowledge institutions, suppliers, industry contingent; b) internal.	a) Collaboration with suppliers before product development and before selling time [9], [27], [24] Collaboration with knowledge institutions – universities, research centres; b) Internal collaboration – between individuals, groups, department integration. Sharing with information, cross-functional team approach [20], [12], [24]
Organizational culture contributing to innovation creation	Formal procedures and control support creativity and innovation Personal is encouraged to be creative and innovative Personal innovative proposals are evaluated Tolerance to mistakes in creative and innovative area – treat it and use it as an opportunity of further learning [3], [30]
Market orientation	Regular information collection about market changes Communication with clients Knowledge about market segments, competitors and industry The usage of marketing research in business decision making [3]
Innovation intensity	Product innovation – quantity of the product innovation during past five years Product improvement – incremental/radical Ability to introduce to the market new products and services before competitors New product/service creation with the purpose to create new markets/consumers or satisfy existent markets/consumers [24], [2] Process innovation – new production methods creation or improvement, promote service or administrative operation improvement with the purpose to develop new product production, improve process technology or operation practice [13] New introduced product and service quality Changes in organizational system – incremental/radical[3] Amount of patents [2]



Pilot Research Results

A research project namely pilot research was conducted in order to: determine next steps of research such as sample size; clear up that research planned will actually work; make sure that the questions set are answerable and find tools to be used in actual work. Sample questions were presented using a five-point Likert scale. In the context of pilot research there were questioned 10 enterprises in Latvia. The employees of the enterprises were asked to fill in questionnaire form and provide the answers on the following blocks:

1. *Enterprise data*
 - 1.1. Enterprise industry.
 - 1.2. The year of foundation.
 - 1.3. The number of employees.
 - 1.4. Location of enterprise.
2. *Enterprise culture orientated on innovation*
 - 2.1. Top management sets strategic objectives; staff mainly decides how to achieve the objectives.
 - 2.2. Inter-disciplinary teams work on important projects.
 - 2.3. Formal procedures and control support creativity and innovation.
 - 2.4. Organizational structure supports the flow of information.
 - 2.5. The staff are encouraged to be creative and innovative.
 - 2.6. Possible conflicts are successfully solved.
 - 2.7. Innovative suggestions of the staff are evaluated.
 - 2.8. Mistakes regarding creative and innovative efforts of individuals are tolerated and used as the opportunity for further learning.
 - 2.9. In selection of employees, special attention is devoted to abilities such as creativity, independent opinion, self confidence, perseverance, self-control, management of complex problems, risk taking.
3. *Market orientation*
 - 3.1. To what extent does your firm collect information about changes in your market?
 - 3.2. How frequently does your firm collect information about changes in your market?
 - 3.3. What percentage of innovative ideas has your firm attracted from market information during the last five years?
 - 3.4. How often do the staff who are not directly involved with sales/marketing meet with customers to learn how to serve them better?
 - 3.5. What is the extent of your firm's knowledge about the market segments in your industry?
 - 3.6. What is the extent of your firm's knowledge of competitors?
 - 3.7. To what extent do you share information about market changes among different departments within the firm?
 - 3.8. How many new products have been developed with information about your customers and competitors during the last five years?
 - 3.9. How often has your firm applied market research information for business decisions during the last five years?



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- 3.10. How often has your firm used market research information from other professional organizations during the last five years?
4. *Human capital*
- 4.1. Enterprise human resources are very intelligent and innovative.
 - 4.2. Enterprise human resources are very talent.
 - 4.3. Enterprise human resources are specialized on their jobs.
 - 4.4. Enterprise human resources create new ideas and knowledge.
 - 4.5. Enterprise human resources are best performers.
 - 4.6. Enterprise human resources are high qualified professionals.
 - 4.7. Enterprise human resources obtain high experience level.
 - 4.8. Training courses at working place in the following sphere: innovation, production process improvement or development, product improvement and design.
 - 4.9. Training courses at working place in the following sphere: work organization, management skill.
5. *Research & Development*
- 5.1. There is constant knowledge assimilation from different sources.
 - 5.2. Enterprise obtain specific technological equipment, software, machinery.
 - 5.3. Sufficient scientific research personal amount is involved in enterprise innovative activity promotion.
 - 5.4. Scientific research results are commercialized.
 - 5.5. Expenses on R&D activities increased in comparison with the previous year.
 - 5.6. There is a R&D department inside the enterprise.
6. *Collaboration on innovation with*
- 6.1. Universities and/or scientific research institutions;
 - 6.2. Consultants;
 - 6.3. Suppliers;
 - 6.4. Customers;
 - 6.5. Another enterprises;
 - 6.6. Collaboration atmosphere is prevailing inside the enterprise;
 - 6.7. There is inside collaboration between enterprise departments.
7. *Innovation intensity (Yes/No)*
- 7.1. Enterprise had developed new products/services during last 3 years.
 - 7.2. Enterprise plans to introduce new products/services in 3 years.
 - 7.3. Enterprise had introduced new technology performance improvement during last 3 years.
 - 7.4. Enterprise plans to introduce new technology performance improvement in 3 years.
 - 7.5. Enterprise had introduced some changes in organizational system during last 3 years.
 - 7.6. Enterprise plans to introduce some changes in organizational system in 3 years.
 - 7.7. Enterprise had introduced some marketing changes during last 3 years.
 - 7.8. Enterprise plans to introduce some marketing changes in 3 years.



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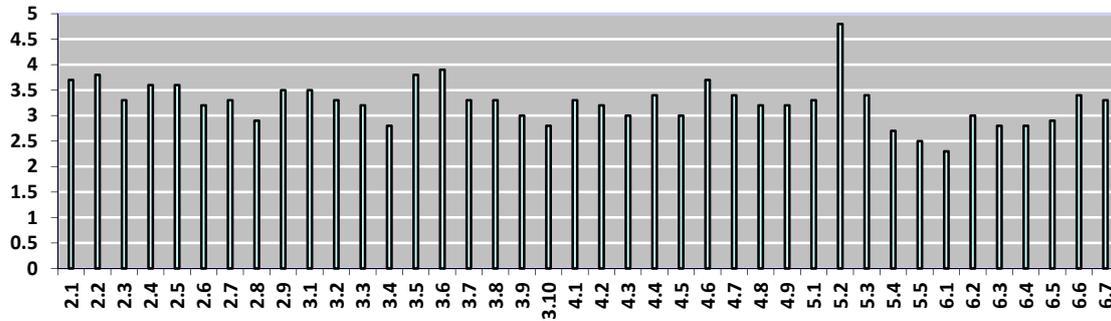


Figure 3. The mean figures of investigated factors

Overall the highest mean figures were devoted to such factors as *Enterprise culture orientated on innovation* (3.43), *Research & Development* (3.34) and the lowest mean figures were devoted to *Market orientation* (3.29), *Human Capital* (3.26) and *Collaboration on innovation* (2.92). In the context of the conducted research it must be admitted that such determinants: *Interdisciplinary teams work on important projects* (3.8), *the extent of your firm's knowledge about the market segments in your industry* (3.8), *the extent of your firm's knowledge of competitors* (3.9), *Enterprise human resources are high qualified professionals* (3.7) and *Enterprise obtain specific technological equipment, software, machinery* (4.8) were evaluated especially high. On the contrary such determinants as *mistakes regarding creative and innovative efforts of individuals are tolerated and used as the opportunity for further learning* (2.9), *the staff who are not directly involved with sales/marketing meet with customers to learn how to serve them better* (2.8), *firm used market research information from other professional organizations during the last five years* (2.8), *scientific research results are commercialized* (2.7), *expenses on R&D activities increased in comparison with the previous year* (2.5), *collaboration on innovation with Universities and/or scientific research institutions* (2.3) with *suppliers* (2.8) and *customers* (2.8).

Only half of observed enterprises have own Research and Development department inside the company.

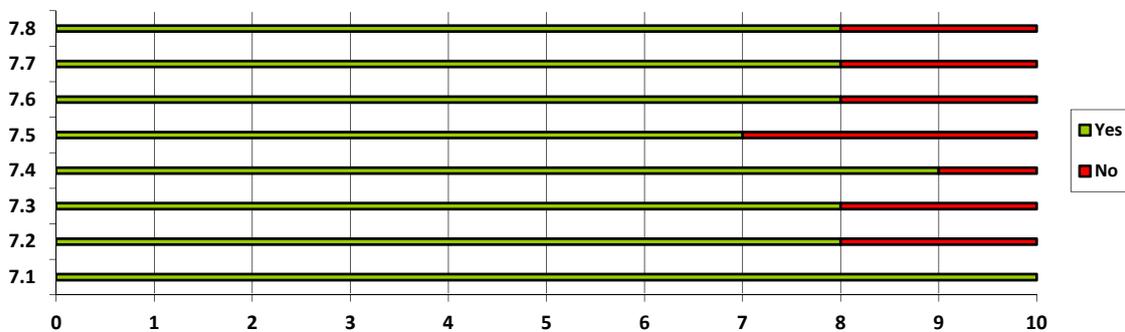


Figure 4. Innovation intensity



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In the context of innovation intensity it should be announced that 80% of observed enterprises plan to introduce new products/services, some changes in organizational system and some marketing changes in 3 years and also the same amount of the enterprises had introduced new technology performance improvement, some marketing changes during last 3 years. 70% of observed enterprises had introduced some changes in organizational system during last 3 years and 90% plan to introduce new technology performance improvement in 3 years. Finally all enterprises developed new products/services during last 3 years.

Conclusion

On the basis of a literature analysis, factors explaining variance in terms of innovation, human capital, R&D, collaboration, organizational culture contributing to innovation creation, market orientation were identified.

Firms should be involved not only to the open science community, but also highly engaged in research collaboration. It is needed to understand the potential of the resources and competences that can be disseminated by the universities. Universities are treated as a vital source of knowledge for industry.

The increase of the innovation capacity is the main source of the future economic growth and sustainable development. The ability to integrate and transform knowledge is fundamental in process of innovation creation. Knowledge acquisition is performed through several processes, such as, learning when observing others organizations; using knowledge – processing components such as other firms do; applying intentional search and monitoring.

In the context of the pilot research it must be summarized that observed enterprises obtain high innovation intensity due to such factors determinants as high knowledge level about the market segments and competitors, as well as due to high qualified human resources that are treated as professionals and due to specific technological equipment, software, machinery that the enterprise obtains.

In the matter of implications and suggestions for further research it must be argued that it is needed to extend research with statistical figure analysis. Survey questions are answerable and there is an opportunity to test hypothesis on the ground of acquired findings.

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VOLUNTEERS WITHIN AN ORGANIZATIONAL CONTEXT – ONE TERM IS NOT ENOUGH

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Abstract

“Volunteering is any activity in which time is given freely to benefit another person, group, or organization”. The most obvious formal characteristic is the absence of pay. Volunteers perform work not for pay. They gain their income from another job. Within the literature there exist different points of view to define volunteers. Volunteers contribute by high percentage to the success of nonprofit organizations. Nevertheless actual changes in culture and society have an impact on the attitude of people towards volunteerism. Consequently the characteristics for the definition of volunteering might have to be adapted.

Within nonprofit organizations volunteers perform work in different levels of organizations and tasks or jobs. They can work only for projects or act in long-term assistance, e.g. daily, weekly, or a longer period or they even lead such an organization in the function of a board member. Volunteers can assist paid staff as well as provide services like paid staff because of the absence of paid staff. The English language uses only one term for different assignments of volunteers in organizations even the meaning behind is very broad and not restricted. The German language on the contrary provides at least two different terms implicating different meanings when talking about volunteers “Freiwillige, Ehrenamtliche” [3], although the discussion about a common meaning is the same. The contribution of this paper is the idea of an advanced nomenclature for the term “volunteer” within an organizational context. It presents new terms for different groups of volunteers in relation to their commitment. It specifies the meaning of the general term “volunteers” as well as implications and consequences on different groups of volunteers can be discussed more precisely.

Introduction

Nonprofit-Organizations are an important social, political and cultural part of a civil society. The nonprofit-sector has become an important part of the society as third sector in addition to the profit sector and the government sector. It covers requirements which are disregarded by public or profit organizations. These organizations close this gap and justify therefore their work field [1]. When talking about nonprofit organizations and their staff it is obligatory to talk



about volunteers. Looking for an all-embracing definition for the term nonprofit-organization is not possible because of the wide range of the whole sector and the different point of views from which definitions are made. The term volunteer faces a similar challenge. Different approach to volunteers result in various definitions. This paper looks at volunteers from the organizational point of view and tries to explore a new concept of terms.

Definition

Volunteering is an important component of civil society all over the world. Politics are aware of the importance of this sector. In Europe, again after 2001 the year 2011 was proclaimed as “European Year of Volunteering” by the European Union, see <http://europa.eu/volunteering/en>. What is volunteering about?

“*Volunteering is any activity in which time is given freely to benefit another person, group, or organization*” [2]. German scholars add another feature to this definition: Volunteering will take place outside the own household [3]. Following there are further explanations to the given definition: *Volunteering* means that the activity will be done freely [2] and without coercion as well as it does not include unpaid work because of legal obligations, i.e. military service, civilian service. *Time is given freely* will mean that volunteers perform work not for pay. Donating time to a worthwhile cause is a powerful motivation for volunteers. It is not enough to reduce the definition of volunteers to the absence of pay [4]. It is useful compared to paid staff. Volunteers gain their income from another job. Out-of pocket expenses on travels, telephone, etc which may be reimbursed are not considered as income [5]. *To benefit another person, group, or organization* excludes unpaid work within the own household [2].

Above definition provides a first borderline. To come closer to what could be meant by volunteers within an organizational context it is necessary to narrow the meaning of volunteers again: It is to distinguish between formal volunteering and informal volunteering – formal volunteering meaning activities within organizations, associations, institutions and informal volunteering meaning neighborly help, mutual aid without any institutional framework [6]. This article concentrates on formal volunteering.

The term volunteering, volunteer covers a wide range of meaning: “*It is extremely difficult to define what is meant by a volunteer as there is no standard practice in volunteering*” [7]. The English language uses only one term although the meaning behind is very broad and not restricted. The German language on the contrary provides at least two different groups of terms implicating different meanings when talking about volunteers “Freiwillige”, “Ehrenamtliche” [8]. The definition “Ehrenamtliche” has a long history starting in the Middle Age. The meaning changed throughout the various historical areas. Even today the meaning is subject to the changing society [9]. In the absence of a more contemporary term it is still used for a special kind of voluntary work. Volunteers as “Ehrenamtliche” work in charitable organizations, associations or as functionaries in political, social and churchly boards [10]. Volunteers as “Freiwillige” provide self-determined activity on common welfare without financial reward [11]. In the German language there does not exist an overall term as “volunteers”. Although the contradictory meaning of such a term, it would be an advantage for general public relations on volunteers [8],[10]. In the absence of an all-embracing meaning of volunteers in the German language scholars recommend either to use the old-fashioned term “Ehrenamtliche” till a new overall expression has



been found because the term “Freiwillige” being not a suitable equivalent [12] or they recommend the terms “Freiwilligenarbeit, Freiwilligenengagement” as best equivalent to the international term “volunteers”[10].

According to the different German terms the allover English term “volunteer” will be adjusted by specific titles to make their meaning more concrete in an organizational context.

Motivation of Volunteers

As already mentioned volunteers will give time freely without an adequate financial reward. Consequently altruism must be the central motive where the reward is intrinsic [7]. Volunteers get involved for tasks which correspond to the personal interest and circumstances [9]. They, as well, hold paying jobs, so their volunteer work may fulfill only those motivational needs that are not being met at work [13].

The literature on the motivation of volunteers focuses on identifying the nature of the benefits of volunteering. Within this context LEETE presents a useful taxonomy for volunteer motivation [14]: At first benefits are divided into extrinsic and intrinsic ones: *Extrinsic motivation* is seen as a result from the work itself while *intrinsic motivation* arises from the volunteer activity itself. The author presents scientific papers confirming that volunteers may especially be recruited to do tasks for which a demonstration of intrinsic motivation is important. Nevertheless much more material and theories are available dealing with extrinsic motivation subsumed in four groups. By instrumental motivations volunteers will donate their time in order to increase the supply of public goods. Psychological motivation stresses personal values of volunteers, e.g. enhanced self-esteem. Motivation concerning human-capital and rational-choice perspective consider the connection between human capital and both the costs and the benefits of volunteering. The final fourth group focuses on developing and maintaining social resources and connections, meaning social networks, organizational memberships, prior volunteer experience, etc.

There exists a lot of more scientific work about the motivation of volunteers, e.g. see article of WILSON [2] using different angles to consider. But it is not only to look on motivation of volunteers there are also demographic aspects to consider when talking about motivation of volunteers: age, gender, paid work status, educational background [13]. These aspects may differ from country to country as well within the various fields of nonprofit work.

People are more likely to volunteer if they can afford to do so, and they are less likely to volunteer if the opportunity cost of their time is high. They are more likely to volunteer if the work and worktime characteristics of their workplace facilitate volunteering and do not pose barriers to volunteering [15]. LEETE also talks about such an effect in another context by using the calculation of the wage elasticity of volunteer labor supply as relationship between the value of an individual's time and the extent to which they donate their time to volunteering [14]. People within active work places volunteer more than people without employment even they might have more time reserve. Unpredictable working hours have a negative effect on volunteering. Better education also may have an impact on volunteering [15].

The following survey will show empirical evidence to this field: Statistics Austria (“Statistik Austria”) [16] made a survey in 2006 to find out motives and other attributes of volunteers. When talking about motives the most reasons to work as volunteer are *a) having fun, having a good time b) helping other people c) meeting new friends*. These three motives are not an



Austrian specialty. NOWOTTKA presents another survey about motives of volunteering in Germany in 1999 and 2004. The motives are the same [9].

In Austria, 4.6 millions of people over the age of 15 years are involved in volunteering in various fields producing 14.7 millions of hours of voluntary work.

The survey considers also *formal and informal volunteering*: 27.9% being busy in association, organizations (formal volunteering), 27.1% of people are busy in neighborly help (informal volunteering). Concerning *age* it is 43.8% of the Austrian population at the age of 15 years volunteering in different areas. Within this group 47.1% are men and 40.7% are women. Especially motivated are people within the age of 40 to 59 years. Also people within 20 and 24 years and 30 to 39 years do much of voluntary work. Regarding the *marital status* married people and single people take an active part with 46% each, widowed people represent only a small part. The *educational background* is also an important attribute when talking about volunteers. Higher education favors volunteering. This is also shown by this survey: 60% of volunteers have a degree of pedagogical school, 54% a degree of a university.

Typology of Volunteers

Within the chapter – definition – the broad range of meaning of the term “volunteer” was narrowed to the understanding within an organizational context of nonprofit organizations. The connection to German idioms should sensibilize for different meanings of “volunteer” also in the English language. When talking about associations being the most important legal framework within nonprofit organizations in Europe [17] volunteers donate their time in different hierarchical levels of such organizations. They can work only for projects or act in long-term assistance, e.g. daily, weekly, or a longer period. Volunteers can assist paid staff or provide services like paid staff because of the absence of paid staff or even act in leadership positions in the function of a board member.

Table 1

Typology of volunteers

	Volunteers as <i>Volunteers</i>	Volunteers as <i>Unpaid staff</i>	Volunteers as <i>Volunteer leaders</i>
time frame/ frequency	project-related assignment/short-term	regular assignment	term of office, normally for four years
qualifications needed	no special qualifications; personal qualifications sufficient	special qualifications needed to do the job	leadership qualifications
position within the organization	temporary jobs, less commitment	integrated within the organization	member of an executive committee
function, responsibility	responsibility limited to the project	responsibility like an employee	leading body
procedure of appointment	no procedure of appointment; no obligation	no formal procedure of appointment; limited obligation	appointment at the annual general meeting of an association

Source: own table



To specify the meaning of “volunteers” and to discuss implications and consequences on different groups of volunteers more precisely new terms are presented: Distinctive features are time and frequency of engagement, qualifications needed, position within the organization, function, responsibility of a voluntary position, procedure of appointment. The higher the position and the commitment the less it is possible to talk about a volunteer in the original sense:

The meaning of these terms will be shown by an example of nonprofit organizations – Alpine Clubs: These organizations are dependent on a lot of volunteers to provide their services to their members. The Austrian Alpine Club (“Oesterreichischer Alpenverein”) an association with 400.000 members can be proud of more than 22.000 volunteers. The major part of them - 12.000 – are volunteers, 6.400 operate as unpaid staff, 2.600 as honorary managers [18]. The distinctive features of these groups of volunteers are shown in table one and explained the following in detail.

Volunteers as Volunteers

This category of volunteers represents the most ideal type of volunteers and can compared with the German term “Freiwillige”. These volunteers put effort in projects only. They make use of their qualifications from their paid job or their personal qualifications. It is not necessary to look for further education to execute the required job. Such tasks are considered as temporary jobs. There is no further engagement needed if a project is finished. Responsibility is limited to the correct execution of the assigned task. Hiring is not dependent on a special procedure.

Examples within Alpine Clubs are: Preparation of the annual general meeting needs a lot of help. Big renovation of huts up to the mountains requires professionals as well as a lot of help to keep cost affordable. Various festivities throughout the year can only be arranged by the assistance of volunteers [18].

Volunteers as Unpaid staff

Volunteers as unpaid staff [19] implicate a different mindset. These volunteers operate like paid staff in for-profit companies. To consider volunteers as unpaid staff it is useful to find criteria to describe distinctions and similarities between paid staff and volunteers as unpaid staff. MAYERHOFER derives her idea to identify volunteers as unpaid staff from characteristics like mission/goal setting, cooperation, organizational context, products, services for the market: Both, paid and unpaid staff act as followers not as leaders, i.e. they do not have the right to make ultimate decisions. Products or services offered are a result of cooperation, teamwork. Volunteers as unpaid staff are integrated in an organization like employees. Product, services are offered at the market [20]. With these arguments volunteers can be classified as (unpaid) staff of a nonprofit-organization.

The most important difference is the remuneration. Paid staff will have an equivalent in money for the invested time, unpaid staff does not. They contribute time and energy to the organization’s mission. Their motivation is not to earn money although they will have reimbursement of out-of pocket expenses and non-financial forms of remuneration but not as equal to their investment of time [5]. Comparison of commitment between paid staff and unpaid staff shows that volunteers as unpaid staff may be even higher although their stick to an organization is not a paid contract [21].



Within associations many volunteers are required to offer services to the members of their club. These volunteers often work also regularly like their counterparts in for-profit organizations. To do most of such jobs it is necessary to acquire specific qualifications by attaining special education offered by the organization being one aspect of non-financial remunerations. Volunteers as unpaid staff is integrated in the organization like employees. It is inevitable to be aware of processes of the organization. Responsibilities can be compared to paid staff [22]. It is to consider that these volunteers do not earn their livelihood with these jobs so their donated time for services to offer is restricted.

In some nonprofit-organizations volunteers and paid staff work complementary and therefore the maintenance of services may be guaranteed or even restricted because of limited availability of volunteer. In other organizations e.g. Alpine Clubs, the offer of services is dependent on active participation of such volunteers otherwise services cannot be offered. To replace volunteers by paid staff is often not possible because of financial reasons. Volunteer management has to put great emphasize on this group of volunteers. Details will be discussed in a later chapter.

Examples within Alpine Clubs: The most unpaid staff is required to perform different activities to members as tour guides, i.e. mountain trips, hut tours, climbing tours, camps for children, etc. Administrative personnel are required for management of memberships, publications on internet as well as regular magazines of the association [18].

Volunteers as Volunteer leaders or “Honorary Manager”

This group of volunteers does not represent the common meaning of volunteers although the characteristics of the definition are met: Being a volunteer leader is not the principal source of income, time is given freely without any equal remuneration and the work done is to the benefit of an organization. Compared to the German language we talk about Honorary Functionaries (“Ehrenamtliche” or “ehrenamtliche Funktionäre”).

The biggest difference to other groups of volunteers as depicted is their very high level of commitment first and foremost in time. Volunteer leaders work for a nonprofit-organization, e.g. association usually at least for a term of office with a normal duration of four years [23]. Their investment in time is a resistant one as they act in a leadership position as member of an executive committee, executive board. Volunteer leaders’ ultimate task is to look at the fulfillment of the organization’s mission. They are responsible, accountable for the performance of an association as well as represent legally their organization [24]. Volunteer leaders play a critical role in the success of nonprofit-organizations. It is the affective commitment, i.e. emotional attachment, identification with, involvement in the organization, which makes a nonprofit-organization successful [25]. When talking about volunteers in its original sense it is to point out that this group of volunteers invests a lot of risk – liability for an organization – when volunteering. This paradox could be explained by a look at their motivation, their affective commitment as already mentioned. The appointment as volunteer leader is a formal procedure: It is dependent on the votes of the members of an association at the annual general meeting [23].

These “honorary manager” operate like manager in for-profit organizations although volunteer leaders face various obstacles in doing their job: Because of not being employed they are not available for regular working hours. If they are not retired time for working for an association is restricted. These volunteers are not in a steady process of thinking about goals, problems,



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business-fields. They may have a lack of continuous information for decision making. To face these obstacles the emphasis has to put on excellent communication [24]. The most important difference is the remuneration compared to manager of for-profit organizations. The range of tasks and duties, strategic knowledge and accountability is the same. Considered objectively these facts might be obstacles. It is again motivation and commitment which makes these volunteers donate time for a good cause. A representative function might be one non-financial reward for these "honorary managers". Big nonprofit-organizations support their executive committee or board by an employed manager, as Secretary General but with restricted rights and duties or Chief Executive Officer [23]. The challenge is again on communication and division of tasks.

Examples within Alpine Clubs are: Chairman, Vice-Chairman, Treasurer [18]. The law on associations defines exactly the duties of these functions.

Within a further chapter the impact of the changing society on volunteering is discussed. This group of volunteers might not be in trend of today's volunteering habit. Consequently volunteer management has to put much effort in motivating volunteers for such functions.

Consequences on the Typology

Impact of the Changing Society as Well as Changing Face of Volunteering

Volunteering has changed within the last 20 years. The changing demographics have a great impact on the number of available volunteers: The increasing number of older people is a phenomenon of many countries. The positive aspect is the availability of more retired people being motivated for a voluntary action. Further demographic aspects having an impact on volunteering are for example: a lower birth-rate, smaller household size, an increasing number of people living alone, smaller number of marriages, high rate of divorces, increase in part-time work by women, etc. [26].

How about is now the changing face of volunteering? In the science there is an obvious discussion about an old form of volunteering and a modern form of volunteering: The old form of volunteering can be equalized with long-term volunteering. It is distinguished by a high level of dedication to and a strong sense of affiliation with the organization. The modern form of volunteering is also known as short-term volunteering [27]. Traditional volunteering focuses on an altruistic, selfless motivation. The voluntary action takes place in traditional organizations [28]. Traditional volunteering is time-driven, modern volunteering is cause-driven [27].

Due to the changing society people prefer short-term volunteering to long-term volunteering. Short-term or episodic volunteering "*is just one of a number of ways in which people choose to use their leisure time; it is a commitment which is clearly limited in its scope and the length of time involved*" [27].

Volunteering is no longer only to the benefit of another group motivation is also grounded in self-interest, i.e. having fun, having a great time, take over responsibility, acquiring additional education, meeting new friends. Volunteering today is also dependent on a so called biographical fit: People are no longer available as volunteer the whole life cycle as well as are only willing to volunteer for special tasks according their personal life cycle [9]. One important fact is also that voluntary action today is characterized by professionalism [29]. On the one hand



it is often necessary to acquire additional education on volunteering and volunteers today are motivated in volunteering by gaining such education. On the other hand volunteers want to be “knowledge workers” also when they contribute to society [30].

Looking at the presented typology of volunteers and the changing society volunteer management which will be discussed in the next chapter has to be aware of this progress.

Volunteer Management not Only for “Service” Volunteers

Volunteer management is not a very common topic. In the not-too-distant past there was the discussion about whether volunteer management is necessary while personnel management for paid staff has already been usual practice. Throughout the literature there is stated a manifold need for volunteer management: It is the nonprofits in general that want to maximize the contribution of volunteers. The desire of a better management comes also from volunteers themselves [27]. But recruiting of volunteers is still often at random without checking necessary qualifications of volunteers and needed qualifications [31].

When talking about volunteer management in nonprofit-organizations it makes sense to be aware of the three different groups of volunteers as they require different approach. Existing scientific papers concentrate on “service” volunteers”, i.e. volunteers as unpaid staff [32]. Volunteer programs for volunteer leaders might be much more specific and dependent on the requirements of a nonprofit-organization, an association as there are widespread problems organizations have in renewing their leaders [33]. The question is how volunteer management could take place. It is only to copy the human resource management-philosophy for paid staff or it is to develop special tools?

KALTENBRUNNER presents a simple and straight model for volunteer management with three major steps: recruiting, retention and parting of volunteers. *Recruiting* of volunteers has to consider the motivation of volunteers, their qualifications, the organizational context they are needed for, as well as the impact of changing voluntary actions [34]. Methods for recruiting have to be adjusted to voluntary action needed and voluntary groups, see table one [35]. It might be easier to recruit volunteers for projects i.e. as volunteers or unpaid staff because of the changing habits towards volunteering. Consequently recruiting of volunteers for long-term assignments as “honorary manager”, is a more challenging task. *Retention* of volunteers is “*more than satisfying motivations*”. This task is the most neglected in volunteer management [34]. Volunteers who are motivated by an emotional attachment to their organization are more likely to continue serving and to be more satisfied with their volunteer position [25]. Satisfaction and integration within the organization have an impact on the duration of voluntary actions [9]. *Parting* of volunteers might occur either because of the end of a term of office or occasionally e.g. in case of conflicts. Because of declining numbers of volunteers and the respect about people volunteering saying goodbye to volunteers might be not done actively [36].

How About the Value of Volunteers for Nonprofit-Organizations and How to Measure It?

Performance, accountability has become normal also for nonprofit-organizations. Standard financial statements according to accounting standards do not express the value of volunteer contribution [37]. The question is about measuring the impact of volunteering, measuring the value of volunteers.



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When discussing the impact of volunteering there is the first question to answer: To whom? ROCHESTER et al present according to a study of the Institute for Volunteering Research (IVR) four stakeholder groups upon whom all volunteering is likely to have an impact: volunteers, organizations, service users and communities. Further they categorized the impact volunteering has in five areas or types of capital: economic, physical, human, social and cultural capital. Further explanation is concentrated on the organizations as stakeholder: Economic capital tries to find an equal value if volunteer workforce must be purchased in the market. An easy method could be to total the number of hours volunteers donate to an organization multiplied by an average wage. The result can only be an approximation. Additional to this calculation the investment costs, i.e. costs for recruiting, training, supervision have to be deducted. Physical capital measures quantifiable, physical products, services delivered by voluntary activity. Human capital focuses on individuals, i.e. the personal development and acquired skills. These impacts can be measured quantitative by the number of trainings attained and qualitative by the level of skills. Measuring the latter might be complicated. Social capital is about relationships, i.e. networks, norms, trust. Cultural capital is about shared sense of cultural and religious identity, including language and heritage. For both social capital and cultural capital it is difficult to find parameter for measuring. [27].

While Rochester presents a widespread point of view on measuring the impact on volunteering BOWMAN goes into detail in finding an exact equivalent for the economic value of volunteers. As there does not exist any market price for volunteer labour its economic value has to be imputed. He suggests three different methods to measure the economic value: the demand price-model. This methods counts cost which an organization pays for volunteers, i.e. cost of recruiting, training and supervision. The replacement cost-model looks at the interchangeability of paid staff to volunteers. The application of this model is limited. The most valuable model is the Volunteers' Contribution to Revenue counted by the number of physical units of output produced by volunteers and the price of each physical unit of output produced [38]. These models might provide useful results for volunteers and volunteers as unpaid staff. The value of volunteers as honorary manager might be more difficult to calculate.

As a result the calculated value could be presented in an expanded value-added statement which allows nonprofit-organizations to estimate their economic and social value-added and the value of their volunteer contributions [37]. This statement could be a valuable appendix to the normal financial statement.

Conclusion

This article reflects ideas about the widespread topic of volunteers. It looks at volunteers from an organizational point of view and as a result a new concept of terms is presented. Implications like the changing society, the changing face of volunteering are to be considered in volunteer management or in talking about the value of volunteers.

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HUMAN CAPITAL AND LABOUR QUALITY MEASUREMENT PROBLEMS IN LATVIA

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Keywords: human capital, labour, quality measurement.

Abstract

Society cannot develop without the division of human capital and labour, because they are determinants for economic growth. To ensure sustainable development in Latvia there is need to use available resources – human capital and labour, taking into account that amount of inhabitants decrease and share of old people increase. Human capital includes education, skills, competencies, and knowledge and these qualities are crucial to support economic growth and transition to knowledge-based economy. The importance of labour quality has been understandable by the development of human capital models, which relate productivity and wage rates to characteristics such as education and work experience. One of the challenges in understanding human capital and labour quality is to know how to measure the quality, because human capital may affect growth performance through different channels. Economists have devoted considerable attention to understand how human capital affects a variety of economic outcomes and have long been interested in economy-wide indices of labour quality. One of the explanations is that growth in labour input can be achieved by increasing working hours or improvement of quality of the working hours. Measuring differences in labour quality there is also a challenge to explain economic growth. Meanwhile economic researches on human capital and labour quality mainly depend on available statistical data over definite time periods. Structure of Latvian economy and distribution of labour in it since 1990 has significantly changed facing several economic crises which also raise difficulties to adopt labour quality measurements used in countries in West Europe and United States of America (USA).

Theoretic Concepts of Human Capital, Labour Quality and Economic Growth

Human capital is related with the knowledge and skills embodied in humans that are acquired through schooling, training and experience and are useful in the production of goods, services and further knowledge. Plausibly education is key to human capital and also supplemented by health, working conditions and other factors [1]. T. W. Schulzt [2] has also



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noted that child care, home, work experience, schooling and health contribute to the acquisition of human capital. More skilled workers will be more productive with given technology level and further will be instrumental in improving the level of technology by means of catching up and innovation [1].

The concept of capital in neoclassical model can be usefully broadened from physical goods to include human capital in the forms of education, experience, and health [3]. The presumption is that an educated labour force is better at creating, implementing, and adopting new technologies, thereby generating growth. Country which lies below the 'leader nation' in technology, but possesses a higher human capital stock, will catch up and overtake the leader in a finite time period [4]. Local R&D efforts tend to put pressure on the demand for scientists and engineers, thus depending on a positive supply response from educational system, i.e., large amounts of highly qualified human capital [5].

In additional to formal education, workers gain human capital after finishing school through increased labour market experience and on-the-job training [6].

Economists have devoted considerable attention to understand how human capital affects a variety of economic outcomes. According to R. Borro and X. Sala-i-Martin endogenous growth models suggest that human capital may generate economic growth in the long term. Human capital would affect economic growth in two ways. M. Fougere et al. point out that first, human capital directly participates in production as a productive factor and the accumulation of capital directly generates output growth. Second, human capital can contribute in raising technical progress through increased innovation, diffusion and adoption of new technologies. From this indirect channel human capital influences growth through increases in productivity [7]. The researches to estimate the human capital contribution to country economic growth are scarce because of continuous time series data paucity.

Also P. M. Romer [8] had suggested that the rate of technical change in country depends on its human capital endowments' identifying the differences between two types of human capital – used in final good sector and used in research sector that produces technology.

Theoretical models of human capital and growth are built on hypothesis that knowledge and skills embodied in human capital directly raise productivity and increase an economy's ability to develop and to adopt new technologies [9]. The knowledge is not separable from human capital and there are many definitions describing the meaning of it. In the Longman Dictionary of Contemporary English 'knowledge' is explained as the facts, skills, and understanding that one has gained through learning or experience.

Human capital should be a high priority because it is key growth input, particularly in a knowledge-based economy. Level of education not only enhances the ability of a country to develop its own technological innovations, but also its ability to adapt and implement technologies developed elsewhere [4]. According to G. A. Kyrioucu countries cannot converge to the economically more advanced countries unless they have abundant levels of initial human capital stock and the more human capital level devoted to research, the higher growth of technology [10].

One of the means of helping to achieve the goal of becoming competitive and knowledge-based economy is through an investment in human capital. Scientific and technological development has since been placed at the core of European Union objectives, with an increasing interest in the role and measurement of skills within the labour [11]. A. A. C. Teixeira [5]



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emphasis that there might be important interactions between technology imports, educational attainment and local R&D efforts because technology imports boost productivity only when an economy has reached a sufficiently high level of education attainment or local R&D efforts that can allow for the efficient use of the imported technology.

Economists have been interested in economy-wide indices of labour quality. One of the challenges in understanding the impact of quality differences in human capital has been simply knowing how to measure quality. For example T. W. Warke [12] using exclusively-physical data from an international cross-section of the cotton textile industry in year 1964 found that a person-hour of labour in fully industrialized, highly literate nations was 3.5 times more productive than person-hour in the least industrialized and literate nations in a study sample, concluding that labour quality varies significantly with the level national development.

It is suggested to measure labour quality by improvements in human capital. Improvements in worker quality due to changes in the distribution of education and work experience are among the key determinants of economy's potential rate of growth [13].

D. Aarosnon and D. Sullian [13] in their research for USA found that changes in the distribution workers' education and experience levels account for significant portion of growth in labour productivity using wage function estimates to value additional years of education, experience and other forms of human capital. The importance of labour quality has been made clear by the development of human capital models which relate productivity and wage rates to characteristics such as education and experience. Productivity increase associated with a year of work experience will vary with the nature of work, how much time is devoted to training and other factors but data sources do not typically include such information.

There are also two other methodologies used to estimate labour quality in USA – M. S. Ho and D. W. Jorgenson construct a quality-adjusted measure of labour input for USA based on a cross-classification of hours worked into a number of cells by observed worker characteristics (sex, age groups, education and self-employment status), meanwhile Bureau of Labour Statistics proposes to estimate Mincerian wage equations.

Data availability affects the choice of the human capital proxy. A. A. C. Teixeira [9] had presented that human proxy could be measured using such indicators as:

- 1) adult literacy rate, but it is very first investment in human capital and miss most of the investments made in lifetime implying the assumption that none of additional investments over the basic education level directly adds to the productivity of labour;
- 2) school enrolment ratios, but persons enrolled in schools are not yet part of labour;
- 3) educational attainment takes into account the total amount of formal education received by labour;
- 4) international test scores of students like International Association for the Evaluation of Educational Achievement (IEA), Third International Mathematics and Science Study (TIMSS), but they do not measure the working-age population educational capital;
- 5) average years of schooling.

Also G. A. Kyrioucu used estimated years of schooling in the labour as index of human capital stock [10] and according to OECD human capital of labour force might be measured by the level of education attainment of employees [14].



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A. A. C. Teixeira has introduced and used data of educational attainment from census statistics of adult working-age population (25 years old and over) in her research in human capital in Portugal [9]. Data on levels of educational attainment and average years of schooling are available but the problems can arise from facts that a year of schooling should be weighted differently depending on how many years of schooling the person has already accumulated and differences in quality of schooling across countries and time.

For example for one indicator i.e. experience. There is opportunity to use different data. Authors as G. Schwerdt and J. Turunen [15] use actual labour market experience measure instead of an age proxy in their research in labour quality in Germany. T. Bolli and M. Zurlinden [16] in their research in labour quality in Switzerland have used age. Age is commonly used as a proxy for labour market experience when information on actual work experience is not available. Meanwhile D. Aaronson and D. Sullivan proxies for years of experience have derived from difference between worker's age and their years of formal education (also minus 6 i.e. school starting age) but unobserved differences in time out of labour force due to raising children etc. will lead it to the differences from actual experience [13].

Future incomes of individuals are related to their past investments. Measures of labour input typically are derived from hours of workers with different education, age, gender characteristics with wage rates serving as weights to account for differences in marginal products [16]. Estimation of labour quality relies on wages as a measure of worker productivity because wages remain the best available proxy of worker productivity [6]. Growth in labour quality is equal to the difference between growth in aggregate labour input and growth in raw hours [15; 13]. It is positive when total labour input is growing faster than the raw total of hours worked.

Situation in Latvia

The main interest is the possibility to estimate the labour quality in Latvia adapting and using appropriate methodology. Labour quality measurement is limited by available statistical data in Latvia. There are no longitudinal data, but available data are for a short time period taking account that there were only two censuses organized by Central Statistical Bureau of Latvia after independence establishment. Also structure of Latvian economy and distribution of labour in it since 1990 has significantly changed also facing several economic crises which also bring about difficulties to adopt labour quality measurements.

For example the problem using D. Aaronson and D. Sullivan method is that peaks in the data calculating labour quality would occur through economy recession because entrepreneurs reacting to economic downturns first lay off low quality workers which result in an increase in working population quality, not full population. Workers of lower productivity find employment more readily and labour quality drops during economic expansion [13].

The interest in labour quality could be motivated in awareness of problems arising from decrease of amount of inhabitants and labour in next decades what could become an obstacle for further economic development. One of the opportunities is to develop knowledge-based economy. The processes of creating knowledge based society and generating knowledge



economy and its further – development should be comprehended as the ones providing economic preconditions for modernization of the society and refinement of its life in accordance with the standards, norms and values of knowledge based society [17].

For example the number of inhabitants in Latvia had decreased for 1990 till 2011 (at the beginning of year) for 438.5 thousands [18]. It is possible that there would be some corrections after presentation of latest census data at the end of year 2011. Most likely the total number of population will be considerable lower than according official data of Central Statistical Bureau of Latvia. According to United Nations population projections the number of inhabitants in Latvia would continuously decrease reaching 2,073 million in year 2030 (medium projection variant).

Table 1

Population in Latvia from year 2015 till year 2030 (share of total, medium variant) [19]

	2015	2020	2025	2030
0-14	15.2	16.4	16.5	15.8
15-64	66.9	65.0	63.7	63.0
65+	17.8	18.6	19.8	21.2

Other problem using previously described methodologies is what population aging could have strong impact on result of labour quality while increasing actual labour market experience with declining share of young people. Workers with different education levels, work experience and skills move in an out of employment.

Share of employed person with low education has been declining. Author made calculation using available data on inhabitants' and employed persons' educational attainment level. The presumption is that each educational level counts for certain amount of time (years) using Central Statistical Bureau of Latvia data on education:

- 1) university education 16 years;
- 2) vocational education 13 years (9+4 3rd level after elementary education);
- 3) secondary education 12 years;
- 4) elementary education 9 years;
- 5) less than elementary education 7 years.

The results are shown for illustrative purpose only, emphasising just the trend.

The results displayed in Figure 1 show that inhabitants' time devoted to education increase, decrease in year 2001 could be only explained by data correction according to census data. The women had devoted more time to obtain education since year 2001.

Also the results displayed in Figure 2 show that employed persons' time devoted to education had gradually increased.

Although the time devoted to education gradually increase, the economic development has been irregular (see Table 2.) during period 1996-2010. According to Spence [20] it could indicate that employers had used education and other observable human capital variables as a signal of unobservable worker ability. That could lead workers to invest in education even it provides no actual increase in productivity.



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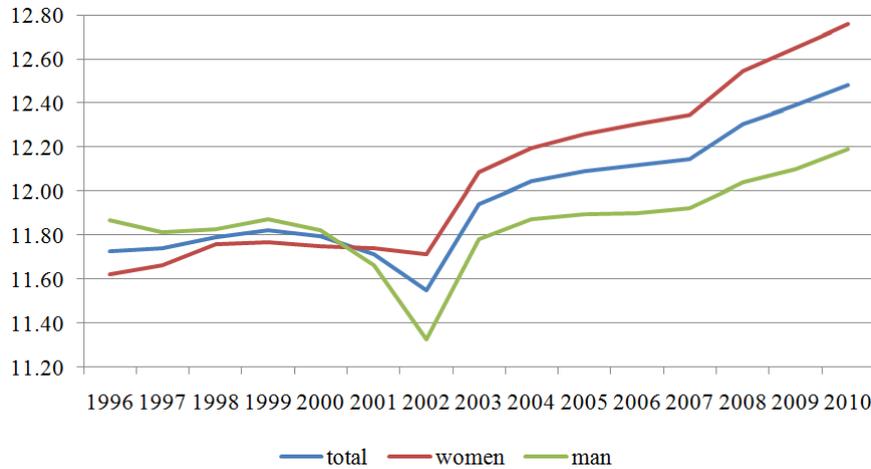


Figure 1. Inhabitants' time devoted to education from 2002 till 2010, years (during 1996-2001 inhabitants aged 15 and more, from year 2002 inhabitants aged 15-74) [19]

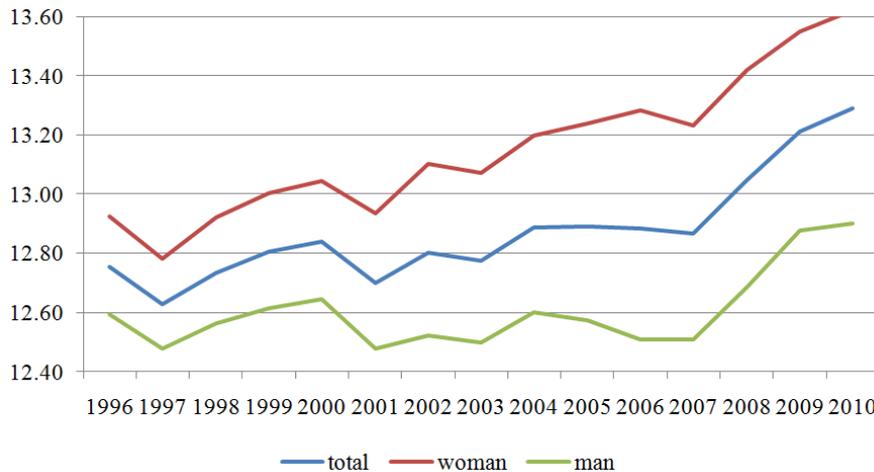


Figure 2. Employed persons' time devoted to education from 2002 till 2010, years (during 1996-2001 inhabitants aged 15 and more, from year 2002 inhabitants aged 15-74) [19]

Despite high annual gross domestic product (GDP) growth level especially during the period 2005-2007, GDP per capita was and is well below developed European Union members therefore using average wage in labour quality estimation is not comparable to other countries. Also the sharp rise in labour costs during economic growth was not supported by corresponding advances in labour productivity. Continuing increase of education of the labour is not associated with higher wages and productivity.



Table 2

Growth in GDP in comparable prices and employment rate (15-64), 1996-2010

Year	GDP in comparable prices of year 2000, thousands lats	GDP in comparable prices of year 2000 growth ($\Delta \ln$)	Employment rate, % (15-64)	Employment rate (15-64) growth ($\Delta \ln$)
1996	3 790 390	-	57.0	-
1997	4 106 535	0.0801	59.6	0.0446
1998	4 303 454	0.0468	59.8	0.0034
1999	4 443 444	0.0320	58.7	-0.0186
2000	4 750 754	0.0669	57.3	-0.0241
2001	5 133 103	0.0774	58.8	0.0258
2002	5 465 413	0.0627	60.5	0.0285
2003	5 858 420	0.0694	61.8	0.0213
2004	6 366 666	0.0832	62.3	0.0081
2005	7 041 687	0.1008	63.4	0.0175
2006	7 903 115	0.1154	66.3	0.0447
2007	8 691 656	0.0951	68.4	0.0312
2008	8 322 821	-0.0434	68.6	0.0029
2009	6 828 459	-0.1979	61.1	-0.1158
2010	6 805 003	-0.0034	59.3	-0.0299

Source: author's calculation based on Central Statistical Bureau of Latvia data [18]

The knowledge-based economy is great challenge for Latvia assuming that according to European Innovation Scoreboard 2010 Latvia is among 'modest innovators' taking last place in EU-27 range. The performance of Latvia is estimated as well below that of the EU-27. Although the relative strengths are in such indicators as human resources (new doctorate graduates, population completed tertiary education and youth with upper secondary level education) and finance and support (public R&D expenditure and venture capital), there are also relative weaknesses – Open, excellent and attractive research systems, Linkages and Entrepreneurship, and Innovators [21]. Also Latvian National Development Plan 2007-2013 [22] defines strategic aim and priorities, emphasis education and knowledge importance in economics development and technological excellence stressing states main three priorities:

- 1) an educated and creative individual;
- 2) technological excellence and flexibility of companies;
- 3) development of science and research.

To promote growth human capital should be geared towards an increase in educational attainment and increased on-the-job training towards needs of the job market avoiding over-education. The choice of human capital indicator hardly reflected upon and dependent very



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much on data availability, but it could also become a challenge for further research. With aim to understand the quality of labour in Latvia, there is need and challenge to identify how to measure it using available statistical data and other information. It could be complex, first identify and use indicators which describe labour quality, second it could not be correct to use only available data which describe these indicators if there are identified other indicators. Assuming that each indicator has its own weight, the research on labour quality could become more complex and therefore only theoretical. Although the assumption is that labour quality influence economic growth, it is important analyzing available data to make correct strategic decisions which would have an impact on economic development in long term.

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SUSTAINABLE REAL EFFECTIVE EXCHANGE RATE IN LATVIA

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Keywords: equilibrium real exchange rate, NATREX, small-scale model, Latvia, VEC models.

Abstract

The paper presents an analysis of the determinants of the real exchange rate of the lat with emphasis on its medium-term and long-term aspects and searching for the equilibrium paths. Question about real exchange rate misalignment is discussed too.

The aim of the article is to estimate sustainable real effective exchange rate of the Lat, using a set of economic fundamentals: net external debt, the stock of net foreign direct investment, terms of trade, domestic and international interest rates, and domestic and external demand variables to answer the questions about most important determinants of the equilibrium real exchange rate of the lat. Equilibrium/sustainable real exchange rate is estimated using a small-scale model based on the NATREX approach, originally formulated by Stein (1994, 1998). Behavioral equations were estimated using Vector Error Correction (VEC) models, structural coefficients are obtained by calibrations. Quarterly data from 2000Q₁ to 2011Q₂ were used.

Estimated medium-run and long-run equilibriums show that Lat was overvalued in real terms in 2010. These findings agree with main results in literature survey part of the article. Results are compared to previous author's studies which were based on applications of FEER (the Fundamental Equilibrium Exchange Rate) and BEER (the Behavioral Equilibrium Exchange Rate) methodologies.

Introduction

Latvia (as all new member states of the European Union) does not have an opt-out clause from the obligation to adopt the euro at some point in the future. Now for all acceding countries the main issues are: what rate should be selected for ERM-II? What policies should be adopted to reduce their vulnerability to crises? Economies can suffer from crises if they have overvalued exchange rate or excess debt. Weisbrot and Ray (2010) argue that in Latvia the depth of the recent recession and the difficulty of recovery are attributable in large part to the decision to maintain the country's overvalued fixed exchange rate. [1] The irrevocable conversion rate should neither trigger inflation due to under-valuation, nor loss of competitiveness caused by an over-valuation. So, the criteria should be that exchange rate should be sustainable.



The concept of a sustainable real exchange rate firstly arrived in Nurkse (1945). Under Nurkse's definition, the sustainable real exchange rate is taken to be the value of the real exchange rate that is simultaneously compatible with internal balance (full employment and equilibrium in the market for non-traded goods) as well external balance (a current account deficit/surplus that can be financed by "normal" capital inflows/outflows), conditioned on sustainable values of the exogenous variables that influence internal and external balance.

Some economists introduce normative concepts to restrict the concept of equilibrium, requiring not only that the market for home goods be in equilibrium at full employment, but also that the rate of inflation is low. [2]

Stein (2006) has offered several criteria for the equilibrium value of the real exchange rate to be a sustainable:

First; it is consistent with internal balance. This is a situation where the rate of capacity utilization is at its longer run stationary mean.

Second, it is consistent with external balance. The latter is a situation where, at the given exchange rate, investors are indifferent between holding domestic or foreign assets. At the equilibrium real exchange rate, there is no reason for the exchange rate to appreciate or depreciate. Hence, portfolio balance or external balance implies that real interest rates between the two countries should converge to a stationary mean. As long as there are current account deficits, the foreign debt and associated interest payments rise. If the current account deficit/foreign debt exceed the growth rate of real GDP, then the ratio of the debt/GDP and the burden of the debt – net interest payments/GDP – will rise. When the debt burden is sufficiently high, devaluation will be required to earn enough foreign exchange through the trade balance to meet the interest payments. The condition for external equilibrium in the longer run is that the ratio of the foreign debt/GDP stabilizes at a tolerable level. [4]

The paper is organized as follows. Firstly the determinants of the real exchange rate are discussed. Later sections describe the NATREX model's properties and theoretical background, as well as an empirical estimation of NATREX of the lat in medium run and long run. Finally the results are discussed and conclusions summarized.

Determinants of the Real Exchange Rate

In figure 1, we can see dynamics of the nominal and CPI based real effective exchange rate of the lat, and PPI based real effective exchange rate of the lat.

During investigation period (2000 Q₁ to 2011 Q₂) we can observe fluctuations both in nominal and in real effective rates. Are these values around their equilibrium values? What factors influence their dynamics? What is sustainable trend in real exchange rate? How we can explain the trends in the real exchange rate? While we cannot list the fundamental determinants of the equilibrium exchange rate, and understand, what is the transmission mechanism between these real determinants and the equilibrium real exchange rate, a country cannot rationally decide what is sustainable /equilibrium exchange rate for entry into euro area, and desirable policies to follow subsequently. [4]



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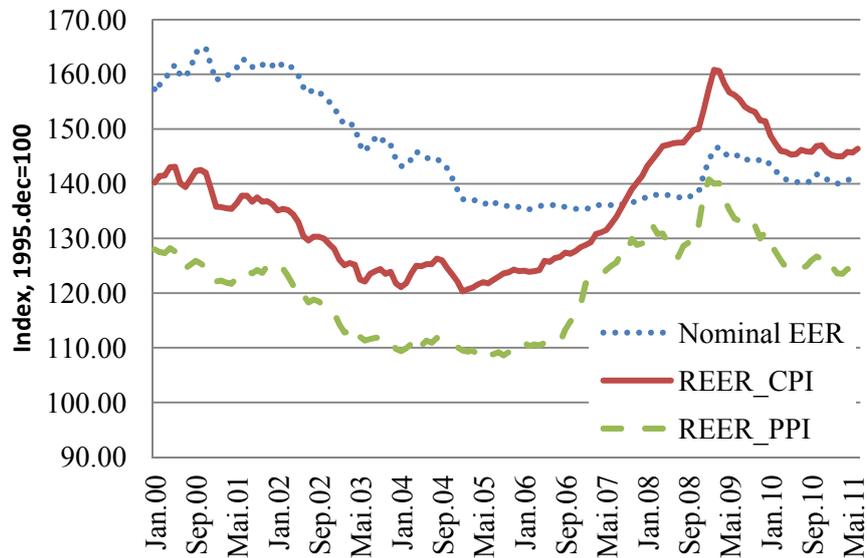


Figure 1. Nominal and real effective exchange rates of the lat (Index 1995.dec=100)

Source: Bank of Latvia

Choice of fundamentals in equilibrium real exchange rate modeling is crucial. This question is discussed in details in Hinkle and Montiel (1999), Egert (2004), Egert, Halpern and MacDonald (2004). Main question here – what are channels through which fundamentals influence real exchange rate values. Main problem – transmission mechanisms of different fundamentals may overlap.

Productivity can affect the equilibrium real exchange rate through several channels. The most popular is the Balassa-Samuelson (BS) effect ([5],[6]), which establishes a supply-side link via sectoral productivity differences at home and abroad. (Balassa (1964), Samuelson (1964)) Egert, Halpern and MacDonald (2004) showed that the Balassa – Samuelson effect can be derived in terms of total factor productivity and average labor productivity. Empirically this effect is often derived in levels on the basis of the average labor productivity, because of problems with availability and quality constraints of capital stock data. So, internal transmission mechanism of the BS effect can be described as following: if in the open sector the Law of One Price holds and wages are determined by productivity, then higher productivity in sector of tradable goods than in non-tradable goods sector raises overall home price level through inflation of the non-tradable' prices because wages will equalize across the sectors.

Hence, external transmission mechanism of the BS effect: if productivity growth differential for the open and sheltered sectors at home is larger than abroad, home price level rises faster than that abroad and, ceteris paribus, the equilibrium rate appreciates. Since PPI and CPI are used to gauge prices in the open and sheltered sectors, the BS effect may explain why CPI- and PPI-deflated real exchange rates have different stochastic trends, and why CPI-deflated rate is inconsistent with PPP. [12] While the model assumes that the Law of One Price



holds for tradable goods, when PPI has a non-tradable component, the BS effect may also explain permanent shifts in PPI-deflated real exchange rates. Fischer (2004) extends the BS model showing that productivity shifts may propagate via investment demand. Specifically, productivity gains in any sector may raise investment demand, subsequently (if investment goods have a non-tradable component) rising prices of non-tradable goods, and appreciating equilibrium real exchange rate.

Net foreign assets are very important in a stock-flow consistent framework where the equilibrium real exchange rate ensures a sustainable international investment position. There are two main channels for net foreign assets: balance of payments and risk premium channels. The first channel is related to the accumulation of foreign debt: increase in debt raises servicing costs that must be offset by current account surpluses, which can be achieved through devaluation to enhance price competitiveness of exports. [10] Thus, the long run equilibrium real exchange rate will be positively related to a country's net foreign assets. Risk premium channel shows the same direction of effect: as the net foreign asset position worsens, investors require higher yield to their portfolios to compensate growing risk. At given interest rates, a rise in a risk premium requires depreciation.

Real interest rate difference typically is viewed as medium-term factor related to interest rate parity fluctuations. But MacDonald (2002) showed that effect of this factor can be ambiguous because it is related to risk premium and can influence investment decisions and therefore the long run real exchange rate.

Terms of trade improvements can reduce home productions of non-tradable good and increase production of tradable. Excess demand for non-tradable goods can increase home price level relative to that in foreign countries and thereby cause appreciation. On other hand, terms of trade can affect the trade balance and change equilibrium via net foreign assets. So, effect of terms of trade is not clear.

Increase in **government consumption** may create excess demand for non-tradable goods and bid up non-tradable prices and appreciates equilibrium exchange rate. However, several empirical studies showed that such effect can be transitory and affect the exchange rate only to the extent that capital and labor are not mobile across sectors.

The structure of relationships and transmission mechanism of interaction of REER and chosen fundamentals is described in the next section were properties and theoretical background of the NATREX model is given.

The NATREX Model Description

Estimation of the sustainable real effective exchange rate is made based on theory introduced by Stein (1998, 2006): the NATREX approach (NATural Real EXchange Rate). The NATREX model concerns the equilibrium rate. It is a sustainable rate, if in the medium run it is associated with internal equilibrium – where the rate of capacity utilization is stationary mean and there are no inflationary or deflationary pressures – and also external equilibrium where real long –term interest rates are equal to the foreign rates. The debt/GDP ratio and the growth rate are predetermined in the medium run. The economy travels along a trajectory where two variables stabilize at their long-term values. The long term equilibrium is the limit of medium



run equilibrium, and is a function of a time varying vector of fundamentals. As this vector changes, so do the medium-run and long run equilibrium. This implies that misalignment will occur if the nominal exchange rate and relative prices cannot adjust to the changing equilibrium. (Stein, 2006)

There are several reasons for choosing NATREX approach emphasised in the paper. Firstly, the NATREX explains what are the fundamental determinants of equilibrium/sustainable real exchange rates, and the transmission mechanism between policies and sustainable real exchange rates. A real exchange rate significantly higher – more appreciated relative to the NATREX – it is unsustainable and will lead to such serious problems as low competitiveness, high employment and low economic growth. Secondly, the NATREX analysis is relevant regardless of whether the nominal rate is fixed. If the nominal exchange rate is relatively fixed, then the variation in the real exchange rate will occur through differential rates of inflation.

Models of the NATREX start in some hypothetical intra-cyclical medium run where prices are confirmed and real income returns to its intra-cyclical potential levels. The medium-term equilibrium is an artificial construction, to which the economy orients itself, though, without ever achieving it. For this reason, we cannot observe the NATREX, but only the current real exchange rate which adjusts itself to the NATREX.

Small – scale model we are using is similar to Detken (2002) Formulas (1) – (12) were taken from Detken et al (2002). Our model consists of four dynamic equations: the functions of fixed net social investment (I), internal social consumption (C), trade balance (goods and services, B) and real interest rate (R). The term “social” is intended to mean “private plus public”.

The four equations are constrained to respect the identity which is called like **National account identity**:

$$\frac{C}{Y} + \frac{I}{Y} + \frac{B}{Y} = 1 - \frac{SCN}{Y} \quad (1)$$

where: C = internal social consumption; Y = GDP; I = fixed net social investment; B = trade balance; SCN = variation in stocks. [10]

Behavioral equations:

The Investment equation

Our investment equation is based upon the following partial-adjustment mechanism:

$$I_t - I_{t-1} = a_I (I^*_{t-1} - I_{t-1}), \quad 0 < a_I < 1 \quad (2)$$

where desired investment I^* is defined by the following function (MPK is the marginal product of capital):

$$I^*_t = f_I[Y_t, (MPK_t - R_t)] \quad (3)$$

The introduction of a partial adjustment mechanism arises from a relaxation of neoclassic hypotheses behind the NATREX approach. In the real world the economic system undergoes frequent perturbations, and the re-equilibrating process is sluggish due to market imperfections.



The partial adjustment mechanism assumes that the frequency of the perturbations and the sluggishness of the re-equilibrating process are such that the system is not capable of recovering from disequilibrium within the time unit (a quarter). From equations (2) and (3) one gets:

$$I_t = b_1 I_{t-1} + f_1[Y_{t-1}, (MPK_{t-1} - R_{t-1})], \quad 0 < b_1 = 1 - a_1 < 1 \quad (4)$$

where the constant a_1 has been subsumed, for simplicity of notation, in the functional form f_1 . [10] In equation (2) the desired investment I^* appears with a one-period delay. This is to allow for the time span necessary for the production of capital goods (constructions, machines, buildings...): the investment decisions taken at time t can be put into practice, on average, only with a one-quarter delay.

Our investment equation does not include an intercept term: this is a consequence of the analysis' time horizon, the long run. In the long-run steady-state equilibrium, fixed net investment is null: hence, the no-intercept constraint must be imposed.

The Consumption equation

With the term consumption we refer to the internal social consumption, in real terms. The NATREX theory postulates that consumption (C_t) is a positive function of current real GDP (Y_t) and an inverse function of the current stock of net foreign debt (F_{t-1} in discrete time). The F variable is the feedback control that guarantees the convergence of consumption to its steady state value, in particular by preventing the explosion of the stock of net foreign debt. In qualitative terms, any increase in F leads to a contraction of consumption, and hence to an increase in savings. As a result, the rate of growth of F slows down (monotonically).

Our consumption function follows the partial adjustment mechanism:

$$C_t - C_{t-1} = a_2 (C^*_t - C_{t-1}), \quad 0 < a_2 < 1 \quad (5)$$

The introduction of the mechanism is justified on the same grounds put forth in the treatment of the investment equation. Desired consumption C^* is defined by the following equation, derived from the above exposition:

$$C^*_t = f_2[Y_t, F_{t-1}, P_t] \quad (6)$$

The stock of net foreign debt F has been defined as the corresponding nominal value deflated by price index P . Hence, given the real values Y and F , an increase in P indicates a proportional increase in the corresponding nominal values. Consumption depends positively on Y and negatively on F : hence, the expected sign for the coefficient of P depends on the propensities to consume with respect to Y and to F .

The intercept term is omitted because of the long-run horizon of the analysis. From equations (5) and (6) the following relation descends:

$$C_t = b_2 C_{t-1} + f_2[Y_t, F_{t-1}, P_t], \quad 0 < b_2 = 1 - a_2 < 1 \quad (7)$$

where the constant a_2 has been subsumed, for simplicity of notation, in the functional form f_2 .

The Trade Balance equation

The NATREX theory states that imports are a positive function of real GDP (Y) and of $REER$ (recall that an increase in $REER$ indicates a real appreciation of the domestic currency). Exports depend positively on the real GDP of the rest of the world (Y^*), and negatively on



REER. Therefore, the trade balance ($B=X-M$) is a direct function of Y^* , and an inverse function of Y and $REER$. Effect of terms of trade (tot) is plausible.

There is no intercept term in the equation, as no unquestionable theoretical foundations for its inclusion exist. Our trade balance equation follows a partial adjustment mechanism analogous to that of the investment equation:

$$B_t - B_{t-1} = a_3 (B^*_{t-1} - B_{t-1}), \quad 0 < a_3 < 1 \quad (8)$$

where B^* indicates the difference between desired exports and desired imports, and is determined by the behavioral equation:

$$B^*_t = f_3[Y_t, REER_t, Y'_t, tot_t] \quad (9)$$

The introduction of the partial adjustment mechanism is justified on the same grounds exposed in the exposition of the investment equation. The variable B^* in equation (8) appears with a one-period delay because of transport times and the component of international trade involving capital goods. In conclusion, the decisions about real transaction with foreign partners can be put into practice, on average, only with a delay. From equations (8) and (9) one gets:

$$B_t = b_3 B_{t-1} + f_3[Y_t, REER_t, Y'_t, tot_t], \quad 0 < b_3 = 1 - a_3 < 1 \quad (10)$$

where the constant b_3 has been subsumed, for simplicity of notation, into the function f_3 .

The real interest rate equation

$$REER - REER^{eq} = R - R' \quad (11)$$

$$(R_t - R'_t) = b_4 (R_{t-1} - R'_{t-1}), \quad 0 < b_4 < 1 \quad (12)$$

Detailed foundation of the behavioral equations can be found in Marin-Martinez (2001). Profound description of the small – scale model's theoretical background and each equation separately one can find in to Detken et al (2002).

Estimation Steps and Results

Data

We use quarterly data from 2000 Q1 to 2011 Q2. Latvia's data were taken from Bank of Latvia, Central Statistical Bureau of the Latvia Republic and *Eurostat* statistics.

In this article only Consumer Price index based real effective exchange rate of Latvian lat was used. "Rest of the world" for foreign demand and foreign interest rates was assumed like main trading partners of Latvia, and as a result these series are weighted values.

Real interest rate like annual time series were obtained from World Bank statistics, and recalculated to quarterly sequence.

Empirical results

Models (1), (4), (7), (10) and (12) derived from economics theory from econometrician point of view make simultaneous equations model. Eviews 7.0 was used for such model estimation.

Firstly, behavioral equations were estimated using Vector Error Correction (VEC) models. Estimated parameters in these equations have the hypothesized signs. Residuals of the models were tested for stationarity and results affirm that the variables in each equation are



cointegrated. Johansen cointegration tests showed the same. (Tables of all results are available on request). The medium run equilibrium is obtained with equations (1), (4), (7), (10), (11).

Secondly, after having estimated coefficients of our model we solved it for the medium and the long run equilibrium exchange rates. To obtain log term NATREX we filtered all flow variables to eliminate the temporary effects. Hodrick-Prescott filter was used for this purpose. As a result long-term NATREX is result from dynamic simulation with introduced long-term assumptions.

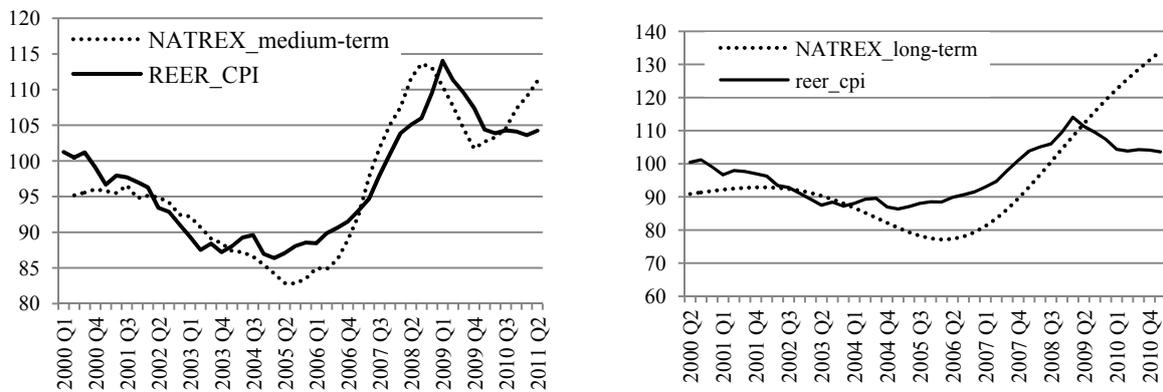


Figure 2. NATREX medium- run and long-run equilibrium and actual real effective exchange rate of the lat. [author’s calculations]

Obtained NATREX series were compared to actual real effective exchange. Misalignments were calculated like percentage deviation from “equilibrium” series. Results are presented in the figure 3 below.

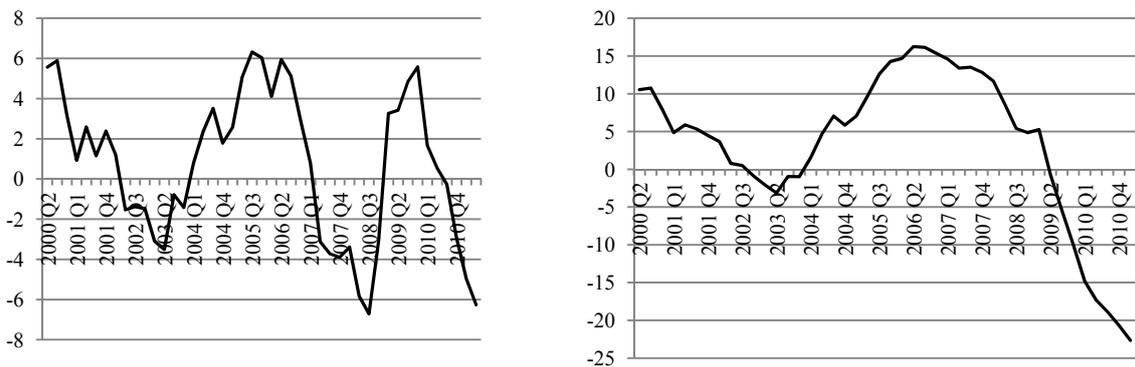


Figure 3. Real Exchange Rate of the lat Misalignment: 2000Q1 to 2010Q4, NATREX approach in medium-term and long term [author’s calculations]



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In figure 3 positive values imply real overvaluation. We can see that lat's exchange rate misalignments in medium-term were substantially volatile. Long term results show that lat was overvalued for quite long period – already before Latvia became an EU member state till recent recession. Second half of 2009 was turning point and finished long period of overvaluation. So, improvement in the indicators of price and cost competitiveness in Latvia affected foreign trade – turnover continued to expand. Terms of trade were improving, enhanced productivity and a more favorable price and cost competitiveness position in comparison with 2009 enabled Latvia to capture new export market shares in several major trade partners (Russia, Poland, Finland, Denmark, the UK, etc) in 2010.

Comparisons with Earlier Research

Babecky et al (2010) estimated SRER using panel data for all new EU member states and simulated SRER for different macroeconomic and debt scenarios. Their finding for Latvia was significant misalignment in real terms at end 2009 and it was traced to excessive debt accumulation.

The major differences in the current approach of equilibrium exchange rate estimation in comparison to previous author's results are (i) previous studies were based on different theoretical and econometrical modeling approaches: FEER and BEER methodologies; (ii) investigation periods are different. So, results are not directly comparable, but the main conclusion – lat was overvalued – was the same.

Conclusions

Equilibrium/ sustainable real exchange rate of the lat was obtained in medium-run using a small-scale model based on the NATREX approach and in long-run applying dynamic simulations for the period since 2000Q1. From author's point of view, the results from estimating the NATREX with quarterly data for so short period need to be interpreted with care and test for robustness using several econometrical methods of model estimations should be made.

Estimated medium-run and long-run equilibriums show that Lat was overvalued in real terms till second half of 2009.

Analysis should be continued with extended investigation period – long-term modeling need longer time periods.

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MEASURING TEAM PERFORMANCE UNDER THE DETERMINANTS OF BEHAVIOR A RESULT OF A PRE-TEST SURVEY

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Keywords: Human Resource Management, Team Performance, Measurement, Behavior.

Abstract

Human Resources Management, the economy and large organizations are still facing and driving a dramatic change based on the financial and nowadays world challenges. Behavioral Economics is entering sustainable more and more daily business into organizations. Teams have played since the 1940s a continuously important role and the use of formal developed teams in organization has increased. Due to glocalization, the meaning of Team Performance and measuring it including the behavioral aspect are coming into forehand. In the past decade the interest of Team Performance rose consequently. This papers is a continued research approach of measuring Team Performance under the determinant behavior based on some pre-defined hypothesizes. It measures behavior in Team Performance on a Pre-Test level by a survey in software population chosen randomly. The questions are based on key hypothesizes – described in the paper – and evaluated. The small population delivers a trend to continue research in Team Performance under determinants behavior and forcing the next step into a bigger survey.

Design/methodology/approach. This paper is based on survey placed in a software organization. The survey is a Pre-Test result in measuring Team Performance under the determinant of behavior. The survey questions are shown. The key questions are delivery as well as the key measurable findings.

Findings. First, it is briefly described the key aspect of Team Performance and the entrance of Behavioral Economics. Secondly, the key hypothesis of behavior in regards of Team Performance is positioned. Next, the survey is described to measure the behavior aspect in the field of Team Performance under respect and definition of the hypothesis, and lastly the key figures of the Pre-Test Survey is presented to trigger and initiate the proposal for the next step in the research of measuring Team Performance under the determinants of behavior.

Originality/value. The paper examines the importance of behavior ties to measure Team Performance under the determinant of behavior a present a measurable result.

Paper Type. Empirical Research Paper.



Introduction

The research into the field of Team Performance proposes a selection of Team Performance dimension. Furthermore, it is necessary to outline that a team must work hard and must be committed to achieving results. [1] In addition, a team should have a mix of competences, i.e. technical skills, problem solving and interpersonal skills with the goal to approach and accomplish a high level of team results. However, teams need to have an appropriate altitude of empowerment to deliver and manage their tasks, [2] proper leadership support, [3] as well as a significant environment with a rewards and recognition system. [4] Furthermore, a dimension of behavior should be included into the research so evaluate the significance of Behavior Economic into the economic environment and Team Performance. However, the literature is so far very economically with this idea. Not many Team Performance assessment found in the literature had behavioral statistical information or statistical psychometric soundness of the instruments. A definition of each dimension, used and relevant for this study, is described with the focus to indicate the scale of the dimension name to this research. This research has defined four clusters, in which one cluster focuses on the new innovative behavioral aspect and three other clusters, which are based on literature findings to measure TP. In total, there are on 12 dimensions defined and in this publication, it will be purely focused on the Cluster Behavior:

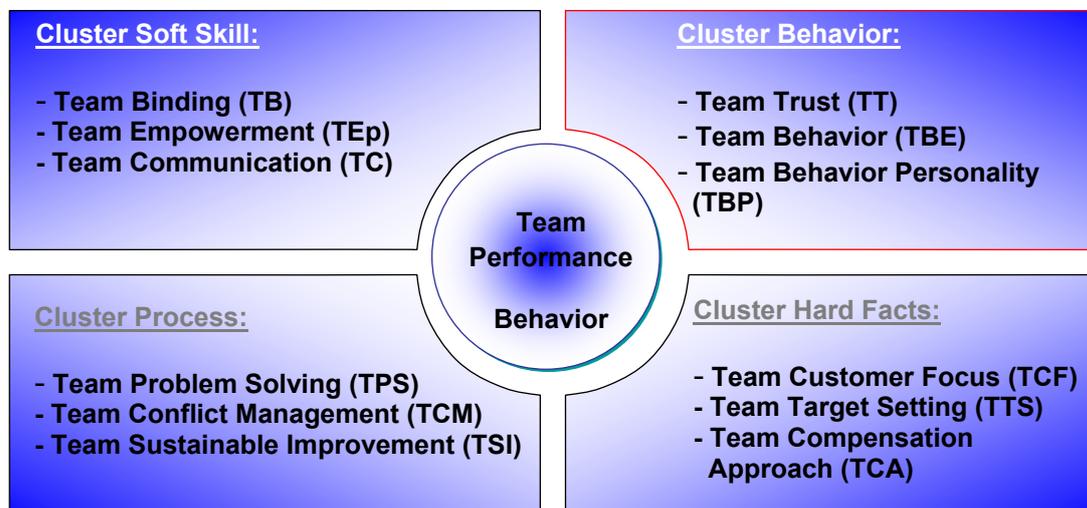


Figure 1. The 12 Dimension for Team Performance Model incl. context of behavior

Cluster Behavior

Team Trust is a difficult are. On the one hand it is a behavior topic, on the other side; it occurs within a relationship and implies some amount of risk and individual vulnerability. A behavior of trust is initiated in a team when the person believes that the tea, "...makes a good-



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faith effort to behave in accordance with any commitments both explicit or implicit, ... is honest in whatever negotiations preceded such commitments, and ... does not take excessive advantage of another even when the opportunity is available" [5]. In addition, a trust environment can be developed by people who have shared social norms, shared experiences and repeated interactions. [6] During the research on the relationship between trust and performance in teams, there are studies that report a link between trust and performance while others do not. Smith and Barclay found for instance a positive relationship between trusting behaviors and perceived trustworthiness with task performance using different rationales. In addition, Mc Allister found already in 1995 a positive relation between the behavioral trust and the assessment of performance. However, there are researches in which trust takes a moderate role in the relation between team processes and performance. [7] TT will be defined as the degree to which team members believe they can depend on other TM abilities and intentions.

Team Behavior is a complex field and therefore often not considered so far in statistical TE measurements. This dissertation has the main focus in this area and hypothesis a key influence in TE. TBE is referring to actions or reactions of an i.e. an organism (a person), usually in relation to the environment. TBE can be conscious or subconscious, overt or covert, and voluntary or involuntary. Referring to the literature, team role behavior is measured by the known used Belbin Team Role Self-Perception Inventory (BTRSPI). In addition, there are researches done focused on team role aspect on the significant in behavior by gender. [8] Furthermore, the authors Fisher and Macrosson brought the childhood family environment to interpret different management team role in the sense of behavior. [9] The known BTRSPI is a widely used instrument by managers and trainers in management selection, assessment, team building and management training, but it does not measure TE in teams, even though it delivers aspects of behavior. [10] TBE in this dissertation is defined on the origin to psychophysiological factors as extroversion-introversion, high anxiety-low anxiety, which underlie the TBE definition in this dissertation. [11] The aspect of the individual's motivation [12] and values [13] is a part of the particular set of definition in TBE.

Team Behavior Personality can be defined as a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviors in various situations. [14] The definition of TBP for this dissertation is focused on the personality aspects of Openness to experience: the tendency to be imaginative, independent, and interested in variety vs. practical, conforming, and interested in routine. Conscientiousness: the tendency to be organized, careful, and disciplined vs. disorganized, careless, and impulsive.

Agreeableness: the tendency to be softhearted, trusting, and helpful vs. ruthless, suspicious, and uncooperative.

Neuroticism: the tendency to be calm, secure, and self-satisfied vs. anxious, insecure, and self-pitying. [15]

H_{y0} *If Team Performance is measured in Business Organizations, then it will be affected when the team has a basic knowledge about behavior action/reaction of all other team members.*



The five key hypotheses

Reflecting these dimensions and the Behavioral aspect, the following hypotheses are issued:

Cluster Behavior: Dimension Team Trust

H_{y1TT} The higher the heterogeneity, the higher the Team Performance will be.

Cluster Behavior: Dimension Team Behavior Personality

H_{y1TBP} The higher the age range in the team, the higher Team Performance will be. [16]

H_{y2TBP} The higher the level of education in the team, the higher Team Performance will be.

Cluster Behavior: Dimension Team Behavior

H_{y1TB} The higher diversity index in a team, the higher the Team Performance will be.

H_{y2TB} The higher the amount of not taken vacation days, the higher the Team Performance will be.

At this stage, it is important to outline a theoretical based comment to the hypothesis of the Cluster Behavior, Team Trust in the field of heterogeneity. The system-theory deals quite strong with the field of heterogeneity of organizations. In their context, heterogeneity is not only used in the context of random or negatively evaluated characteristics of organizations, which focus on standardization, but also build the basis for flexibility and organizational learning development. A central message of the system-theory is the aspect of “law of the necessary diversity” [17] in which the long-term survival of a system is in danger when the complexity is not enough to allow variety to solve environmental influences. As more heterogenic a system appears, as more is the probability for linkage to element of a system. [18] As a result, the internal heterogeneity is therefore the most important pre-condition of self-reflecting development processes of systems and so the successful adaptations of the continuous changing environmental conditions. [19] Reviewing into the management and organizational theory, St. Gallen Management approach [20] and the author Kirsch [21] assume that organizations are too complex to get steered systematically and target oriented by management. Instead of using instruments to reduce complexity to be capable to manage the organization, they propose to understand complexity as an advantage. In conclusion, complexity, heterogeneity and redundancy take a key position into the conditions to have a long-term capability of the survival of the organization. [22] However, empirical studies deliver only partly evidences. There are studies that present a positive impact from cultural heterogeneity to the TP, but there are also studies that present a negative impact. By the author Kilduff/Angelmar/Mehra (2000) and Gibson (1999, 1st part), there is shown no impact of cultural heterogeneity in their empirical study. The authors Thomas/Ravlin/Wallace (1996) prove even a negative influence of the heterogeneity linked to TP. However, Cox/Lobel/McLoeod 1991 and Gibson (1999, 2nd part) deliver a positive effect of TP and Earley/Mosakowski (2000) find even an linear relation to TP. Based on the discussions, in this dissertation it was decided to take this hypothesis in and try to delivery an additional aspect of the empirical study in the field of heterogeneity.



Business Field & Environment

The organization that is used for the Pre-Test Survey in which the hypothesis are checked against the data, it is today a worldwide company under the top five software business players in the field of product and plant lifecycle management. The global organization has more than eight thousand employees worldwide in more than 24 countries with over 63,000 customers. It is a dynamic, flexible, lean, function oriented and team structured organization that develops sells and provide service of software for industrial products, plants for the entire lifecycle process. The research design focuses on the second largest country – Germany – in the sense of revenue and profit. The German organization is represented in the field of Research Development, Pre-Sales, Sales, Services, Customer Support and support functions (IT, AC, Finance, HR, and Procurement).

Pre-Test - Survey

A survey is a study by asking people from a population about their opinion on a specific issue with the intention to define relationships outcomes in this issue. There are three types of survey: the descriptive, the explanatory and the explorative one. Based on the research question, it is one solution to issue a survey into the conflict team including the mediator and ask for their feedback. The choice of a survey seems to be a reasonable solution with the possibility to add a research method with the goal to increase validity and reliability.

In the industry organization, teams self-assess their performance. Of course, the assessment and its measures is based on this dissertation and rooted in theory [23] because theoretical models greatly influence the way in which measures are constructed and utilized. [24] In conclusion, the teams are asked voluntarily to complete a self-assessment including the aspects of behavioral approach against their performance using the new approach of team assessment. This is accomplished by sending an e-mail to request for participation in the research to all of the team leaders throughout the organization. Moreover, the opportunity to participate in the research is communicated individually to managers and news-tickers internally. Teams are informed that their participation is voluntary, their information is used anonymously, and the data from their pilot assessments is used for the sole purpose of validating the properties of the assessment. Participants receive no feedback of the results as the instrument had not yet been evaluated. Teams have the choice of completing their assessments in electronic or paper format. The electronic version of the assessment is available on a commercial electronic data collection tool and is sent to the team leaders, TM via e-mail. All of the electronic assessments contained only information to identify the total feedback. The survey is anonymous. The collection procedure is designed this way to maximize anonymity at individual. The data will be then evaluated. Based on this information data analysis, statistics will be done.

Survey

Based on the so far delivered empirical results, the conclusion and implications of the Secondary Analysis, the next step is to use an additional empirical method, a survey. The idea was to evaluate Team Performance in form of a survey with the determinant of behavior in



software sales and service population in Germany of around 840 people. The key aspect of the Team Performance Survey was the cluster of behavior. In this cluster there are embedded the key questions that link to directly to the hypothesis, which can be seen in the below extract of the survey. The entire survey including their details is attached in the appendix. To pre-check, if the survey is designed, implemented and organized well a randomly pre-test is done, which is described and analyzed with its result in this paper.

Cluster Team Trust:

- Team members trust each other.
- Team members with different nationalities add value to the team performance.
- Team members with different experiences (e.g. experiences living abroad) lead to a greater trustfulness within the team.
- Team members with different experiences (e.g. experiences living abroad) lead to a better performance.
- Teams with different cultural backgrounds are more communicative with each other.

Cluster Behavior in Teams:

- Team members know who in the team behaves more introverted.
- Team members know who in the team behaves more extroverted.
- Team members care less about vacation days, but are more interested in increasing the team performance.
- Team members know the value each team member adds to the team and they appreciate each other's strength.
- Team members know how a team member will act/react in specific situations.
- Teams with mixed-gender (women and men) lead to better results.

Cluster: Team Behavior Personality:

- Team members have an understanding of their colleagues colleague's.
- Teams with a wider age range lead to a better performance because overall they are more experienced.
- Team members know who in the team has a more chaotic and imaginative working style.
- Team members are open to share experiences and colleagues appreciate this.
- Team members know who has a more softhearted and helpful personality.
- Teams with a high educational level lead to higher performance results.

General Question to the Cluster Behavior

- Team Performance increases by knowing more about the behavior of the others.

Figure 2. Survey Questions – Behavior

Pre-Test of the planned Survey

The Pre-Test of the survey to evaluate Team Performance with the determinant of behavior was done from the time of October 27th, 2010 until November 2nd, 2010 and then to evaluate the feedback and adjust the survey before starting the final survey from November 10th, 2010 until November 26th, 2010. The chosen population was the same one of the Pre-Test of hypothesis and the Secondary Analysis; however the population was expanded to a total of



840 people. In addition, the dimensions of Team Performance are based on the theoretical context and the based on the Model of Dimension of Team Performance including the context of behavior. Lastly, it is important to outline that the cluster of behavior includes the key questions, which links to the five hypotheses which are under empirical test. The Pre-Test of the survey covers a population of ten randomly chosen people of the defined population that were asked to answer the survey in a defined and informed time period.

Results & Analysis Incl. the Link to the Hypothesis of the Survey Pre-Test

The Survey Pre-Test of measuring TP including the determinant of behavior and its focus on it resulted in 100% participation. Concretely, 10 people out of 10 were asked and they answered the full survey. The following result evaluation concentrates on the aspect of behavior and the question linked to the hypothesis. The attachment presents all details and all answers to the Survey Pre-Test. At the beginning, results are presented firstly in a generic overview of the participants in their frequency and allocation of age, education, living abroad and open vacation days in 2010.

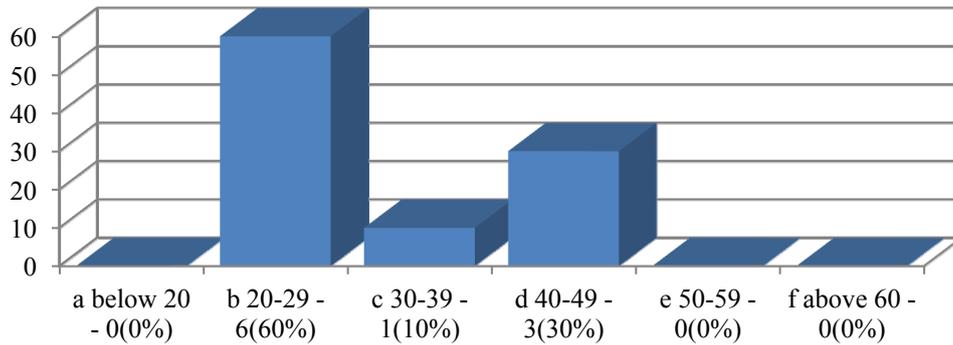


Figure 3. Allocation of participant's age of Survey Pre-Test

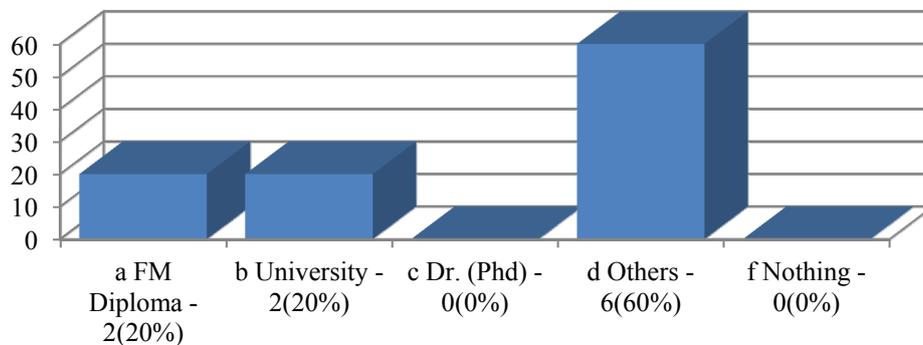


Figure 4. Allocation of participant's education of Survey Pre-Test

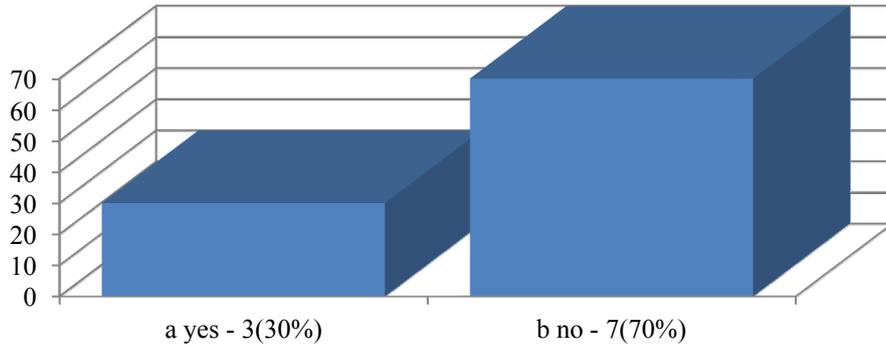


Figure 5. Allocation of participant's living abroad experience of Survey Pre-Test

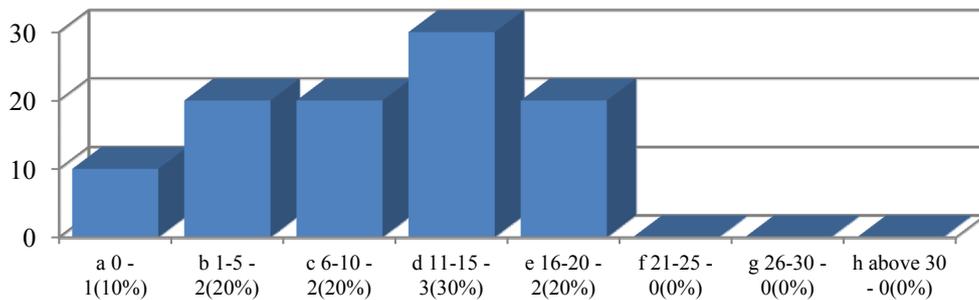


Figure 6. Allocation of participant's open vacation status of Survey Pre-Test

At this stage, it could be remarked that the evaluated Pre-Test population has an Age-Rage from 20 to 49 years. 100% of the participants have an education and 40% have a bachelor degree or higher. The majority has no living abroad experience (70%) and the team has in November 2010 at least 50% of the participants who have more than 11 days of open vacation days.

The following focus on the result evaluation will concentrate on the eight key questions in the cluster behavior that are linked indirect/directly to the hypothesis:

1. Team members with different nationalities add value to the team's performance. (H_{y1TT})
2. Team members with different experiences (e.g. experiences living abroad) lead to a greater trustfulness within the team. (H_{y2TT})
3. Team members with different experiences (e.g. experiences living abroad) lead to a better performance. (H_{y2TT})



4. Team members care less about vacation days, but are more interested in increasing the team performance. (H_{y2TB})
5. Teams with mixed-gender (women and men) lead to better results. (H_{y1TB})
6. Teams with a wider age range lead to a better performance because overall they are more experienced. (H_{y1TBP})
7. Teams with a high educational level lead to higher performance results. (H_{y2TBP})
8. Team Performance increases by knowing more about the behavior of the others. (H_{y0})

H_{y1TT} Evaluation of Team members with different nationalities adds value to the team's performance.

In the following the allocation of the evaluation is shown including the key figures. One key result is that in total 50% evaluates that TM with different nationalities add value to TP, even though in this population only 30% have living experience abroad.

Key figures are: N = 10, Arithmetic Mean = 3.3, Variance = 2.21, Median = 4, Min = 1, Range = 4, Standard Deviation = 1.4, Mode = 5, Max = 5.

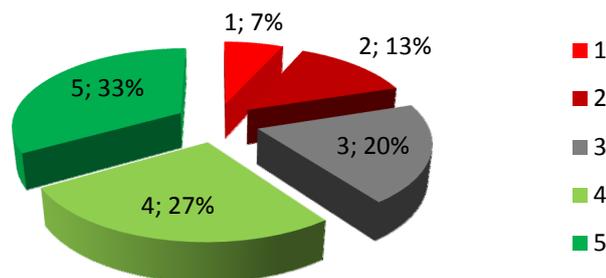


Figure 7. Allocation ...to nationalities adds value to TP of Survey Pre-Test

Based on the figure, allocation and quartile analysis, it can be stated that based on this Survey Pre-Test, the question is valuable to ask and that there is a strong tendency to be know that different nationalities could add value to the Team Performance.

H_{y1TT} Team members with different experiences (e.g. experiences living abroad) lead to a greater trustfulness within the team. Team members with different experiences (e.g. experiences living abroad) lead to a better performance.

The evaluation on the experiences is asked by two questions in the cluster of behavior. In conclusion, it will be analyzed in a combined focus so that it can be seen the parallity in these area of evaluation. Based on the results shown below, it can be already concluded that the opinion of the Pre-Test population deliver a clear tendency that TM with different experiences show a clear tendendy that there is an impact to more trustfulnees and a better TP.

Key figures are: Experiences versus trustfulness: N = 10, Arithmetic Mean = 3.875, Variance = 0.61, Median = 4, Min = 3, Range = 2, Standard Deviation = 0.78, Mode = 3, Max = 5; Experiences versus better performance: N = 10, Arithmetic Mean = 4, Variance = 0.89, Median = 4, Min = 2, Range = 3, Standard Deviation = 0.94, Mode = 4, Max = 5.

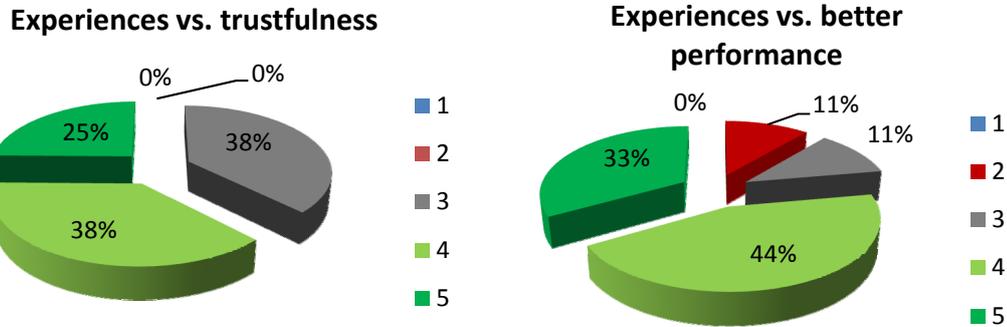


Figure 8. Allocation of ...experiences... by Survey Pre-Test

Above on the illustration of the allocation it can be highlighted that in illustration of experiences vs. trustfulness, there are 0% for evaluation steps in scale 1 by both criteria's. In illustration experiences vs. Better performance one scale with 0%. In general, it can be stated that roughly 63% outline that Team members with different experiences lead to a greater trustfulness in teams and even 77% state that it leads to a better Team Performance.

In conclusion, based on the key figures, allocation and the box plot / quartile analysis, the Pre-Test population delivers a clear tendency that different experiences might have an impact to Team Performance.

H_{y2TB} Team members care less about vacation days, but are more interested in increasing the team performance.

The analysis, if a team performs higher by less taking care of open vacation days will be seen below. The analyses are again on the key figures, allocation and quartile overview. The results show a standard deviation of less than 1.0 and in the allocation level 1 is not used. However, the allocation show a broader range, which is also presented by quartile analysis that focus in the range of 3-4. It is also shown by the key figures of an arithmetical mean of 3.66.

Key figures are: N = 10, Arithmetic Mean = 3.66, Variance = 0.89, Median = 4, Min = 2, Range = 3, Standard Deviation = 0.94, Mode = 3, Max = 5.

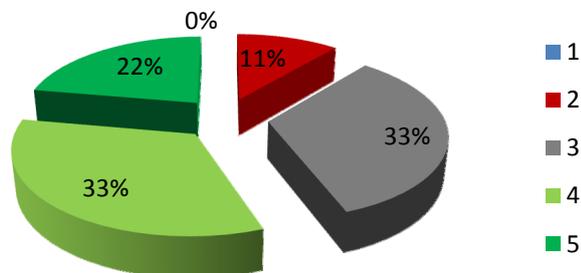


Figure 9. Allocation of ...open vacation days... by Survey Pre-Test



In conclusion, the question to the open vacation days presents a less clear tendency of a direct trend because there are 44% that are in quartile 3 and 55% in total quartile 4 and 5. It is assumed that this is an aspect, which is assumed to appear based on the small amount of people asked to the Survey Pre-Test. More clarity is needed to have a stated a trend, and therefore more data is definitely necessary.

H_{yITB} Teams with mixed-gender (women and men) lead to better results.

The result is this question appears to deliver a clear trend, at least in the Pre-Test Survey. A standard deviation of only 0.6, a median of 4 and a range of only 2 present a clear trend. The allocation will also show that 90% of all evaluation state that a mixed-gender team leads to better results. Lastly, this clear trend is show by a box-plot quartile analysis.

Key figures are: N = 10, Arithmetic Mean = 4.2, Variance = 0.36, Median = 4, Min = 3, Range = 2, Standard Deviation = 0.6, Mode = 4, Max = 5.

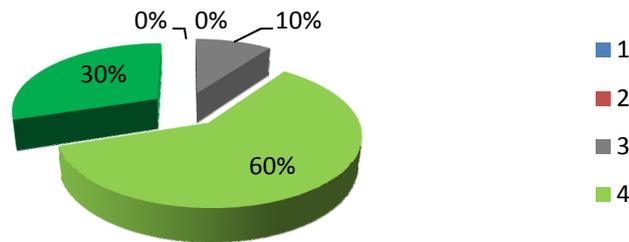


Figure 10. Allocation of ...mixed-gender... by Survey Pre-Test

In summary, the Survey Pre-Test result of the question, if Team Performance increases by mixed-gender seem to be clear answered with committed trend to “yes”.

H_{yITBP} Teams with a wider age range lead to a better performance because overall they are more experienced.

The details of the Survey Pre-Test results are answered positively with 88% by the asked population. The standard deviation is a by 0.92 because there are also 11% of the answered who said no for this link age range and Team Performance. The Median, Mode and Arithmetic Mean deliver a clear trend with 4. Lastly, the quartile analysis presents also the majority into the evaluation of 4-5.

Key figures are: N = 10, Arithmetic Mean = 4.2, Variance = 0.84, Median = 4, Min = 2, Range = 3, Standard Deviation = 0.92, Mode = 4, Max = 5.

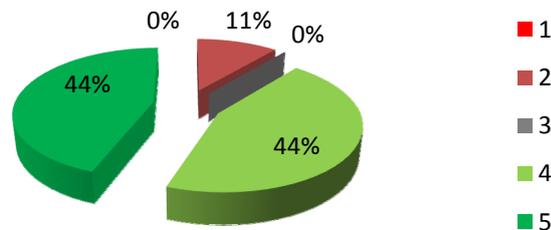


Figure 11. Allocation of ...age-range... by Survey Pre-Test



H_{y2TBP} Teams with a high educational level lead to higher performance results.

The result of the educational level and its linkage to higher Team Performance seems to be not delivering a clear and definite trend. The standard deviation is compared also to the other answers higher and by around 1.2. In addition, on the one hand the allocation delivers 50% with a trend to agree this statement but the other 50% show a different trend. In conclusion, it can be stated that there is the need to wait for the roll out of the survey to collect more data and to receive a representative data.

Key figures are: N = 10, Arithmetic Mean = 3.5, Variance = 1.45, Median = 3.5, Min = 2, Range = 3, Standard Deviation = 1.20, Mode = 2, Max = 5.

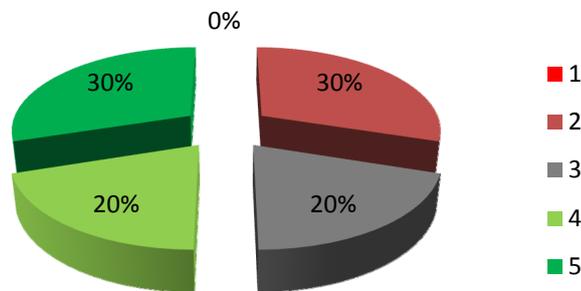


Figure 12. Allocation of ...educational level... by Survey Pre-Test

H_{y0} Team Performances increases by knowing more about the behavior of the others.

The result to this question presents a clear statement. 100% of all participants in this Survey Pre-Test believe that the TP increases by knowing more about the behavior of other. A strictly low standard deviation, a range of 1 and an Arithmetic mean support this clear trend.

Key figures are: N = 10, Mean = 4.4, Variance = 0.24, Median = 4, Min = 4, Range = 1, Standard Deviation = 0.49, Mode = 4, Max = 5.

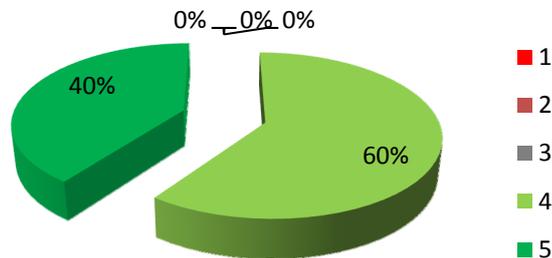


Figure 13. Allocation of ...behavior... by Survey Pre-Test



Survey Pre-Test Conclusion & Implications

Reviewing the Survey Pre-Test, the results and analyses, it can be concluded that the survey can be rolled out to the defined population. The received data with the focus to behavior and the linkage to the hypothesis trigger a valuable result:

The generic hypothesis of this research is:

H_{y0}: If Team Performance is measured in Business Organizations, then it will be affected when the team has a basic knowledge about the behavior action/reaction of the other team members.

The question in the survey, if the Team Performance increases by knowing more about the behavior of the others, links to the generic hypothesis and is clearly stated with a positive trend by the empirical Pre-Test.

Referring to the dimensions of behavior and the behavioral cluster the following summary based on the Pre-Test can be done:

A. Cluster Behavior: Dimension Team Trust

H_{y1TT}: The higher the heterogeneity, the higher the TP will be. The questions of team members with different nationalities add value to the TP and TM with different experiences lead to a better trustfulness and Team Performance link to this hypothesis. Based in the results in the Pre-Test, it can be concluded that all three questions deliver a positive trend to this hypothesis and should be therefore continued to be evaluated in the final survey, too.

B. Cluster Behavior: Dimension Behavior Personality

H_{y1TBP}: The higher the age range in the team, the higher Team Performance will be; and *H_{y2TBP} the higher the level of education in the team, the higher Team Performance will be.* The questions of age range and educational level in the survey of the cluster behavior links so to these hypotheses. The results in the Pre-Test for the age range were clearly positive and delivered already a strong positive trend. The educational level question and so the hypothesis is not clear and more representative data is needed. In conclusion, both hypotheses with these questions should be more evaluated in the next step of the survey.

C. Cluster Behavior: Dimension Team Behavior

H_{y1TB}: The higher diversity index in a team, the higher Team Performance will be; and *H_{y2TB} the higher the amount of not taken vacation days, the higher Team Performance will be.* The questions of the mixed-gender and the open vacation days are directly linked to these hypotheses. The evaluation of the mix-gender in the Pre-Test delivers a strong positive trend, whereby the trend of the hypothesis with the open vacation status cannot be stated as a trend. However, the data is not clear and therefore this hypothesis as well as the other will be continued and tested in the final Team Performance survey.

In summary, the hypotheses are represented in the survey and the Survey Pre-Test has delivered few clear trends and left some questions open. In general, the trend to have Team Performance measured including behavior and its influence were positively stated in the Pre-Test.



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THE INFLUENCE OF INTELLECTUAL CAPITAL TO STOCK MARKET PERFORMANCE IN BALTIC COUNTRIES DURING FINANCIAL CRISIS

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Keywords: intellectual capital, stock market, financial crisis.

Abstract

There is increasing evidence that the major drivers of value creation in present decade focus on firm's intangible assets rather than its physical tangible. My studies of listed companies across the Baltic region consistently find significant difference between the accounting book value of companies and their market value.

The purpose of this empirical study is to investigate the influence of intellectual capital to stock market performance in Baltic countries such as Germany, Denmark, Sweden, Finland, Poland, Lithuania, Latvia and Estonia during last financial crisis. This study uses empirical data from Bloomberg Terminal Platform for data management that cover period of time 2007-2009. This research use quantitative analysis. The population of the research is listed companies concentrated in all-share index in particular national stock exchange of Baltic countries.

In this paper in order to demonstrate link between changes in both IC and stock market performance is used market to book value ratio as a common measure of intellectual capital. According to the results, among the Baltic countries there are two groups: one of emerging countries where higher decrease of intellectual capital value is related with lower rate of return from stock exchange and second of developed countries with higher rate of return is linked with less depreciation of intellectual capital value. Secondly, impact of financial crisis into stock performance lead to changes in value of IC in period of time 2007-2009. Based on this, I divided Baltic countries into three groups: those with positive value of IC during research time, countries with mixed value of IC and last group of countries with negative value. I believe the results of the full research will be significant to practice and fulfill the gap of detailed data about IC for region of Baltic countries.

Financial Crises come out in the summer 2007, and year after bankruptcy of investment bank Lehman Brothers, achieved apogee of panic. It was the unprecedented event in the history of postwar economy having such a big implications for world economy. We should remember that the whole outbreak was predated by long period of bank loan growth, low bonus for taking the risk and also the use of financial leverage due to the deregulation in financial sector. As it



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turn out inadequate evaluation of credit rating and sustained low capital cost became extra stimulus, which increased discrepancy between market price and fundamental value of real estate. Appearance of speculative bubble in this assets category lied in the base of speculation, irrational investors decision and information asymmetry. Constant inflow of low budget capital and existence of wide, fluid secondary market increasingly enable bigger body of investors to expect further price and stock dividend increase on real estate market. Low interest rates meant low profit margin primarily for Financial Institutions. Such a position pressured increase of profitability which led to the need of securitization on mortgage products. Through excessive loans and financial agents expansion supported by elastic regulations characterized improper control and risk estimation allowed investors to catch express train. In the scenery of such circumstances I would like to quote the very common sentence: "bull market comes when pessimism is dominate on market, grow on skepticism, matures on optimism and die when there is euphoria" said by American Financier Sir John Templeton. Significant element in pumping speculative bubble was appearance of information asymmetry as well.

The foundation of Allan Gale's imperfect information concept is the theory about passing, by financial intermediary, responsibility for loan risk financing investments on investors themselves, which appraised expected return from investments. On a roll of adverse financial conditions, developed quite quickly worse quality credits market so called subprime. As we see from results showed by Bruce Krasting in period 2000-2008, the mortgage debt scale in USA grown from 6,9 to 14,6 billion dollars, which is 110%. If we take a look at the share of mortgage value to GDP in the same period, it will turn out that this level rose from 67% to 106%. The subprime credit value itself in the ten years period 1996-2006 rose from 96.8 bln dollars to 640 bln, which means growth on 561%.

Situation on real estate market started to go from bad to worse with the begging of interest rates series uplift by FED in order to put back inflation effect and inflation expectations. The growth of operation mortgage debt impose with expiration of attractive conditions and credit condition promotion settled previously by financial intermediary. The temporarily boom was put down and the real estate value began to depreciate. In that situation the possibility of high financial leverage turn out to be a weapon in both directions. The rate of banks executions, had consequences on growing group of bankrupt borrowers, started to rose. For shocking results we did not have to wait too long. In April 2007 the largest credit company specializing in subprime credits made petition on implementing so-called: Chapter 11 Bankruptcy Codex.

Shortly after, the growing number of small and medium size credit companies decided to put them in bankruptcy position. So far the Banks were trying to get rid of the problem by liquidate issued earlier mortgage backed securities and collateralized debt obligations.

Because of the lengthen sides chain involved in transactions, foggy loan assets quality, in which risk information were stack and because of active support of rating agencies, investors were buying composed credit products without risk knowledge, which was sleeping in that complicated Securities.

Estimation of real risk value and financial objects themselves participating in the process find out to be very difficult. Because investors lost they trust to this kind of instruments, they market liquidity got worsen which had the effect in price drop. Uncertainty of financial institution against themselves were growing, caused mainly by bankruptcy risk. It became as a fact, that interbank market is in the big liquidity trouble, and profit for interbank loan risk growth rapidly.



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Banks had to face real financing problem and rolling up they own short-term debt. The examples of Financial Institutions embroiled in the process of mortgage securitization and securities trading with negative consequences, started to cross geographical border of United States. The rapid drop in USA housing market was the fuze of spreading the crises influence on the other assets area. It got obvious that subprime crises transformed into banking crises and started steadily infect other assets.

The most common institutions like BNP Paribas, HSBC, Deutsche Bank, Credit Agricole, Societe Generale, Credit Suisse, Fortis NV, Commerzbank, Lloyds TBS, HBOS, Standard Chartered, ING, Sachsen Landesbank, Northern Rock, UBS, RBS, Barclays or Halifax were steadily announcing to public opinion the size of their lost. It became pretty obvious that we have to deal with global financial crises. The news about Lehman Brothers collapse, the supportive plan for Fannie Mae and Freddy Mac and threat of bankruptcy of giant insurance company AIG, only caused panic wave on global markets implementing rapid price drop on natural resources and stocks on capital markets.

Financial crises showed the weakness of financial institutions applied by most developed countries. Serious, basic pillars were undermined on which financial markets relied on such as liquidity, trust and capital. Stability of international financial institutions had to face in front of enormous question mark for future functioning on present rules and based on accepted rules. Nowadays, we can only speculate how big loss would have global economy and particular countries if central banks, governments, financial institutions and international organizations would not intervene.

One of the negative effect of financial crises influence in financial markets, was change of investment risk level estimated by credit rating. In the case of Baltic countries, we have experienced credit rating decline, which implied a reduction in the overall security of financial transactions for entire area. In particular, it affected the most Lithuania, Latvia and Estonia.

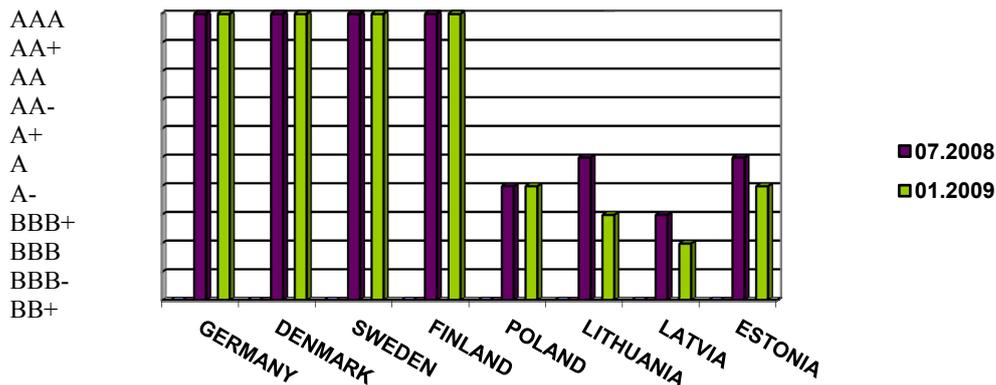


Figure 1. Credit rating of countries in the Baltic Sea area in the period 07.2008 - 01.2009 (Fitch Agency)

Source: Valerie Plagnol. European bond markets in the financial crisis: an endurance test, CMCICS, March 26, 2010, 7 p.



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The broad spectrum and range of financial aid additionally supported by fiscal rescue packages have taken place in order to reduce the depth of the effects of the crisis, stimulate economies and finally restore appropriate level of trust among banks and customers to financial institutions. The scale of the crisis has reached a global dimension no matter what kind of liberal or conservative policy was dominated in particular markets. In the majority of countries public finances have deteriorated as a results of crisis and intervention actions made by governments.

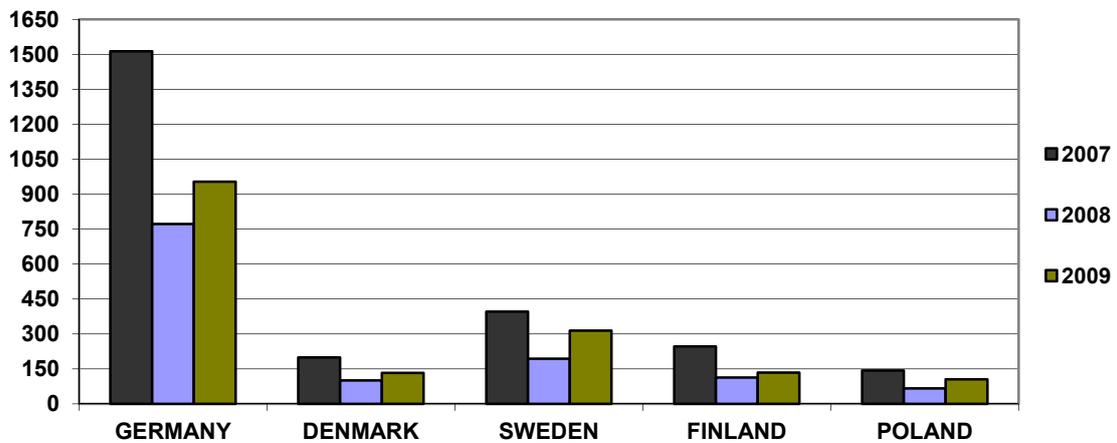


Figure 2. Market capitalization in Germany, Denmark, Sweden, Finland, Poland in billion of euro in 2007-2009

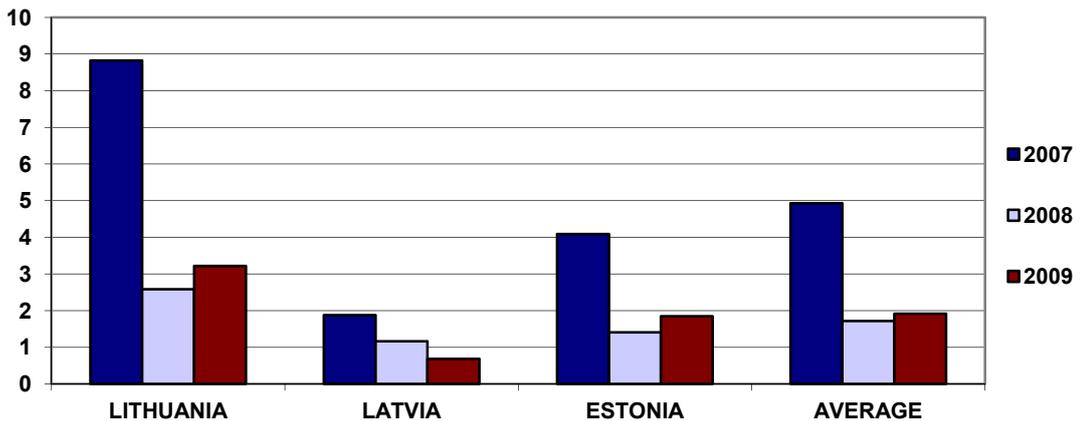


Figure 3. Market capitalization in Lithuania, Latvia, Estonia in billion of euro in 2007-2009

Source: Own elaboration based on data from Bloomberg



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Among states of Baltic area the greatest negative impact of the crisis on the balance of public finance recorder Latvia with deficit of 8.7%. The average value of the deficit increase for the entire area was 6.1%. Government action involving growth in public spending affected adversely into level of public debt to GDP.

In the period of time 2007-2009 average relation of public debt to GDP for Baltic states increased from 30.4% to 40.6%. Latvia again became a leader with an increase of 27.1%. Beside of visible increase of sovereign debt another negative factor was contraction of the financial assets after nearly 30-year upward trend. The scale of assets losses on financial markets reflect the changes in stock market capitalization.

The largest share in total capitalization of stock exchanges in the Baltic Sea region countries, noted the stock exchange in Germany, which outpaced their Scandinavian colleagues and left far away stock market in Riga.

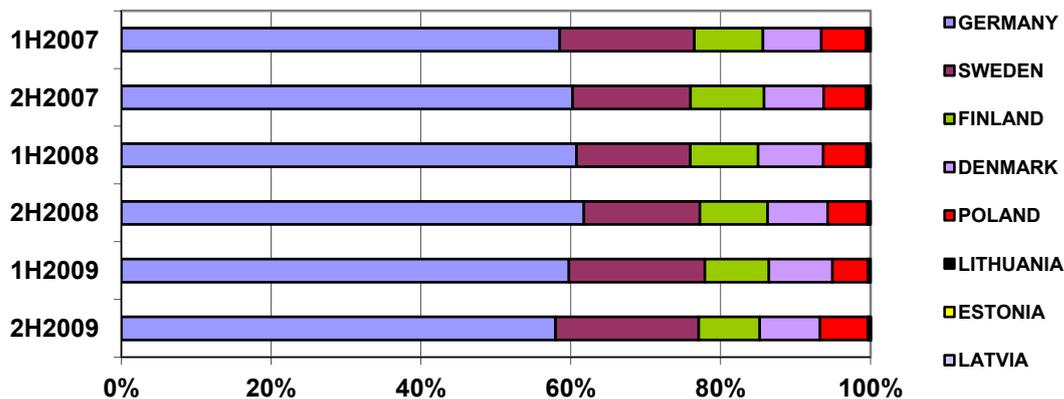


Figure 4. The share of respective national stock exchanges in the total capitalization of the Baltic region in 2007-2009.

Source: Own elaboration based on data from Bloomberg

During considered period of time the German stock market capitalization share in the total market value of the Baltic area fluctuated close to 60% and respectively in comparison to the stock exchanges in Warsaw share was close 6%. Among the Scandinavian countries which counted on one third of total share in market capitalization, stock exchange in Stockholm was the leader with average share of 17%. Peripheral and marginal meaning of exchanges in Vilnius, Riga and Tallinn, gave a total of less than 0.5%. All capital markets in Baltic region due to the depreciation of investor confidence and increased risk aversion have experienced decline of turnover. The biggest drop among the countries surveyed in the period 2007-2008 noted the stock market in Latvia with a score of 70%. The similar situation Estonia and Lithuania has found, where the reduction was respectively 63% and 52%. The least sensitive market to change was Frankfurt with the modification of 8%, Copenhagen with 12.5% and Warsaw 20%. The average value of drop for the entire area was 36%.

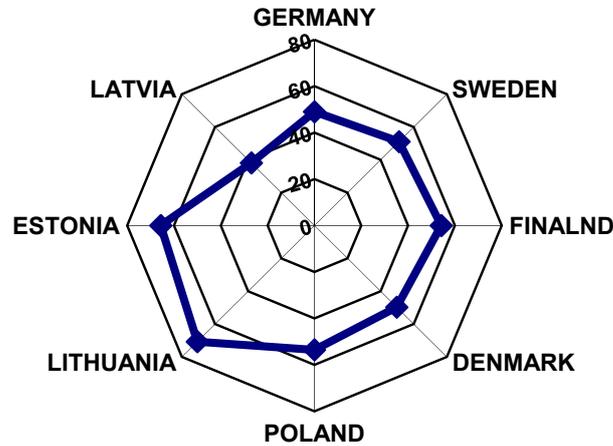


Figure 5. Decline in the value of capitalization (%) in the Baltic area in the period 2007-2008

Source: Own elaboration based on data from Bloomberg

Besides of mentioned before negative influence on the balance of public finances, the crisis also left its mark on the value of GDP in the Baltic Sea region countries. Apart from case of Poland all countries clearly and definitely recorded aggravation of this indicator in 2008 year on year. Among the most affected countries were Latvia 18%, Lithuania 14.7% and Estonia with 13.9% decrease. On average GDP in region was declined about 8.5% in comparison to whole European Union with decrease only 4.2%. The scale of the decline in stock market capitalization and value of GDP was illustrated on Figure 6.

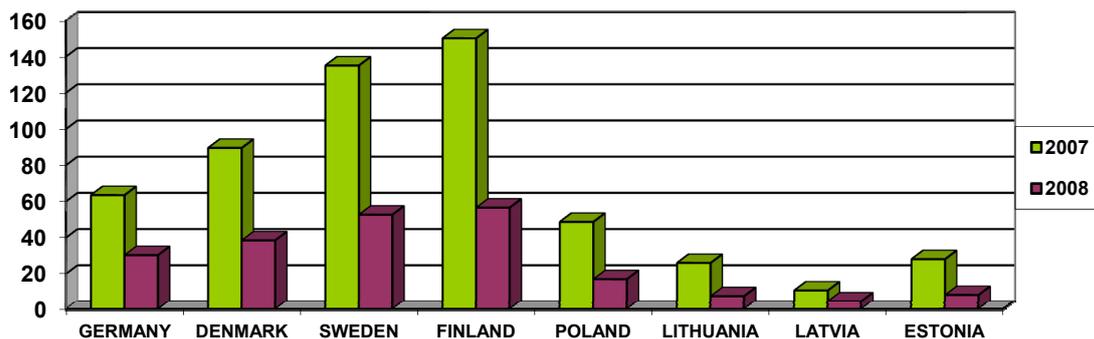


Figure 6. Relation of stock market capitalization to GDP in the period 2007-2008 (in %)

Source: Own elaboration based on data from Trading Economics

Apart from previously mentioned effects of crisis, we have noticed also a significant drop in share value across the globe. It is estimated that during 2008, when a wave of equity



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securities sell-off has entered a hot pace, the value of global share shrank by half devouring nearly 28 trillion US dollar.

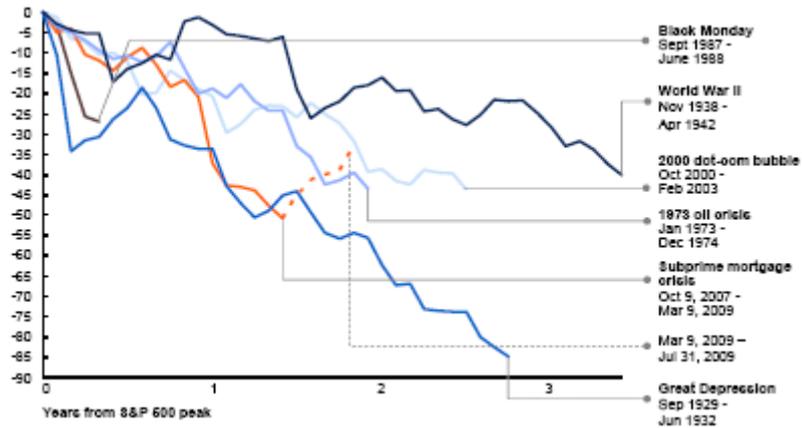


Figure 7. Declines in the S&P500 index during the period 1929-2009

Source: McKinsey Global Institute. Global capital markets: Entering a new era, 2009, p. 10.

Analyzing the quotations of securities based on S&P500 index, it is clear that financial crisis of 2007-2008 has caused the greatest decrease in share prices since the Great Depression of the late twenties of XX century. Emerging markets which were relatively small, less liquid and primarily absorbed a significant amount of speculative capital have experienced slightly deeper decrease than developed capital markets. For instance, IGBVL index in Peru lost 60%, BSE500 in India lost 58%, SSE CI in China lost 65%, JCI index in Indonesia lost 50% and CSE GPI index in Cyprus lost 77%.



Figure 8. Share prices in emerging markets 2003-2009.

Source: IMF. Meeting New Challenges to Stability and Building a Safer System, *Global Financial Stability Report*, April 2010, 123 p.



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The wave of declines in equity prices did not spare stock exchanges in the Baltic region countries. Stock prices plunge in 2008 absorbed nearly 1.2 trillion euros by reducing the value of the shares by half. Since stock markets reached its peaks in 2007 local stock exchanges in Baltic region had crashed down in different pace until recovery has shown at the beginning of 2009.

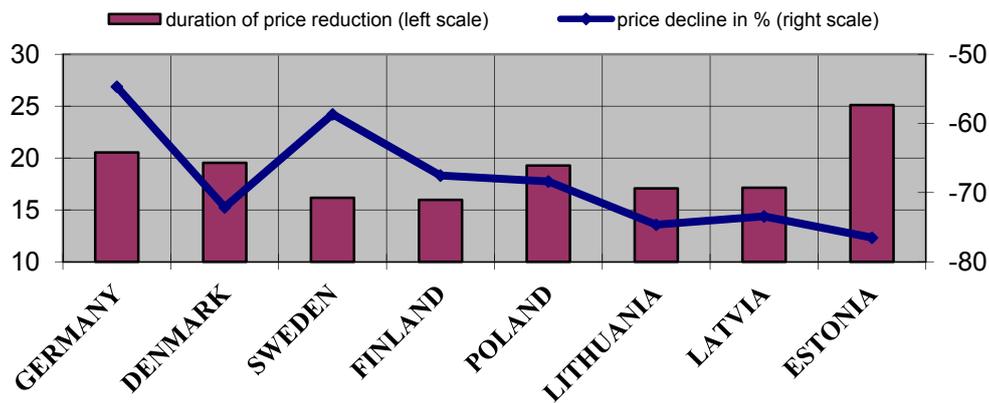


Figure 9. The scale of decline in major stock indices from the peak to bottom and duration of price reduction in months

Source: Own elaboration based on data from Bloomberg

The most painfully decline in stock prices have hit investors in Lithuania, Latvia and Estonia. Shares become cheaper there by nearly 75% on average. A similar result was observed in Copenhagen, where the index fell by 72% and 68% in Warsaw. The bear market turned out to be the most friendly for holders of securities in Germany and Sweden, where the decline reached 55% and 59%. The average value for the shares decline in the region accounted to 68%. Taking into account the length of the duration of decline stock exchange in Tallinn have notice the longest fall period of 25.1 months while the stock market in Helsinki, have taking the shortest fall with only 16 months. Average for the entire region share sell-off extended for a period of 19 months.

The study made by B. Leva shows that approximately 95% of the price volatility of stocks is caused as a result of non-financial information. The question arises of what is relation between the amount of intellectual assets in the enterprise and the price of its publicly traded equity values. A significant portion of intangible assets is not recognized in financial statements. Intellectual capital's definition is a very wide and there is no exist of standard framework for it. It's often emphasize that essence of intellectual capital is based on three pillars: human capital, organizational capital and relation capital with customers and business partners. False illusion lies in the belief that knowledge alone is sufficient to gain an advantage. Knowledge is just the source to achieve the possibility of transformation of potential included in three pillars for real value for the company. Then we can assume that the formation of intellectual capital in that way



becomes the most precious resource in the entire company's assets making possibility for creation of competitive advantage in the market. It is important to underline how the relation between the traditional tangible assets to intangible assets during the past fifty years has changed. Based on studies of Brand Finance Global Intangible Tracker Research shows that share of tangible assets accounted for 80% of assets in fifties while today this proportion stands at 30%. It is need to remember that this is a global approach, because within sectors of the economy particular countries, these relationships will differ significantly from each other.

In order to illustrate how the financial crisis affected the size of the intellectual capital of companies listed on stock exchanges in the Baltic Sea region countries I have used the one of the methods based on market capitalization. Market value to book value indicator is the most common instrument to materialize the existence of intellectual capital in the enterprise and calculate its overall valuation. Because of lack of uniform accounting standards across the world it is problematic to clearly compare the results. The Figure 10 is a calculation of the value of intellectual capital on the basis of the difference between market value and book value for the period 2007-2009 for the various stock exchanges in the Baltic Sea area.

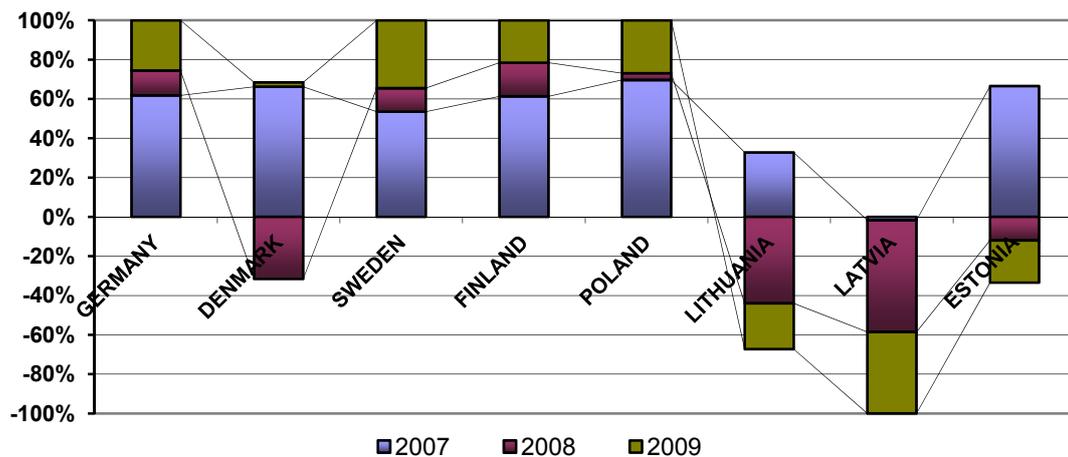


Figure 10. Change the value of intellectual capital in the period 2007-2009 (in %)

Source: Own elaboration based on data from Bloomberg

Observation from the study cast doubt the homogeneous behavior of the markets in close geographical vicinity to each other in reference to knowledge capital. State the Baltic area could be divided into three groups: first group with a positive value of intellectual capital, the other with a mixed and a third with a negative value. As is clear from the analysis, only the listed companies on stock exchanges in Germany, Sweden, Finland and Poland managed to maintain positive value of intellectual capital during the period of research. In other countries such as Lithuania, Latvia and Estonia is not enough that the intellectual capital in 2008 reached a significant negative value as the local conditions, in the following year maintained its negative



trend. Latvia was the only country in region that have not shown positive value of intellectual capital at all.

The highest value of IC showed the company concentrated in German DAX stock market index. Their cumulative value of the three years amounted to 1265 bln of euro. On the podium in terms of volume of IC also included companies listed on the Stockholm Stock Exchange with a score of 437 bln euro and the stock exchange in Helsinki, with the value of 266 bln of euro. Beside of Poland and Denmark, the other stock exchange markets were marginal and peripheral participation. The value of IC for the whole region was 2143 bln euro. The largest share of the total estimated value of intellectual capital in the period 2007-2009 among the Baltic Sea region accrued German and Scandinavian Bourses.

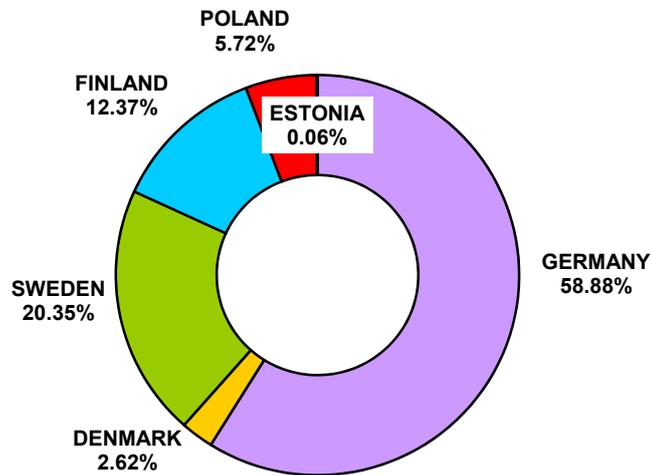


Figure 11. The share of the exchanges in the total value of intellectual capital 2007-2009

Source: Own elaboration based on data from Bloomberg

Crazy wave of stock prices plunge during 2008, caused a significant depletion of the value of intellectual capital and a significant decrease compared to the previous year. The value of total IC for the Baltic region decreased from 1370 bln euro to 208 bln euro, it's about 85% fall. The largest decreases, of course, experienced exchanges that showed in one year a positive value and the second negative as it was in the case of Lithuania, Estonia and Denmark. The smallest decrease was recorded on the stock exchange in Helsinki and it amounted to 72.1%. For other securities markets depreciation value of intellectual capital were quite similar and results didn't significantly differ from each other: 77.6% decline in Sweden, Germany 79.6%, Poland 95.1%. The Figure 12 examines the value of intellectual capital and the return on shares in the respective months in 2008.

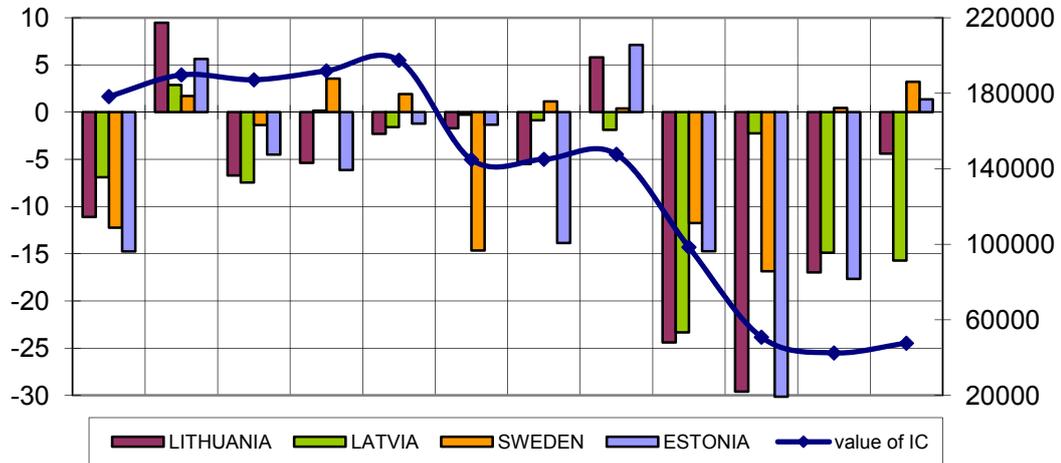


Figure 12. The value of intellectual capital in a millions of euro and a rate of return (%) of shares of stock exchanges in Vilnius, Riga, Stockholm and Tallinn in 2008

Source: Own elaboration based on data from Bloomberg

A significant decline in the value of intellectual capital was recorded in the second half of 2008 due to intense panic in capital markets leading to a strong wave of selling off shares. In terms of scale of decline January, September and October of 2008 were the months of laying on nerves and patience of investors to the test.

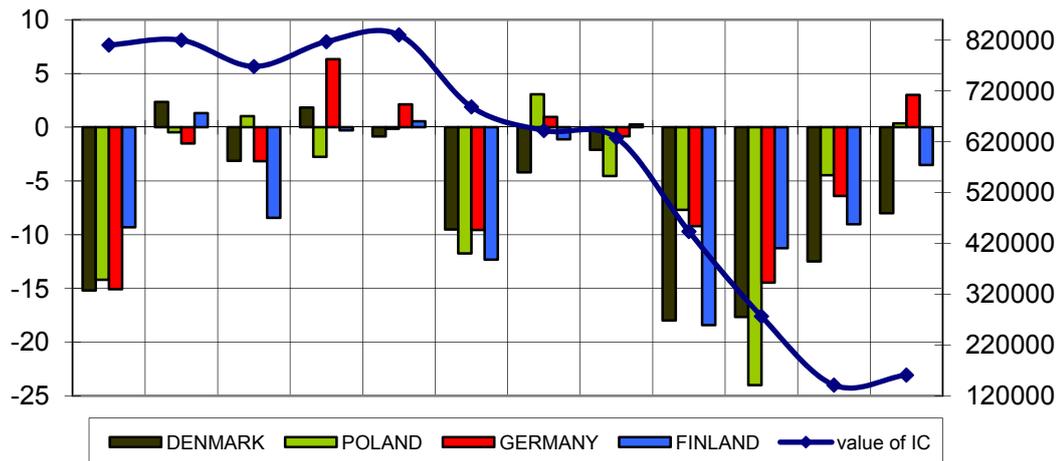


Figure 13. The value of intellectual capital in a millions of euro and a rate of return (%) of shares of stock exchanges in Copenhagen, Warsaw, Frankfurt and Helsinki in 2008

Source: Own elaboration based on data from Bloomberg



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During the first month of the 2008 year, the portfolio share in the region fell by an average of over 12% with the biggest declines of 15% in Frankfurt and Copenhagen. Months of February and August were the only ones in the calendar when investors obtained a positive return on investment.

Based on news of the collapse of Lehman Brothers in the United States, the nationalization of financial institutions in the world and entering the first countries in the economic recession, the stock exchange in late September and October affected by an avalanche of supply driving the share price by dozens of percent. In the Baltic region the worst panic appeared in the stock market in Vilnius, Riga and Copenhagen, where the index fell from 18% to 30% at the turn of the third and fourth quarter.

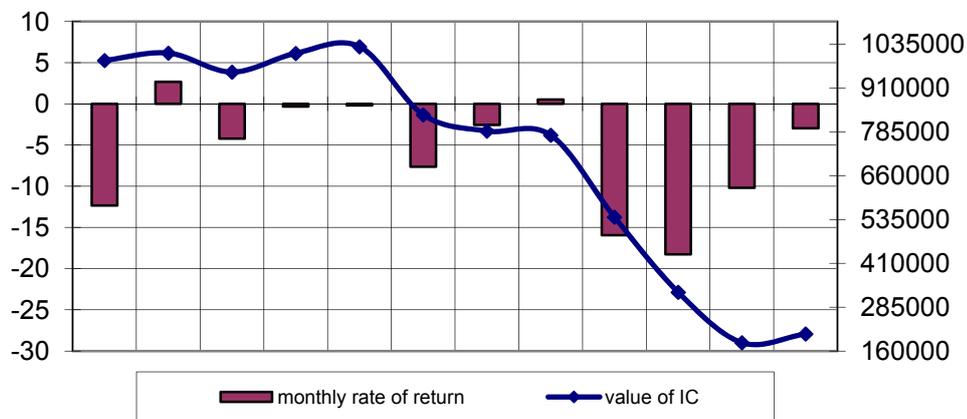


Figure 14. Relation of averaged rate of return on shares in the Baltic Sea region countries and the value of intellectual capital in millions of euro in 2008

Source: Own elaboration based on data from Bloomberg

The largest declines nearly 44% in intellectual capital value was recorded in November in terms of month to month, October 39.5% and 30% in September, cumulatively reducing the value for about 592 bln of euro. Considering the period of 2008 and 2009, the results look much more preferred because of the return of warming sentiment around stocks specially at the end of the first quarter of 2009. The value of intellectual capital for the Baltic region in 2009 have amounted to 565 bln of euro, which means that it increased compared to the previous year by 171.5%. Only stock exchange in Estonia have encountered a depletion of intellectual capital, where the value has fallen by nearly 80%. In the case of Lithuania and Latvia have shown a negative value of IC in both years, although there appeared a slight increase. On the other exchanges, there were clear increases ranging from 26.47% in Helsinki to 187% in Stockholm. The leader in this field, was the Warsaw Stock Exchange, with a record high annual increase reaching 684%. Despite such a magnificent result, the share of polish stock exchanges in the total value of IC in the region in 2009 amounted to only 5.8%. Analyzing the relationship of changes in volume of intellectual capital and return on shares in the period 2007-2009 in the



region, we have noticed some accuracy that intellectual capital and rate of return from shares tend to go the same direction.

The study reveals a particularly large disparity in the relationship between the change of value of IC and the return of the shares on the stock exchanges in Tallinn and Vilnius. This state of affairs is mainly due to the fact that in both these markets in 2009 was reported a negative value of intellectual capital. Data from stock exchange drive us to affirmation that the market in which experienced the greatest decline in stock prices measured by the change value of a broad stock index also experienced the greatest decline in intellectual capital.



Figure 15. The relation of change between the value of intellectual capital and rates of return on shares in the Baltic region in the period 2007-2009¹

Source: Own elaboration based on data from Bloomberg

This regularity, also occurs in the opposite direction so that stock exchange, which recorded the smallest decline was marked by the smallest decline in the value of intellectual capital. Confirmation to the above-mentioned dependence is the situation concerning the exchanges in Copenhagen and Stockholm, which were at opposite poles.

Nowadays, it becomes clear that intellectual capital is a key hidden asset value of the company and represents the ability to obtain competitive advantage. It should be remember that for building a certain value relationships both inside and outside the organization is responsible a human being. Investing in knowledge by present corporations is becoming a conscious strategy to create value-added capabilities to its natural and physical resources. Transfer from the industrial era to a knowledge economy and the development of globalization has become a milestone in setting priorities for the proper management of human resources and create a strategy that meets the expectations of the future in the twenty-first century. Companies that knowingly take focus on remodel philosophy and strategy of action in terms of visibility of the

¹ The results from the Riga Stock Exchange have not been included, due to the fact that the value of intellectual capital was negative in each year of research.



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formation and development of flexible knowledge creating a unique expertise at the same time, will be able to achieve competitive advantage for long time in future. The more strategic analysis of business activity in the market we consider through approach of expenditure on intellectual capital as an investment and not as a cost, the sooner we are be able to adapt accommodate to a changing environment incurring less risk.

During the current information era human resource management has become equivalent power next to financial capital playing a huge strategic role in shaping the competitiveness not only at the corporate level, but also at national government level of particular countries.

The strength of the transformations that occur in the structures of the assets of enterprises as measured by a drop in the traditional physical assets against intangible assets of companies over the last two decades clearly shows, which course of business have been taken in order to look for new alternative factors improving competition.



STRATEGY IMPLEMENTATION FACTORS – A LITERATURE REVIEW

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Keywords: strategy implementation, process perspective, behavioral perspective, hybrid perspective, success factor.

Abstract

The development and formulation of a new strategy is a difficult task. Nevertheless many researchers, consultants and managers claim that implementing such a well-formulated strategy is even more difficult and challenging. In this article the author describes – based on several studies on strategy implementation – the most important influencing factors for strategy implementation. Based on the results of this review the factors can be split into single implementation factors and the multiple implementation factor approaches. While there is criticism on the short-sighted single factor approach there is also an increasing number of frameworks and processes about the multivariant approach as this concept is trying to look at the “big picture” of the whole organization during the implementation. Finally the author will give an overview in a mind map about the main concepts used in this literature review and develops a critical review about those concepts and an outlook for future research.

1. Introduction

Strategy formulation is well advanced in theory and in the models used. (Compare e.g. (Hrebiniak, 2006)) Strategy implementation is then very often seen as a “following process” with very little attention and also heavily underweighted versus strategy formulation. (Raps, 2008, p. 24ff) A similar statement is coming from Hrebiniak by saying: “*Formulating strategy is difficult. Making strategy work – executing or implementing it throughout the organization – is even more difficult. Without effective implementation, no business strategy can succeed. Unfortunately, most managers know far more about developing strategy than they do about executing it.*” (Hrebiniak, 2006, p. 12)

There are many factors that usually can influence the implementation process especially when taking into account how complex such a “project” can be. According to a research done by Hrebiniak the most important **obstacles** concerning a successful strategy implementation are: (Hrebiniak, 2006, p. 17)

- Inability to manage change effectively and overcome resistance to change;
- Poor or vague strategy;



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- Not having guidelines or a model to guide strategy implementation efforts;
- Poor or inadequate information sharing among individuals/units responsible for strategy execution;
- Trying to execute a strategy that conflicts with the existing power structure;
- Unclear responsibility or accountability for implementation decisions or actions.

Of course there are much more influencing factors to a successful strategy implementation. Some of them are **hard facts**, some of them are **soft facts** and others are a mixture. When analyzing the literature we see that it is definitely a tremendous change process which takes place during a strategy implementation phase. (Raps, 2008, p. 29ff)

In German literature the topic of strategy implementation has only been tackled within the last ten years. (Al-Laham & Welge, 2008, p. 791ff) In the Anglo-American area the thinking about strategy implementation started with the work of Chandler (Chandler, 1990 (1962)) and Ansoff. (Ansoff, 1988) A newer concept has derived from a work of Thompson & Strickland (Thompson, 1998, 10. Auflage) with a more systematic approach concerning the tasks and activities during the strategy implementation phase. The most important activities according to Thompson & Strickland are:

- Allocation ample resources to strategy-critical activities;
- Establishing strategy-supportive policies;
- Instituting best practices and mechanisms for continuous improvement;
- Installing support systems that enable company personnel to carry out their strategic roles proficiently;
- Tying rewards and incentives to the achievement of key strategic targets;
- Shaping the corporate culture to fit the strategy;
- Exercising strategic leadership;
- Building a capable organization.

In this list we can already see the distinction between issue-orientated strategy implementation and behavioral-orientated strategy enforcement which will be defined more precisely in the following chapter.

In a further statement *Al-Laham et al* (Al-Laham & Welge, 2008, p. 791ff) also mention that organizational culture is a key factor in successfully implementing a strategy. In this regard we will have to distinguish between strategy implementation processes whereas a change of culture is necessary or where a change is not needed. For simplification we will not further distinguish between those aspects although this could be a limitation to this analysis.

2. Definitions

The term “strategy implementation” is generally not used without controversy in the existing literature. According to the study of Li et al sometimes “execution” or “actualization of goals” is meant synonymously and therefore for this review of strategy implementation factors the author will not distinguish between both of them.



But what does strategy implementation mean? The word implementation has its origin in the Latin word “implementum” which derives from the Latin word “impere” and means “to fill up” or “fulfill”. (myetymology.com, 2011)

In literature there are also several aspects of strategy implementation concerning their focus and attention. *Kolks* for example has defined a two-folded approach in which he splits the implementation into an *issue-orientated strategy implementation* (“sachorientierte Strategiemsetzung”) and *behavioral-orientated strategy enforcement* (“verhaltensorientierte Strategiedurchsetzung”). According to *Kolks* each of these phases is incorporating three sub-systems: (*Kolks*, 1997)

- **issue-orientated strategy implementation:**
 - Elaboration, revision and realization of functional sub-strategies;
 - Derivation of operating measures from sub-strategies;
 - Elaboration, revision and realization of performance-related sub-strategies;
- **behavioral-orientated strategy enforcement:**
 - Communication of strategy;
 - Briefing and Training;
 - Obtain a strategy-related consensus.

Although there is no generally accepted definition of “strategy implementation” there are other concepts in which the term is further described. *Li et al* has been able in their study to identify three distinct conceptions of the term: The first approach focuses on a process perspective and takes strategy implementation “*as a sequence of carefully planned consecutive steps*”. The second approach treats strategy implementation “*as a series of more or less concerted (but often parallel) actions and examines these actions from a behavior perspective.*” These two approaches are very much in line with the above concept from *Kolks*. Additionally *Li et al* brought in a combination of the process perspective and behavior or action perspective and build a third approach, which is called a hybrid perspective. (*Li*, 2008, p. 4ff)

The above definitions show that there is a common understanding of strategy implementation in at least 2 major characteristics:

- The **process perspective** or the **issue-orientated strategy implementation** and
- The **behavioral perspective** or **behavioral-orientated strategy enforcement**.

The hybrid perspective is giving place to on or the other direction in strategy implementation.

Following this approach the author will use the process perspective and the behavioral perspective for the future research in this field.

3. Methodology for Research on Implementation Factors

For this literature review on strategy implementation factors the author reviewed several management journals and books on strategic management with at least a special section on strategy implementation. To grasp also eventual differences between the Anglo-American approaches and the European approaches (especially German language texts) the author has done the research in English and German language. Some of the Journals analyzed are:



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the Academy of Management Journal, Strategic Management Journal, the Journal of Management Studies, Long Range Planning, Journal of Management, Academy of Management Executive, Human Relations, Journal of Business Research, Harvard Business Review, Strategy & Leadership, Controller Magazin, etc. using the literature databases of EBSCOhost, Scencedirect, Emerald, SAGE Journals.

For the research the author has used as selection criteria the following terms as keywords:

- “Strategy implementation” or “Strategieimplementierung”;
- “Strategy, implementation, factor” or “Strategie, Implementierung, Faktor”;
- “Strategy execution” or “Strategieumsetzung”.

Out of this research the author also used some of the referenced articles when this article had an own section about implementation. In the same way the research was conducted with books where the author checked the content for a special section about strategy implementation.

During this initial literature review there has been two sources found as sources of major interest for this research. When taking into account that the focus for this research is “strategic implementation factors” the author could find two sources which are covering this topic in a very favorable way. The two sources are:

- Li, Y. G. (2008). Making Strategy Work: A literature review on the *factors influencing strategy implementation*;
- Raps, A. (2008). *Erfolgsfaktoren der Strategieimplementierung* – Konzeption, Instrumente und Fallbeispiele.

Both sources represent a very comprehensive overview of existing sources in the field of strategy implementation – and especially the success factors during such an implementation. Also in both works there is wide variety on sub-sources used for their analysis. As a result the author will apply those main sources for this literature review exemplarily but not exclusively. Besides the two major sources the author has used input from related articles whenever this primary input would better explain a topic or providing a more precise view. Another advantage of the two sources is that they represent a good overview of Anglo-American sources (Li et al.) and German sources (Raps) so that it is not only an analysis of English sources and German sources but far more a comprehensive analysis where one supports the other including a number of shared citations.

4. Research Results

Based on a literature review on the factors influencing strategy implementation there are several concepts and studies, some by using an analysis of the literature and others using empirical studies. (Raps, 2008, p. 39ff) Several studies from *Alexander* (Alexander, 1985), *Al-Ghamdi* (Al-Ghamdi, 1998) and *Steinle/Thiem/Lange* (Steinle, Thiem, & Kange, 2001) analyzed problems arising in the strategy implementation phase and they are primarily resources related (e.g. lack of time, coordination, workload, expertise of employees) as well as related to communication and leadership. (Raps, 2008, p. 41ff) The factor of organizational culture and the influence on the implementation has not been discovered in those studies.



Newer studies and concepts have taken into account also soft facts and therefore support the evidence of those factors. Of importance especially for applied sciences in this field is the 7-S Model from *McKinsey* published by *Peters & Waterman* (Waterman Jr., June 1980) and a following concept published by *Higgins* “The Eight ‘S’s of Successful Strategy Execution” (Higgins, 2005). In both models it is described that not only hard facts but also soft facts play a vital role in strategy implementation. In the picture below the hard factors (strategy, structure and systems) are shown in red and the soft factors (staff, style, skills, shared values) are shown in brown.

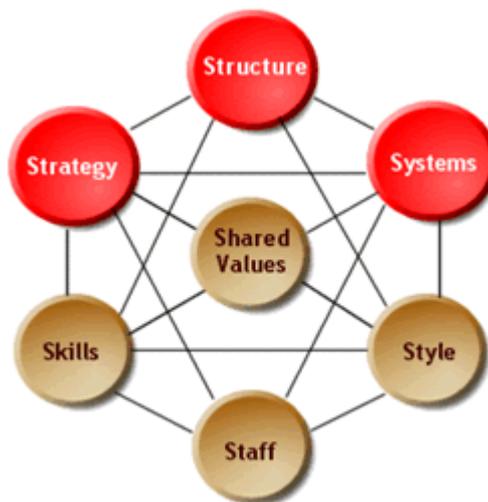


Figure 1. 7-S Model – McKinsey published by Peters & Waterman (Waterman Jr., June 1980)

In the last decade several papers are focusing more on those soft factors which are strongly related with organizational behavior and organizational culture. In this area the studies from *Riel et al* (Riel van, 2007) and *Lehner* (Lehner, 2004) can be mentioned exemplarily.

Further research in this field has also been accomplished by a working paper from Li et al. (Li, 2008) Herein the authors split literature into two types of strategy implementation studies:

- (1) those highlighting the importance of *individual factors* for strategy implementation and
- (2) those that emphasizing the “*big picture*” of how such factors interrelating and forming a strategic implementation environment.

This matches with the definitions of *Raps* (according to Al-Laham) where he also distinguishes between the so called “monovariate Ansätze” (monovariant approaches) and the so called “multivariate Ansätze” (multivariant approaches). (Raps, 2008, p. 32ff) This leads us to the separation of the two approaches into the following:

- **Single factors influencing strategy implementation** (monovariant approach);
- **Multiple factors influencing strategy implementation** (multivariant approach).



5. Organizational Context

In the research study of *Li et al* the results have been classified into two dimensions: the *examined organizational levels* and the *considered organizational types*. **Organizational levels** title the locus of strategizing, i.e., whether a study focuses on functional strategies (i.e., Finance, Marketing, HR, etc), SBU-level strategies or corporate strategies. **Organizational types** refer to the type of organization in terms of ownership or scope (privately held or state-owned, operating scope regional or multinational).

Based on their conclusion on organizational context in the studies about strategy implementation none is “*comparing similarities and differences of strategy implementation among private corporations and state-owned corporations, or among local firms and multinational firms. We thus do not know which specific differences exist regarding strategy implementation in these various forms organizations. This clearly is another interesting avenue for future research.*” (Li, 2008, p. 10)

6. Single Factors Influencing Strategy Implementation

As mentioned above there are two main concepts which will be used in this research. First there are single or individual implementation factors which are influencing the success of an implementation. Those factors are also described within the monovariant approaches in other literature. (compare e.g. (Raps, 2008)) The second type can be described as multiple related implementation factors or multivariant approach. This concept takes into account the various interrelated factors and they are either grouped in several categories or related in a framework. (Li, 2008, p. 27)

The most common influencing factors in this study can be split into single and multiple factors. Single factors are listed in the table below.

Table 1

Single factors that influence strategy implementation

Name of factor	Type of factor
Organizational structure	<i>hard factor</i>
Administrative system in place	<i>hard factor</i>
Relationships among different units/departments	<i>mixed factor</i>
Strategy formulation process	<i>mixed factor</i>
Communication activities	<i>soft factor</i>
Consensus regarding the strategy	<i>soft factor</i>
Employed implementation tactics	<i>soft factor</i>
Level of commitment for the strategy	<i>soft factor</i>
Strategy executors (managers, employees)	<i>soft factor</i>

The criticism about working on a single factor model is that in “real life” there are several multiple related factors and therefore the complexity is much higher. (Li, 2008, p. 11) That of



course opens the view on a more complex concept – the influence of multiple factors on strategy implementation.

7. Multiple Factors Influencing Strategy Implementation

In the multivariate models (multiple factors influencing the implementation) the researchers are looking at various variables and activities happening more or less simultaneously. *Skivington* (Skivington, 1991) and *Noble* (Noble, *The Eclectic Roots of Strategy Implementation Research*, 1999) for example classify the implementation variables into two dimensions: **framework and process**, but with different content in the categories.

Earlier studies have been done by *Pettigrew et al* (Pettigrew, Ferlie, & McKee, 1992) group variables into categories like: strategic content, context, process and strategic outcome. *Okumus* (Okumus, 2001) adopts the above framework from Pettigrew but adds three new variables: the main sections remain the same but in strategic content he adds *multi project implementation*, in context he adds *organizational learning* and adds a second type of external environment – the *task environment*.

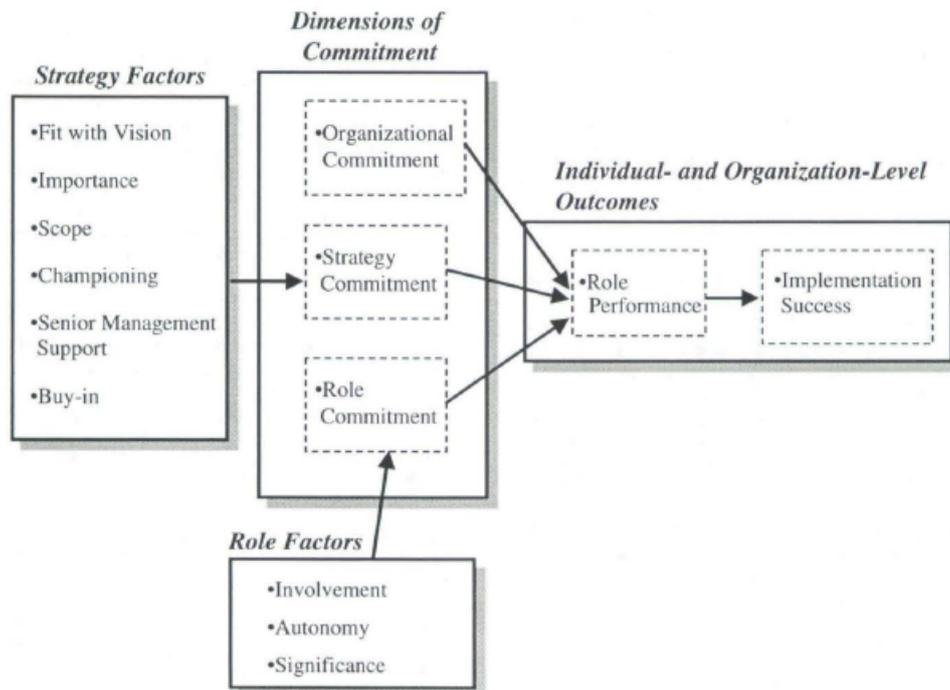


Figure 2. Framework of Noble & Mokwa (Noble & Mokwa, *Implementing Marketing Strategies: Developing and Testing a Managerial Theory*, 1999)

Another aspect comes from *Noble* (Noble, *The Eclectic Roots of Strategy Implementation Research*, 1999) as he reviews strategy implementation from a **structural view** (emphasizing



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organizational structure and control mechanisms) and an *interpersonal process view* (emphasizing strategic consensus, autonomous strategic behaviors, diffusion perspectives, leadership and implementation style, communication and interaction processes) later enlarged by *Noble & Mokwa* (Noble & Mokwa, *Implementing Marketing Strategies: Developing and Testing a Managerial Theory*, 1999) with a third view – the *individual-level processes view*, emphasizing cognition, organizational roles and commitment besides the structural and interpersonal process view. This three dimensional view was tested in a two-stage, multifirm field study for grounded theory development. The framework for this study is shown in the Figure 2.

Some of the major conclusions of their study of this framework are that general relationships exist among aspects of the strategy being implemented, characteristics of managers' roles, and multiple dimensions of commitment. Especially the dimension of commitment, split into organizational commitment, strategy commitment and role commitment could be found as a factor influencing individual performance and the overall success of the implementation effort. (Noble & Mokwa, *Implementing Marketing Strategies: Developing and Testing a Managerial Theory*, 1999, p. 71)

In another study of *Beer and Eisenstat* (Beer & Eisenstat, 2000) they were looking at the “silent killers of strategy implementation and learning”. In this study they found 6 killers for implementing a strategy which should be turned into six core capabilities to overcome those hurdles. Those capabilities are:

- **A leadership style that embraces the paradox of top-down direction and upward influence:** The general manager advocates direction but learns from the feedback of those down the line;
- **Clear strategy, clear priorities:** The top team formulates the strategy as a group and spends significant amounts of time discussing it with lower levels;
- **An effective top team, whose members possess a general management orientation:** to constructive conflict, the team arrives at a common voice and creates and maintains the organizational context needed to implement the strategy;
- **Open vertical communication:** the top team and lower levels are engaged in an open dialogue about the organization's effectiveness;
- **Effective coordination:** effective teamwork integrates activities around customers, products or markets, across diverse functions, localities and businesses;
- **Down-the-line leadership:** mid-level managers with the potential to develop leadership skills and a general-management perspective are given clear accountability and authority.

In another work of *Noble* (Noble, *Building the Strategy Implementation Network*, 1999) implementation factors are not only grouped but put in “*a web of causal or temporal relationships*”. (Li, 2008) The study of Noble is structured around four major phases of the implementation effort: pre-implementation, organizing the implementation effort, managing the implementation process, maximizing cross-functional performance. Additionally he uses five managerial levers for these implementation phases: goals, organizational structure, leadership, communications, and incentives. Based on the framework of Noble the four different stages in the implementation process require different attention and execution of the managerial levers.



When having the full matrix of all stages and all levers in front, it should enable the manager to improve the implementation process by following this framework.

Another important work in this field has been done by Peters & Waterman with their “7-S Model” which has been modified and advanced by Higgins to the “8-S Model”. (Higgins, 2005, p. 3ff) The main differences to the famous model from McKinsey are:

- the deletion of skills from the McKinsey model and the addition of reSources in its place;
- Additionally Strategic Performance has been added to the model to help focus the strategy execution effort.

For a better understand the graph below shows an aligned form of the eight “S”s to manage a successful implementation.

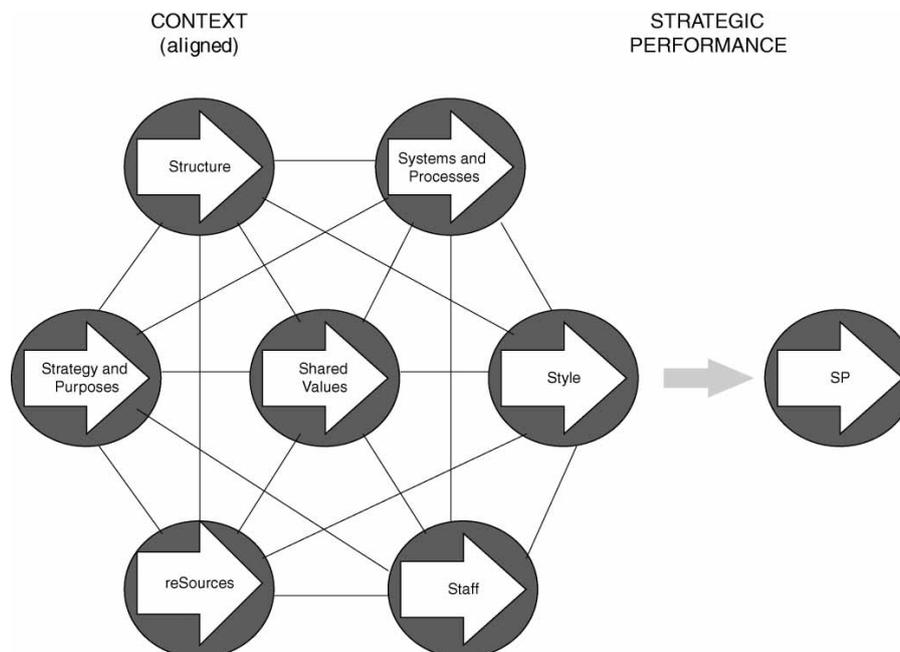


Figure 3. Figure of the aligned 8 ‘S’ s in an optimal process (Higgins, 2005, p. 6)

As a result the Eight ‘S’ s Model shows on a cross-functional basis practically everything an organization does. When applying this model during the strategy formulation process, the company can anticipate what needs to be changed in the organization in order for the strategy to work. Then during the implementation phase, the model serves as a road map for implementation which also can uncover reasons for failure. *“The underlying principle of the 8 ‘S’ s model is that different strategies require different kinds of structures, systems, style, staffing, resources, and shared values to make them work. If there is not a good match among these factors, performance suffers.”* (Higgins, 2005, p. 12ff)

Finally a newer study from *Brenes et al* (Brenes, Mena, & Molina, 2008) should be mentioned to end-up the overview. The dimensions there are: the strategy formulation process,



systematic execution, implementation control and follow-up, CEO's leadership and suitable, motivated management and employees, and corporate governance leading the change. As a conclusion derived that "All five dimensions must be managed comprehensively to align them with the firm's determinations and strategic choices. Even though they are not the strategy, they must be an incontestable part of the firm's change agenda if competitive strategy is to be effectively implemented." (Brenes, Mena, & Molina, 2008, p. 597ff)

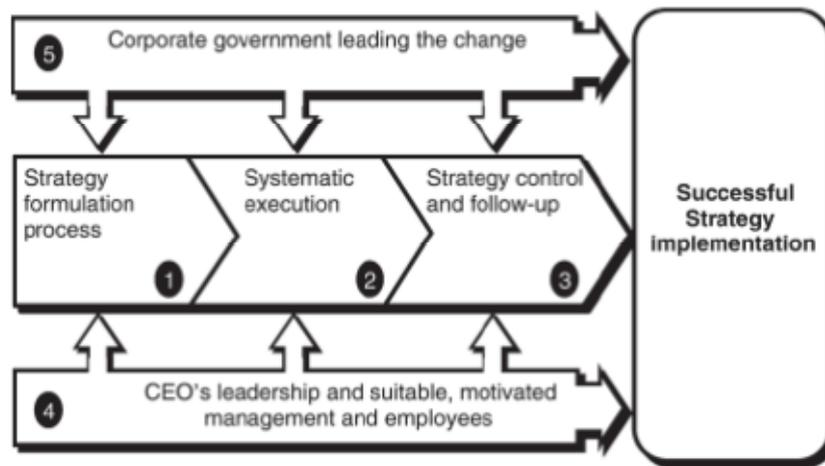


Figure 4. Five key dimensions in successful implementation of business strategy (Brenes, Mena, & Molina, 2008, p. 591)

8. Limitations to Results

First of all this review represents only a selective number of studies in the field of strategy implementation. Although the author has put a special focus on "implementation factors" this does not mean that there are not additional sources in other fields. It is a valid argument that additional search words would have led to additional results.

Another aspect in this review is that there are two main sources used. This does not mean that the author has not checked the primary sources for their input, but the main sources have provided the frame for this literature review. Once again the author would like to note that specific aspects and conclusions are coming directly from the primary sources of the articles used.

The search engines used in this review represent only a snapshot of some of the most popular databases used for academic research.

There is also an important point to raise concerning the level of strategy. In this review most authors of the studies did not differentiate which strategy was being implemented – a corporate strategy on corporate level or a business unit strategy on a business unit level.

At the beginning of this review the author also stated that he will not distinguish between strategy implementation processes whereas a change of culture is necessary or where a change is not needed. That of course brings another limitation to this review as it has also not been distinguished in most of the articles for this review.



9. Critical Review and Further Research

The first cohort of studies using individual factors is easier to analyze and understand as there are not really any strong interrelated dimensions which have been valued. Therefore the mentioned nine single factors give an indication on which aspects a manager should pay attention during an implementation process. They can be worked through on a process or a behavioral orientated perspective and allow the organization to work out actions for each of these areas.

On the other hand there are the multivariant approaches which work towards exploration of the “big picture”. In this set of studies the various factors are depending on each other and that brings the problem of exploring all those different settings in a model. Even the numerous studies which have been cited in this review do only collect “snapshot” on the complex cognitive and instinctive activities during a strategy implementation process. Similar to other projects in business the implementation of a new strategy is a complex setting and the bigger the change is the more complex and time consuming it gets.

The author supports some of the frameworks used as they give guidance in turbulent times. Even of more practical evidence are the obstacles and killers of a strategy implementation as mentioned by *Hrebiniak* (Hrebiniak, 2006) and *Beer and Eisenstat* (Beer & Eisenstat, 2000). As seen in other projects it is business-as-usual to solve problems during the implementation of a new initiative. It can get very difficult in such a process if you have ignored some of the “key issues” for the people. Some of those key issues are: (based on (Hrebiniak, 2006) with comments from the author):

- Inability to manage change effectively and overcome resistance to change (***so that people block change***);
- Poor or vague strategy (***so that people get confused***);
- Not having guidelines or a model to guide strategy implementation efforts (***so that people get lost***);
- Poor or inadequate information sharing among individuals/units responsible for strategy execution (***so that people feel not informed and not important***);
- Trying to execute a strategy that conflicts with the existing power structure (***so that people are struggling about their position and standing***);
- Unclear responsibility or accountability for implementation decisions or actions (***so that people can't execute decisions – standstill***).

Future research should enlighten further aspects in the field of strategy implementation. Especially cultural aspects (values, attitudes and beliefs) could bring more guidance into such a process and help the managers to better address the “needs of the implementation” in a timely manner. Obviously another limitation is that the success of a strategy implementation can only be measured retrospectively and as a strategy is normally designed for several years the research about the success factors is a historical review.

In the research of *Lie et al* they found also some limitations in the existing research and some suggestions for future research:

- Most studies focus on the functional level of strategy implementation on marketing strategy;



- Several studies focus only on the influence on middle management and there is no evidence about lower management or non-management functions;
- The influence of different organizational units and strategy levels on implementation;
- Focusing research on better models and frameworks;
- As there are many theories involved in implementation (e.g. *agency theory, organization theory, social system theory, social learning theory, ...*) *future research on strategy implementation could move beyond these approaches.*

10. Overview on Main Studies Used in the Literature Review

As an attachment the author is providing an overview on the main literature and studies used for this literature review. This mind map should give a good insight into the main strategy implementation factors – both single and multiple factors.

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Attachment

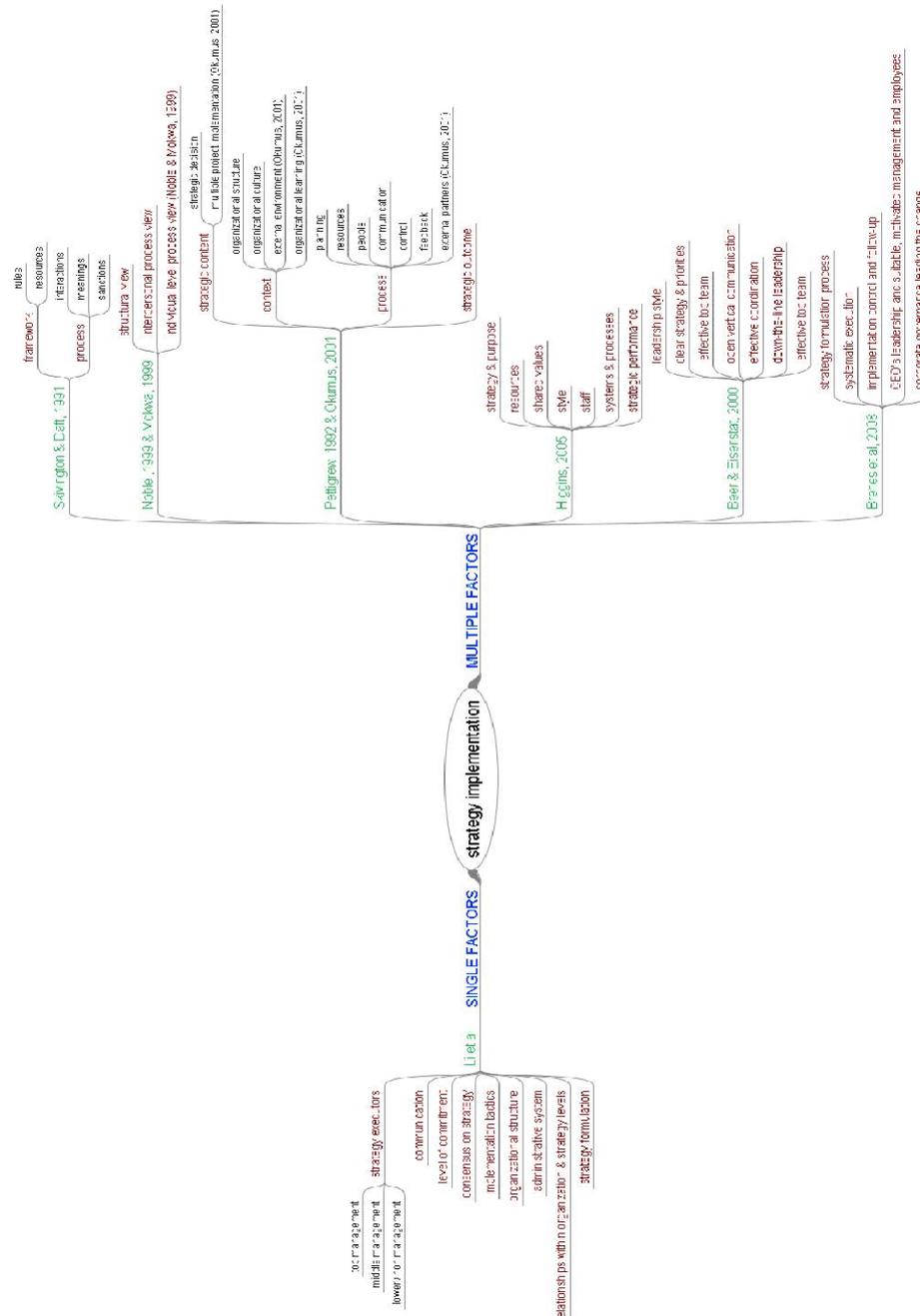


Figure A.1. Strategy implementation factors



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THE LEGISLATIVE INITIATIVE: EU PRACTICE AND EXPERIENCE OF NGOS IN LATVIA

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Keywords: legislative initiative, non-governmental organisations, social partnership.

Introduction

This paper outlines the legislative initiative, its implementation and possible impact of non-governmental institutions (NGO) on changes in the legislation system [1, 2, 4]. Because of the limited legislative initiatives, people can use NGO's, constructing social dialogue as the legislative drafting instrument, which can be applied directly or indirectly. NGOs are often the focus, directly or indirectly legislation includes the possibility of legislative initiative, both directly and indirectly – expressing their views, collecting signatures of interest parties in protest against certain laws and regulations or the implementation of decisions and marketing.

The author will discuss the legislative initiative as an instrument that could be used efficiently by (NGO) to influence changes in the legislation in the EU New Member States (NMS). Gained by the Old Member States practical experience in this area will be compared with experience of the NMS and Latvia in particular [5].

The role of the EU institutions in the legislative initiative will be observed. The paper highlights the role of NGO as a social partner in decision-making process. Analysis of the legislative rights implementation in the legal system in Latvia in the context of the EU requirements is provided.

The author will pay attention to the fact that the legislative initiative in EU and Latvia. In EU in Latvia legislative initiative is limited according to the Constitution. In EU the Commission has a legislative initiative. However, according to the Maastricht Treaty strengthened the Treaty of Lisbon, the European Parliament has a right of legislative initiative, which allows it to invite the Commission to submit a proposal. The legislative initiative could provide an opportunity to influence directly development of legislation. The paper outlines that a number of legal regulations that delegates legislative initiative to the organisations is limited despite of intensive political discussions and public debates on the issue. For example, the legislative initiative is not delegated to the Employers' Confederation of Latvia (LDDK) that is the biggest organization representing the interests of employers and acts as a partner in socioeconomic negotiations with the Parliament (Saeima), the Cabinet of Ministers of Republic of Latvia and Free Trade Union Confederation of Latvia according to the Law on "Employers' Organisations and their Associations Law" (1999) in relation to the article 10 on the



Relationship of Employers' Organisations and their Associations with State and Local Government Institutions. [3]

1. Classification of NOGs

The term originated from the United Nations (UN), and is normally used to refer to organisations that do not form part of the government and are not conventional for-profit business. In the cases in which NGOs are funded totally or partially by governments, the NGO maintains its non-governmental status by excluding government representatives from membership in the organization. The term is usually applied only to organizations that pursue some wider social aim that has political aspects, but that are not overtly political organizations such as political parties. For such reasons, they are sometimes referred to being part of the "third sector" in society.

NGOs are difficult to define and classify due to the term's inconsistent use. NGO, non-profit organization (NPO) and private voluntary organization (PVO) are the most used terms and are used interchangeably despite differing definitions. Classifying non-governmental organizations within defined boundaries excludes NGOs that fall outside each specific boundary. Additionally, it is beneficial for NGO networks to create a classification that allows similar organizations to exchange information more easily. To attempt a classification of NGOs requires a framework, that includes the orientation and the organization's level of operation. An NGO's orientation refers to the type of activities an organization takes on. These activities might include environmental, development, or advocacy work. An NGO's level of operation indicates the scale at which an organization works on, like the difference in work between an international NGO and community or national NGO [6].

Despite this wording, NGOs can represent a business interests, the specific interest of merchants. NGOs have the right settled by law to carry out economic activities and make a profit.

In the international community NGO type can be understood by orientation and level of co-operation.

NGO type by orientation:

- Charitable orientation;
- Service orientation;
- Participatory;
- Empowering orientation.

NGO type by level of co-operation

- Community-Based Organization;
- City Wide Organization;
- National NGOs;
- International NGOs.

The NGOs sector is in the public sphere, which does consist of both formal and informal social networks that finds its place outside the public power sector and the business sector. It is



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specified in a Latvian law "Associations and Foundations Bill", Article 2. The goal of NGOs activities is not in making profit [7].

In the course of time in Latvia the status and regulation of NGO's has changed several time, the same has happened with its implementation. Currently establishing and regulation of NGOs are regulated by "Associations and Foundations Bill" [7]. There are also some particular types of NGOs, regulated by some special laws, e.g. Trade Unions, political parties and religious organizations. Regulations are not unified. For this reason it is certainly difficult to apply and analyze NGOs rights and obligations. For the members of NGOs it is complicated to apply consequently for their rights.

NGOs expression, function and diversity is vague, leaving the parties as much as possible the opportunity to realize their rights. Some authors believe, that it is currently NGOs influence in significantly strengthened national and international decision-making [11]. NGOs vary in their methods. Some act primarily as lobbyists, while others primarily conduct programs and activities.

Equal result can be reached using different forms of NGOs in Latvia. The mechanism of the organizations seems complicated and incomprehensible for ordinary people. Citizens use other means to express their opinion – such as demonstrations, legal, public bonds, even organized publicity and public opinion polls. NGOs do not seek for an impact in public administration which lacks popularity and gives no motivation to participate. The opinion of NGOs is expressed quite often although it does not become a part of the social dialogue. Public government does not use the views of social groups concerning certain matter. Would information about certain problems be gathered in time they could be prevented in the embryonic phase. Bureaucratic procedures are complex and due to them the area of actual problems might increase. As a result identification and resolving the problems takes much time and accumulates substantial resources. NGOs in Latvia are an untapped potential which includes even the public opinion and the range of problems in the phase of their identification. Public administration might sooner start resolving this problem.

2. Financial Provision

The main fundamentals, that provides functions of NGO's, are membership dues, donates and grants.

In USSR movement of NGO's was ensured by government. That generated subordination of NGO's. They were not independent, but totally controlled and affected. And the public opinion was fully created.

Currently public administration does not have any impact of the NGOs. Public administration can use the point of view of different NGOs, because of their economical and ideological independence. Their are created to achieve their aims and to represent their members. EU often requires to consult with social partners in decision making process, especially by taking important decisions.

According to Public organization benefit law, firms donating to NGO's can have some tax relieves. Because of that evolution of NGO's is affected to the percent of tax relieves. This aims to promote NGOs to public benefit activity, especially an activity, that provides significant benefits



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to society, especially if it focuses on philanthropy, human rights and individual rights, civil society development, educational, scientific, culture and health promotion and disease prevention, sports promotion, environmental protection, disaster aid and emergency situations, the public, especially poor and socially disadvantaged class of persons of social welfare-building. In a length of time there originates different number of NGOs, created to get the tax relieves [8].

Other one important reason of interest about NGO's are grant programmes and European Social agenda. Grant programs for NGOs Support Programme aims to strengthen civil society in Latvian, financially supporting non-governmental organizations in the sphere of democracy and civil society development. The program will support organizations that are seeking funding for its regular operation of the next three years, the organization has so far been successfully in operation for civil society development and wants to continue these activities. To qualify for funding from this program, the organization must submit a long-term work plan, which provided information on how the organization intends to work in civil society-building, organization and detailed work program for the first year. If the application is approved, each subsequent year, the organization shall prepare a detailed work program for their organization and is the basis for funding the organization receives regulation. Work program is a prerequisite for the organization's regular operating expenses would be recognized as eligible.

3. Social Dialogue

NGOs need healthy relationships with the public to meet their goals. Foundations and charities use sophisticated public relations campaigns to raise funds and employ standard lobbying techniques with governments. Interest groups may be of political importance because of their ability to influence social and political outcomes. A code of ethics [6] was established in 2002 by The World Association of Non Governmental NGOs.

NGO's members work together to ensure that:

- The EU and member states are fully committed to comprehensive policies and practice that promote sustainable economic, social and human development, aim to address the causes of poverty, and are based on human rights, gender equality, justice and democracy;
- The rights and responsibilities of citizens and organised civil society, to influence those representing them in governments and EU institutions, are promoted and respected.

The aim of NGO's is that, the important decisions of society are based on social justice, gender equality and upon our responsibility to future generations; where every person has the right to live in dignity, on an equal basis, free from poverty and sustainably.

The Commission adopted the Discussion Paper "The Commission and NGOs: building a stronger partnership" on 18 January 2000 (COM (2000) 11). In December 2002, the Commission adopted a Communication "General principles and minimum standards for consultation of interested parties", which sets up a coherent and flexible framework for consultation of stakeholders, including NGOs.

NGOs vary in their methods. Some act primarily as lobbyists, while others primarily conduct programs and activities [9; 10].

According to the Latvian accession to the EU, legislation and the consolidation impact of NGOs in social dialogue has increased by reference in EU legislation, including the Treaty of



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Lisbon, includes a requirement for closer cooperation between the social partners. Regulation of social dialogue is included rarely. Social dialogue often is based on private initiatives. Latvian legislation is inflexible and unable to adapt to EU requirements and principles of Law.

In accordance with Latvian Law in establishing and representation of NGO, there are required two members at least. Sometimes equal rights to participate in social dialogue has organization having two members and NGO having 20 000 members. At the same time, the number of members rate might not be decisive, as it may represent various parties, interest groups or minorities.

Both EU and EC try to involve NGO in different processes understanding their influence and ability to concentrate large masses of people. Although it should be admitted that accumulation and suggestion of opinion should be a competence of NGO as well as in Latvia as EU especially considering that they are created in definite areas or representing certain groups e.g. Latvian Confederation of Entrepreneurs, Latvian Ice Hockey Federation, Latvian Diabetes Federation. Quite often Latvian NGO representing certain groups, which becomes members of international organizations and this is the reason why they could participate in definite processes, e.g. Latvian Confederation of Entrepreneurs, Latvian Society of Deaf People. As a member of international organization NGO obtains certain rights in Latvia, e.g. Latvian Confederation of Entrepreneurs has certain rights to represent Latvian entrepreneurs on governmental and municipal level only due to the reason that it is a member of an international organization.

Significant role in the establishing NOGs in Latvia gives the opportunity to obtain public benefit status, which gives some tax incentives.

Sometimes it is difficult to build social dialogue for different reasons, e.g. social dialogue between the police trade union and the Ministry of Interior Affairs is not solved yet in Latvia. In fact these parties cannot build social dialogue because of being on the same side in a social dialogue. It is difficult to built social dialogue between the players and forces of the same side simultaneously interested in opposite things.

4. Legislative Initiative

In EU the Commission has a legislative initiative. However, according to the Maastricht Treaty strengthened the Treaty of Lisbon, the European Parliament has a right of legislative initiative, which allows it to invite the Commission to submit a proposal.

Under the Treaty, the Commission proposes that the Union's annual and multiannual programming. Taking to achieve this objective, the Commission prepares its agenda, which is its contribution to the Union's annual and multiannual programme. European Parliament is already working with the Commission in the process of developing the work program and the Commission shall take into account the priorities expressed by Parliament in this period. After its adoption by the Commission, the Parliament, Council and Commission dialogue is intended to reach an agreement on the EU agenda.

Detailed arrangements, including timing, are set out in the Regulations (the Framework Agreement on relations between the European Parliament and European Commission), XIV.

Parliament adopted a resolution on the annual program. The chairman asks the Council to give its opinion on the Commission's work program and its resolution. If an institution is unable



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to comply with the schedule, it must inform the authorities of the other reasons for the delay and propose a new timetable.

Based on the report, one of its committees, in accordance with Article 225, Parliaments, the majority of the members may ask the Commission to submit a legislative proposal. Parliament can also set a deadline for submitting such a proposal. The Commission can accept or refuse a proposal request.

On EU legislation on the basis of the right of initiative granted to Parliament under the Treaty on the Functioning of the European Union proposal for Article 225 can also be proposed by individual Member States of the European Parliament. Such a proposal submitted to the President, referring to the committee responsible. It may decide to submit it to the plenary.

On EU legislation on the basis of the right of initiative granted to Parliament under the Treaty on the Functioning of the European Union proposal for Article 225 can also be proposed by individual Member States of the European Parliament. Such a proposal submitted to the President, referring to the committee responsible. It may decide to submit it to the plenary.

In Latvia legislative initiative is limited according to the Constitution.

As stated in the 65 article of the Constitution [2], "legal proposal could submitted to the Saeima (Parliament) by the President of the State, Cabinet of Ministers, the Commission of the Parliament and no less then by 5 members of parliament as well as by one tenth of the voters". The legislative initiative could provide an opportunity to influence directly development of legislation.

The Lisbon Treaty introduces a new form of public participation in European Union policy shaping, the **European citizens' initiative (ECI)**. As required by the Treaty on a proposal from the European Commission the European Parliament and the Council does adopt a Regulation which defines the rules and procedure governing this new instrument (Regulation (EU) No. 211/2011 of the European Parliament and of the Council 16 February 2011 on the citizens' initiative). It was suggested to enable activities of NGO, e.g. Trade Unions.

The ECI would permit 1 million citizens from at least one quarter of the EU Member States to invite the European Commission to push forward proposals for legal acts in areas where the Commission has the power to do so. The organisers of citizens' initiative – a citizens' committee composed of at least 7 EU citizens who are resident in at least 7 different Member States would have 1 year to collect the necessary statements in support. The number of statements in support has to be certified by competent authorities in the Member States. The Commission would subsequently have 3 months to examine the initiative and to decide how to act in this relation. In accordance with the Regulation it is possible to launch the first European Citizens' Initiatives from **1 April 2012**.

On one hand it is good that the decision making process is slow and conservative - it makes the process more transparent and predictable. On the other hand, considering existing decision making procedures in Latvia, sometimes decisions arrive too late to solve current problem.

In EU and Latvia there are two existing praxis. One of them refers to NGOs as a social partner. In this case NGOs are the players in social dialogue that express the point of view of different groups of society. In the other case the opinion of NGOs is not regarded. For example European Architects Council does work together with two representatives of European Parliament to reach better result in the field of architecture.



Conclusions

The key issue for this kind of organizations – what do they mean to general audience. What segment of society do they cover? What kind of interests do they represent? No doubts that organizations lobbying definite interests are more active. While assessing impact of organizations and their abilities for lobbying it is important to understand the ways and possibilities for the society to use it.

Quality and quantity of organizations, as well whether they could be considered as social partners or do they have legislative initiative is of large importance.

Since Latvia has joined European Union the scope of tasks to be implemented by the NGOs has broadened. The strategic aim of the legislative initiative and the role of NGOs is to enhance the level of convergence of welfare in Latvia similar to other EU Member States.

Political and economic interaction and its relation concerning the impact of NGOs in decision-making has increased thus raising the profile of the article topic. Social dialogue is used only recently in Latvia because it is not well acknowledged. In EU social dialogue is used as a tool of legal supplementation. NGOs are representing and forwarding the citizens interest towards public administration on a local and international levels thus affecting not only the adoption of legislation but implementation and enforcement as well.

According to the Latvian accession to the EU legislative and consolidative impact of NGOs in social dialogue has increased. This result is achieved referring to the EU legislation including the Treaty of Lisbon strives for a closer cooperation between social partners.

It is difficult to fulfil implementation of this requirement due to a general nature of the requirement. Legislative framework of NGOs in Latvian and EU legislation is under special bill and regulations thus making it difficult to enable the rights of their members. In the case if precise instructions about NGOs functions and regulation would be included in certain general legislative regulations it would alleviate use of public opinion presented by NGOs in this case. For public administration it could become one of alternatives to use this public opinion or not.

Based on the main proposals the paper provides conclusions and suggestions. The proposals for NGOs regulation and activities are made looking in future thus making these bodies more efficient and accumulating their power in legislative initiative and social dialogue.

NGOs are the catalysts of the problems existing in society and country at the current moment. Problems are marked and pointed out by the members of the society. It would allow public administration to define and outline future tasks despite the fact that the tasks would not be immediately favoured by the public administration. Identification of the point of view of the society is essential and that is would be the field covered by NGOs. NGOs often represent the views of public minorities that are not covered by major strategic planning vectors of public administration. Despite the fact that NGOs sometimes cover small segment of society they are able to influence environmental guidelines artificially created by public administration.

NGOs like the Latvia Association of Architects which are not social partners and have no right of legislative initiate are denied the opportunity to propose significant principles of architecture and environment of the state. There are no legal regulations of the guidelines for Latvian architectural development. Such guidelines have been developed and adopted in all EU member countries. Latvian Architecture is regulated using legislation regulating construction



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industry. Regulations performance is incorrectly strategic and hierarchic. The state architectural concept and policy cannot be regulated by contractors bill.

NGO is an essential force in implementation of legislative initiative which could be applied both directly and indirectly.

In order to facilitate realization of rights of NGO it would be important to gather their rights and duties in certain guidelines or legal framework especially in the field of social dialogue and legislative initiative.

NGO is especially bounded being regulated in certain legislative acts.

Both in EU and the whole world NGO is accepted as an essential social partner in certain cases delegating them such important tasks as collecting of signatures or submitting of joint opinion while performing legislative initiative. In Latvia the role of NGO as a social partner is accepted and used only in several cases e.g. Latvian Federation of Entrepreneurs or Latvian Free Trade Union.

Public administration can have different benefits having such a social partner as NGOs:

1. Economy of budget for different sociological surveys;
2. To know the point of view of different groups of society;
3. NGOs can be used as organizations for making official point of view in different situations, especially economic changes;

NGO is the mechanism for ordinary people to realise their rights in social level. There is no easy way to do it according existing legislation.

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QUALITY IN AUDITS AND EXTERN QUALITY CONTROL

– *By the Special View of Small and Medium-Sized Audit Companies* –

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Abstract

In the recent years a discussion about the rise of the quality in financial audits has come up after the spectacular balance scandals in the US and Europe, Even the justifications of the conversions of the EU-directive 2006/43/EC talk about the rise of quality. It is necessary to determine who understands what is meant by the term “quality” if you want to take any measurements, which raise the quality of financial audit. This paper deals with the aspects of quality issues in service industries, financial audits and in business administration.

What is quality in financial audits? Does this definition distinguish from the sight of the contemplator?

To answer these questions the term quality needs to be defined first, according to its origin from the Latin word “qualitas” [1], which means condition, characteristic, property or condition. Because of the different meanings of the words, it is to distinguish between the objective condition of an object and the subjective quality, which means how an object will be perceived and rating by the receiver [2]. Both dimensions of the term quality represent a unit [3].

The paper starts off with the business discussion of the question “what is quality?”. This discussion is about which criteria a product or a service can be evaluated [3] with. On the other side the author points out that there is no generally valid understanding of quality in businesses.

So a part of the business literature holds the opinion, that fulfilling the expectations of the customers is the only right approach. Peter Drucker [4] defines quality as “Quality in a product or service is not what the suppliers put in, it is what the customer gets out and is willing to pay for it.”

In the business management literature, quality in service is “The ambition of a provider, to develop the constitution of a performance, which needs the participation of the costumer, in a way the costumer expects. It is the addition of characteristics of a service to meet certain requirements.” [5]

Finally, the author comes up with an own definition of the term quality according to Kellner and Feigenbaum based on financial audits and business administration.



I. Introduction

After the spectacular balance scandals in the US and Europe, a discussion about the rise of the quality in financial audits has come up. Even the justifications of the conversions of the EU-directive 2006/43/EC talk about the rise of quality. If you want to take any measurements, which raise the quality of financial audits, it is necessary to determine who understands what is meant by the term “quality”.

What is quality in financial audits? Does this definition distinguish from the sight of the contemplator?

To answer these questions the term quality needs to be defined first.

II. The Term Quality

1. Origin and classification

The German term quality has its origin from the Latin word “qualitas” [1], which means condition, characteristic, property or condition. Because of the different meanings of the words, it is to distinguish between the objective condition of an object and the subjective quality, which means how an object will be perceived and rating by the receiver. [2] Both dimensions of the term quality represent a unit. [6]

In order to give a detailed explanation on “what is quality” many definitions need to be taken into account. The most important definitions for this research will be presented in this paper. The definitions will be analyzed regarding to:

- Quality in Business Administration
- Quality in Services
- Quality in Audits
- Own Definition of Quality in Audits

2. The Term Quality in Business Administration

The next chapter of this paper discusses the term quality in business administrations and examines different professional perspectives. The further research is based on the concepts of Feigenbaum, Garvin and Hoyer.

At the beginning the business discussion of the question “what is quality?” needs to be clarified. Quality is about which criteria a product or a service can be evaluated with. [6] In business there is no generally valid understanding of quality.

So a part of the business literature holds the opinion, that fulfilling the expectations of the customers is the only right approach.

Peter Drucker [4] defines quality as “Quality in a product or service is not what the suppliers put in, it is what the customer gets out and is willing to pay for it.”

According to Garvin quality can be divided into five different categories.

The transcendent approach explains that quality is a subjective experience for customers regarding to the unique characteristics of a product. In this case quality cannot be rated or measured exactly, it is in the eye of the beholder.



The product based approach concentrates on the product itself and its specified requirements. The product is of value in this case and will be analyzed according to set standards; customer needs and expectations do not take into account.

When all customer needs and expectations are completely satisfied or even exceeded, Garvin interprets it as the user-based approach. Quality can only be evaluated and measured individually by every single customer. The quality standard ISO concentrates on this approach and will be explained more in detail in the next section.

The manufacturing-based approach focuses on the compliance of different standards and norms. In case norms and standards have not been fulfilled, the product is of diminished quality.

The last approach of Garvin is the value-based approach and centralizes the cost effectiveness of products. According to this point of view, a quality product is a product which can be purchased at an appropriate price. In this case price is not only the financial value of a product but it also includes other expenses as time, physical and psychological efforts. [7]

As stated by Feigenbaum, quality is: "The total composite product and service characteristics of marketing, engineering, manufacture and maintenance through with the product and service in use will meet the expectations of the customer." [8]

Consequently this definition means that quality is based on customer satisfaction and their expectations. As customer needs and expectations change from time to time, quality has to change with it. It is the management's challenge to recognize these changes and act upon them.

R.W. Hoyer and Brooke B.Y. Hoyer analyzed the term quality and therefore conducted a study in which "eight well-known quality gurus" [9] have been interviewed. The definitions of the "gurus" can be divided into two different categories:

Level One: quality is a simple matter of producing products or delivering services whose measurable characteristics satisfy a fixed set of specifications that are usually numerically defined.

Level Two: Independent of any of their measurable characteristics. Level two satisfy customer expectations for their use or consumption.

In short, level one quality means get it in the specs, and level two means satisfy the customer.

K. Kellner characterizes quality as something which needs to be defined by every single company itself. The quality a company wants to deliver and provide has to be determined. Quality is the core value of every organization in its segment.

"Quality should be the USP of every organization, the quality provided needs to be defined by every organization and with quality they try to reach a certain monopoly." [10]

3. Quality in Services

There is a difference between quality in business administrations and service quality. As service quality and quality in audits is related this chapter examines the most common principles.

There are two main aspects when it comes to quality in services: the process of creating and delivering the product or service, and the perceived value of the product or service by the customer.



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Quality pioneers like Deming, Crosby and Juran found diverse ways of defining quality. Juran introduced the thought that the quality of a product or service describes its “fitness for purpose or use”. [11]

Similarly, Crosby claims that quality is the product’s or service’s “conformance to requirements”. [12] This implicates that increasing the quality means decreasing the defection rate as close to zero as possible. The process variation from the product’s specifications needs to be reduced in order to delight the customer. Deming focuses explicitly on the customer aspect when explaining that “quality should be aimed at the need of the customer, present and future”. [12]

Dahlgaard et al. differentiate between the objective and subjective quality of a product. The objective quality summarizes the total number of a product’s quality elements, whereas the subjective quality takes into account the fulfillment of customers’ expectations as a result of previous experience. [13]

Kandampully et al. see quality as a journey that is defined by the customer and is the responsibility of everybody in an organization. “Quality is keeping the service promise. Quality, leadership, and communication are inseparable.” [14]

Quality lies in the eye of the beholder and as Buzzell and Gale have noted in 1987, “Quality is whatever the customer says it is and the quality of a particular good or service is whatever the customer perceives it to be.” [14]

The ambiguity of the issue of quality is stressed additionally due to its subjective, multi-dimensional, dynamic and intangible nature. [14] When evaluating and improving the quality of services, the analysis is even more abstract and subjective due to the intangibility of the service, its simultaneous production and consumption and the high involvement of the customer. [15]

Juran defined quality of a product or service as that is determined “by its fitness for use by external and internal customers.” External customers are defined as Incentive Houses or End-user clients and internal customers as employers or the staff. [16]

Although, there are a number of different definitions for “service quality”, one general agreement is that “Quality service is service that consistently meets or exceeds customer expectations” [17]

Obviously, every service organization can achieve quality in their service processes, from upscale firms to simple fast food restaurants, when they know their customers and care about their expectations.

Robert H. Woods and July E. Kings wrote about how to overcome this obstacle: “Identify customer expectations, consistently meet or exceed those expectations, and do so at a price that is acceptable to customers and generates profits acceptable to the company”. [16]

Occasionally it is not enough just to meet those expectations, since customer expectations are higher than before. “Nowadays customers have more options to spend their money elsewhere, more well-defined expectations of quality and are less tolerant of poor service than ever before”. [18]

In the business management literature, quality in service is:

“The ambition of a provider, to develop the constitution of a performance, which needs the participation of the customer, in a way the customer expects. It is the addition of characteristics of a service to meet certain requirements.” [5]



The International Organization for Standardizing (ISO) defines the term “quality” in its DIN-Norm as the “grade, in which a bunch of requirements is fulfilled” [19].

“The quality of the results of a service hinges is the fulfillment determined requirements, for example given by law, and is the fulfillment of the expectations of the customer.” [20]

Following this definition of Bruhn, the quality of a service is the constitution of a performance, which is fulfilled with a certain service level. This level can be extremely bad up to excellent. The expectations on the service level are set by the service recipient.

Similar Schmidt states quality outcome of service depends, on the one hand, on achieving specific requirements which are predefined by law requirements. On the other hand it depends on the degree of fulfillment of the customers’ expectations. [21]

Quality summarizes the “total composite product and service characteristics of marketing, engineering, manufacture and maintenance through which the product and service in use will meet the expectation by the customer.” [8]

The consensus is that customers seek value, more than ever before and that business without customers is doomed. The need of understanding a guest’s expectations is crucial. “To provide high-quality service we need a profound understanding of the needs, wants and desires of the customer and understanding who the customer is”. [22]

Therefore, it is important to convince the customer at every service encounter and to retain loyal customers. John Carlzon of SAS has named these service encounters “Moments of Truth”. He defined it as “an episode in which the customer comes into contact with any aspect of the organization and gets an impression of the quality of its service”. [22]

4. Quality in Audits

After analyzing the concept of quality in services and business administration, quality in audits needs to be investigated more in detail for the purpose of this study.

In the last years there are a lot of discussions about the term “Audit Quality”. So according to Schmidt [21] that means that the quality of audits hinges whether the auditor is able to give a trustworthy judgment about the conformity annual financial statement computed on the basis of the accounting policies. “The quality of the final audit is the qualification of the annual auditor (meaning his ability and independence to judge) and accomplishment of action of audit (that means the appropriate judgment) for given a reliable audit judgment about accounts.” [21]

It seems, according to Marten [23], that the term Audit Quality is understood as “synonymous for the compliance with requirements and statutes.” [23] For a long time, the receiver of the services of the auditors, the companies which are audited or the interested public, are not in the focus by the definition of quality in audits. [23]

One of the first who extended the term quality was Leffson. [23] He describes “quality as trustworthiness of the judgment which includes as essential component accuracy belongs.” Thereby however is assumed, that trustworthiness in the auditor’s judgment only can be evaluated by the receiver.

Dr. Anke Müßig searches for the definition of the term “quality”, as well. She comes to the conclusion, that in the case of financial audits, it is all about the fulfillment of expectations. [24]



So, to define what “quality” means for financial audits, you need to question whose requirements and expectations need to be fulfilled. Does a judgment about the definition distinguish from the sight of the observer?

Already at this point of the research it became clear, that an absolute definition of this term is not existent, because the subjective requirements of the service recipients for financial audits distinguish.

The auditor himself will define “quality” in another way than the enterprise that is been audited. Similarly the chief executive officer (CEO) does have another definition than the supervisory board.

For the auditor, quality means to perform the audit in a special expenditure of time and it means to reduce the risk of liability. For the profession of financial auditors “audit quality is not simply about following a rulebook of auditing standards and regulations (...) It is about professionals reaching the appropriate judgment in difficult and complex situations.” [24]

For the CEO or the management, as the receiver of the service “financial audit”, an audit with high quality is an audit that is run fast and without any problems, questions and discoveries.

In contrast to that, a supervisory board judges an audit positively if he gets the information fast and if the mistakes are cleared up fast. [24]

The public’s expectation for quality in financial audits is again to receive an audit which contents no mistakes and which they can trust.

These examples already show that the answer to the question what “quality” means for financial audits cannot be standardized.

Regardless this, new laws, communiqués and standards are decreed, just to raise the quality in the financial audit.

5. Own Definition of Quality in Audits

After analysing important aspects of the term quality according to business administrations, service quality and quality in audits, an own definition has to be determined.

To fulfil all expectations of the different receivers of audit services and to fulfil the own expectations at the own services a definition of audit quality a term must be found, that will be very broad. Because of the term must also take into account the regulations given by law and by the professionals it must consider aspects of product-based, of manufacturing-based and user-based approaches. [7]

But because quality in audits must be more than only a addition of these three categories my own definition of quality in audit is, according to definitions of Kellner [10] and Feigenbaum [8] my own definition of quality is:

Quality doesn’t rise by quality control but will rise when it will be the task of the whole audit company exemplified by the auditor and each employee. Quality must be the unique selling point (USP) of the audit company, every task in the company must be aimed to fulfill the set quality requirements for itself.



At the same time the auditor must keep his independence, and by considering of his professional duty creating values by his work, which will fulfill the expectations as well of the stakeholders as of the audited company.

The auditor has the responsibility but he must include his employees in the whole process.

III. Extern Quality Control

At the beginning of the century, the public recognized scandals of companies like “Enron”, “Parmalat” or “World.com” combined with a high financial damage of shareholders, lead to an international discussion about the quality of audits. [25]

Although there is converging opinion what quality in audits means or included, the United States of America responded to this discussion with the “Sarbanes-Oxley Act” [26] and the European Union decreed the directive 2006/43/EC. [27]

This EU directive updated the statutory provisions for the professional guild of auditors to increase the quality of audits. The directive demanded in detail an external quality-control-system and a public supervision for the profession of auditors. In addition to that the directive set arrangements, which should improve the cooperation between the EU-regulation offices.

The EU-member-states, including Germany, Austria and Latvia were engaged to transform this directive into national law until June, 28th 2009 (Art. 53 I of the directive 2006/43/EC). Characteristic for directives given by the EU is that the directive sets a frame and the member-states are in charge to fulfill the frame (Art. 288 III AEUV)

The three named countries, Germany, Austria and Latvia transferred the directive into national law, partly, like Germany and Austria, too late, but now it becomes national law in all three countries. This directive provides the first basic principles for the quality of the audit. The regulations differ as to the auditors who perform audits for publicly traded companies and regulations for all auditors.

Germany

In Germany the transformation of this directive leads to extensive law changes and new regulatory burdens. So a “Peer-Review-System” was implemented in the year 2000. Since that there are a lot of changes and modifications of the laws. Actually it is the task of the Wirtschaftsprüferkammer (WPK) to operate a system of quality control. [28] This system should ensure that the profession of the auditors will be controlled regularly.

Auditor must be audited and controlled by another independent auditor of the profession every six years to have their practice. if they carry out statutory audits. These auditors of profession are called the auditors for quality control Failure to do so, the practice may not statutory accounts to conduct more audits. [28]

Austria

In Austria a “Peer-Review-System” like in Germany was established, quality controls are performed by active auditors. It is required that the AeQ tolerates the auditor as an inspector for external quality controls (§ 10 I A-QSG). To be tolerated as a quality inspector, you need to



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document your qualification. The tolerated auditors are registered in a list of quality inspectors (§ 10 A-QSG). [29]

Just like in Germany, there is a difference between those auditors or audit companies who wants to do audits for enterprises of public interest and for those, who won't. If an auditor wants to do audits for enterprises of public interest, he needs to participate in an external control every three years, if not, it is enough to participate every six years (§ 4 A-QSG). [29]

The inspector controls the audit company with reference to its quality safety system and if a proper professionalism can be warranted.

If the external control was successful, the auditor or the audit company receives a certificate. In case the inspector detected some deficiencies, the certification can be denied or granted with measurements.

Latvia

On January 1st, 2002 the Latvian law "On Sworn Auditors" came into force. [30] It is comparable to the German "Wirtschaftsprüferordnung". This law included the directive 2006/43/EC into national law with amending laws on June 12th, 2008 and January 29th, 2009.

In section 35 paragraph 2 the "Law on Sworn Auditors" states, who should be subject to auditing service controls. It distinguishes, like the German and Austrian Law, by the auditor's customers. If the auditor provides audit services to financial institutions or commercial companies whose transferable securities are admitted to trading on the regulated market of member-states, the auditor has to be subject of external quality control at least every three years. Other auditors or audit companies have to be controlled at least every five years.

Section 35 paragraph 3 states that the quality control shall be performed in accordance with a by-law that is approved by the Latvian Ministry of Finance and the Latvian Association of sworn auditors (LASA).

According to section 35 paragraph 4, a representative of the Ministry of Finance shall make sure that the requirements for a quality control are maintained and draw a report about his observation.

IV. Summary

The above named remarks have shown, that there are a lot of different definitions of quality and quality in audits in the existing literature. But there is no one-size-fits-all definition or approach what quality in audits is and means, because the respective reviewer always define quality as he define it from his side of view.

Regardless this, new laws, communiqués and standards are decreed, just to raise the quality in financial audits. In Europe, Germany and Austria are the only countries who demand a participation certificate for their external quality control. The association "wp.net" speaks of a clear "Over-Regulation" and links a threat for the constancy of smaller audit companies to that. [31]

This statement is backed up by the development of the professionals particularly for small and medium-sized companies. There are not only companies of the same size in one country. Bigger companies do have better options to fulfill the requirements and so they might have the possibilities to push smaller and medium-sized audit-companies out of the business. But the



consideration, supported by a part of the science [32], that the “Big Four” audit companies, occupy quality in audits only for themselves is to contradict. [33]

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BANKS' HOME LENDING POLICIES: COMPARISON OF FIVE LATVIAN LARGEST BANKS

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Abstract

The current financial crises in Latvia presented, that households took out risky loans that were pushed by lenders who didn't care about the riskiness of these loans as they would be packaged and sold.

After the heavy fall in economy 2009 the Latvian commercial banks' mortgage credit portfolios are more prudent and in 2011 the changes in lending policies should continue.

Purpose. The changes in the mortgage credit portfolios has taken place with the deepest recession on Latvian economy forcing commercial banks to evaluate their lending policies and home loan products. This paper aims to examine mortgage loan offers of the Latvian commercial banks and to analyse their prospects. This paper seeks to investigate the extent to which mortgage credit portfolios have been tarnished, and how it has evolved during recession. It aims to take both prospective and retrospective views on what has changed in the Latvians home loan market since the economic downturn, looking at where new potential have been found and where old potential have been lost, and supposing about the range to which banks' behaviour will change.

Design/methodology/approach. The paper is based on a variety of statistics and on an overview of banks' home loan products.

Findings. This paper discusses changes in banks' lending policies, showing the strict realities of credits with overdue. Also looking at which parts of mortgage loan agreements clauses have been changed and what these changes means for short and medium term futures.

Introduction

Ample researches has underlined the importance of long-term relationships developing to improve competitiveness and profitability (e.g. Yanamandram et al., 2010; Bedman et al., 2011; Koenig-Lewis et al., 2010; Yavas et al., 2010). However, there is no agreement among researchers about the importance of long-term relationships developing through mortgage lending policies. Previous studies have pointed out several antecedents of market orientation, such as: banks' learning market opportunities and competitive intensity, human resources practices, customer loyalty and investment in inter-organizational systems. Furthermore, most



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of the extant research typically stops at identifying the antecedents of long-term relationships, while the interactions and correlations among long-term relationships and lending policies are not typically studied in depth.

Banking and the environment meet in many ways, most notably through the corporate lending operations of the large banks, which lend considerable sums to commercial customers in order to finance activities which inevitably have an impact on the quality of the natural environment. It thus follows that banks have a role to play in helping to raise long-term relationships. This role could be played out in a variety of ways. First, banks could act as environmental policemen, scrutinising borrowers to ensure they comply with environmental standards and denying finance to those that fail to meet such standards. Senior bankers regard policing as falling outside their traditional area of expertise and in any case the job of statutory regulators. Second, banks could take a partnership approach with different sectors of the economy, encouraging borrowers to adopt sound environmental practices and providing them with information to assist with their environmental risk management and in turn reduce harmful environmental impacts.

The provision of information could be viewed as a value-added service, crucially at nil or low cost, by business customers, and hence essentially serve as a means of product differentiation for the banks offering it. Finally, banks could take on a more overtly proactive environmental stance. For instance, they could target their loans at businesses which demonstrate superior environmental performance and/or operate within the environmental technology and service sector (hereafter referred to as the “environmental sector”). Such initiatives effectively amount to a form of “green marketing”.

“Green marketing” offers a number of potential benefits to banks, both direct and indirect. The indirect benefit may be in the form of improved public relations that comes from demonstrating to the wider public that the bank is socially and environmentally responsible. This may attract new customers on terms preferential to the bank, for instance an inflow of new deposits, despite offering uncompetitive rates of interest, which in turn lower the bank’s cost base. The direct benefit may take the form of attracting more lucrative lending propositions by targeting certain types of customers. [1]

Since every kind of business entails some degree of risk, every company must decide just how much risk it is prepared to take and to be brutally honest about how they are faring in the market at all times. Senior management must establish a comfort zone for risk taking and ensure that people within the organization understand it and remain within it. Outside this zone, the potential consequences of losing are more severe than the potential satisfaction from winning. Establishing a comfort zone and – more importantly – staying within it are not as simple as they may at first appear. The quest for profitable growth often puts businesses on a collision course with their risk boundaries. A few lucky companies may for a time grow rapidly without experiencing major losses. Most, however, must make tough choices among competing interests and priorities. Will the organization aim, above all, to maximize market share, asset quality, or profitability? What level of losses will it tolerate? How predictable must its performance be? How should it maximize shareholder wealth? [2]

A cultural attitude toward risk is critical in the credit-granting organization. P. Henry defined bank credit culture in the following terms at the end of the century: Credit behaviour has its own cycle, ranging from defensive conservatism to irresponsible aggressiveness. [3]



Overlaying each credit system is a stratum of linked attitudes, responses, and behavioural patterns emanating from the CEO and infiltrating the organization. Institutional philosophies, traditions, priorities and standards are additional factors to consider. Personalities of line officers play a role, as do their personal attributes – knowledge, abilities, and biases, together with frailties. These are the seeds from which credit cultures grow, and it is bank culture that influences individual lending behaviour. The CEO and the board of directors are its designated guardians. Mueller's view was that bank credit cultures were formed over long periods of time and reflected the history, traditions and personalities of the banks and their bankers. Senior management's role was to nurture and, to some degree, to shape the culture. While much of what he wrote has relevance today, it does seem like today's financial institutions are too big and too diversified to have such a passive approach to the development of a risk culture for their organization. What is needed now is a tangible, specific set of rules of the road that are fully understood and accepted throughout the organization. [2]

1. Mortgage Loan Market in Latvian Economic Situation Latvian Economic Situation

It would seem appropriate to start by taking a look at Latvian economic situation.

According to the Central Statistical Bureau of Latvia, the real GDP has been improving since the beginning of 2010 and in the third quarter of last year the real GDP again started showing positive growth for first time after eight quarters and was 2.9%.

The main downward risks include worsening of economic conjuncture in the euro zone, possibility of the current tension on the financial markets expanding into the real economy, slowing down economic growth in several countries that are Latvia's trade partners, and the fiscal consolidation measures in the national budget that might have negative effects both on private consumption and business environment in general.

Economic recovery notwithstanding, the real GDP in 2010 is likely to be slightly smaller than in 2009, yet the economic growth had been faster than anticipated, mostly due to stronger private demand and investments (see Figure 1). [4]

The deflation period in Latvia was over – the annual price changes had become positive in September 2010 and the annual inflation reached 1.9% in November last year.

The Central Statistical Bureau revealed that the average rate of consumer prices in 2010 overall was 1.1% lower than a year ago. To a great extent, it resulted from the low domestic demand and drop in producer prices: as labour costs shrank, and productivity rose, businesses could respond to the drop in demand with lower prices.

The rise in global oil prices has had a significant effect on fuel prices: they exceeded the 2009 level, when the global oil prices were at their lowest in the last five years, by 14.6%. The tariffs of natural gas and heat rose as well. The global prices have been likewise pushed up by the prices of unprocessed food, particularly vegetables. Price drop has been steady for those groups of goods and services that have been affected by the drop in labour costs and demand in Latvia. The low domestic demand has had the most significant effect on service prices, which dropped at the end of the year: prices of services in 2010 were on average 4.6% lower than the previous year.



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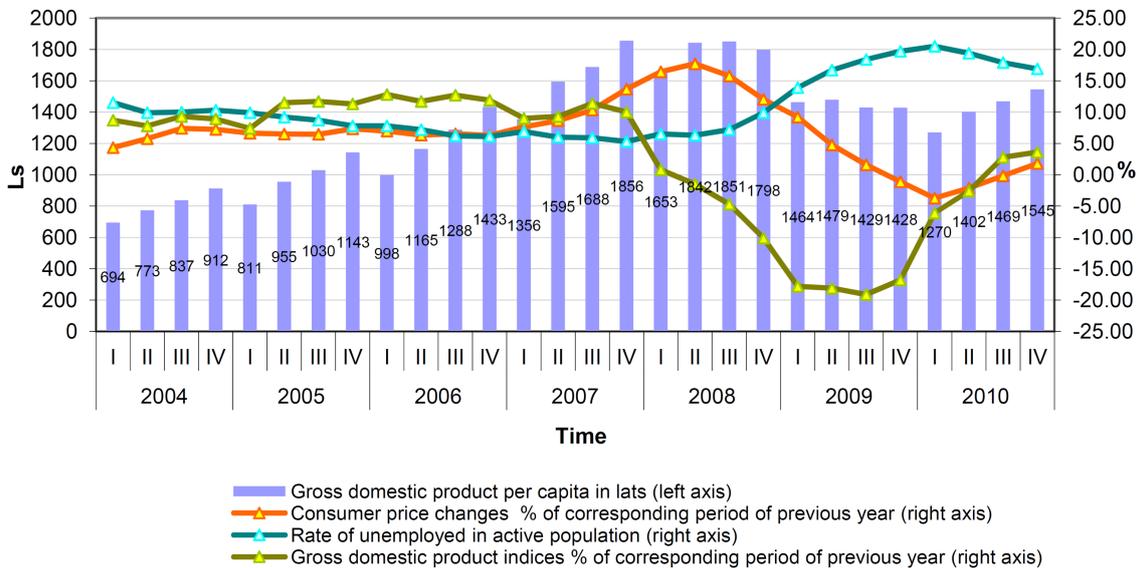


Figure 1. The Main Economic Indicators in Latvia in 2004.-2010. years, by quarter (% and absolute values)

Source: author's made using the statistics of the Central Statistical Bureau of Latvia

The price growth is determined by the dynamics of the world food and energy prices. The falling euro rate against the US dollar and currencies of other trade partner countries also contributed to price growth by pushing up prices for imported products.

Important upward risks related to domestic demand include inflation expectations and the situation on the labour market. The developments on the labour market reveal indications of mismatched demand and supply which might lead to growth of wages even upon rather high unemployment.

At the same time, in the conditions of current high unemployment, it makes it possible for the companies that can further optimize their operational costs to absorb the growth of energy and food prices without including them in the end consumer prices. [4]

The decrease of economic activities in 2008 firstly reflected in the unemployment rate, while the level of wages was still rather high. However, a decrease of employment and wages was observed in 2009 and at the beginning of 2010. Yet, as the economic situation became stable, the wages and the number of employed persons has slightly increased since the second quarter of 2010 (see Figure 2). [5]

The dynamics of wages shows that a significant decrease of wages was observed in the second half of 2009. In the first quarter and at the beginning of the second quarter, the level of wages was slightly above the level of corresponding quarters of 2008, but in the third quarter and the fourth quarter it was respectively by 6.4% and 12.1% lower.

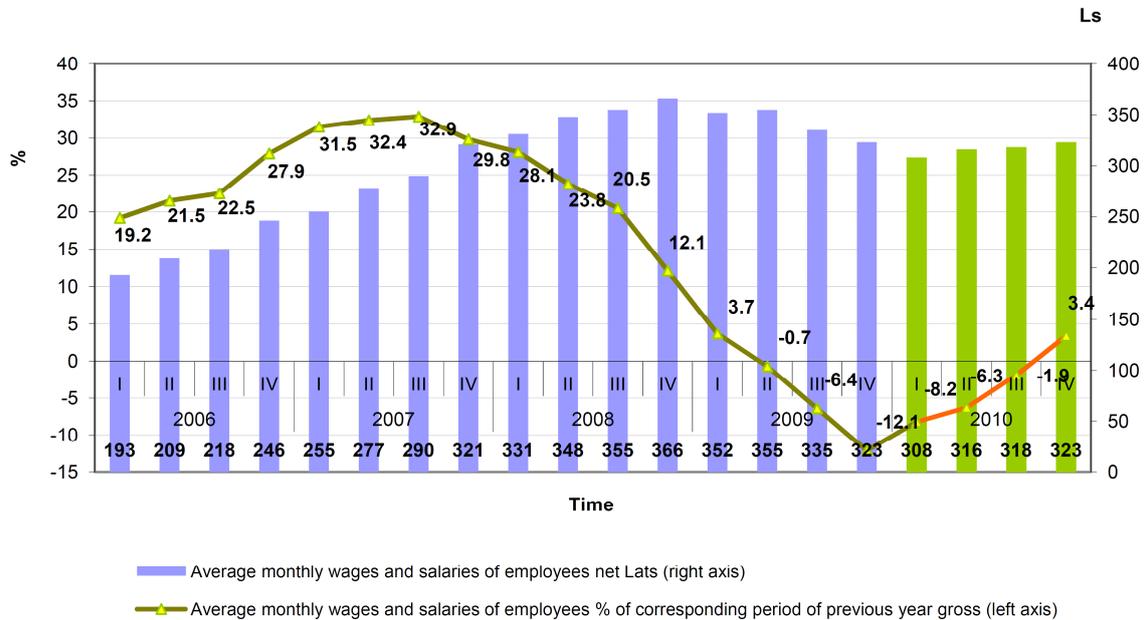


Figure 2. Labour Cost in 2006-2010 years, by quarter, % of corresponding period of previous year and in absolute values Ls

Source: author's made using the statistics of the Central Statistical Bureau of Latvia

The average annual gross wage in 2009 was LVL 460, i.e. by 3.8% lower than in the previous year (in 2008 – LVL 479), but by almost 16% higher than in 2007. Such wage adjustment is quite insignificant taking into account the depth of the economic recession.

In 2010, the dynamics of wages became stable, thus nearing the level of the previous year with each quarter. In the first quarter of 2010, the level of wages was by 8.2% lower than in the corresponding period of the previous year, however in the second quarter and the third quarter of 2010 it was by 6.3% and 1.9% lower, respectively.

The adjustment process of wages was considerably different sector by sector. Wages in the public sector experienced the most rapid decrease which is mainly related to budget consolidation measures. Wages in the public sector in 2009 were on average by 11% lower than a year ago. [5]

Mortgage Loan Market

The global financial crisis of 2007-2009 is, arguably, the most significant financial crisis to occur since the Great Crash of 1929, which led to the Great Depression. The crisis of 2007-2009 was caused by a number of factors for example flawed monetary policy, excessive and uncontrolled use of financial innovation, the proliferation of shadow banking activities and inadequate corporate governance structures within banks and other financial services firms. [6]



The Latvian mortgage market had not shaken off the problems emanating from the US sub-prime sector and has continued to feel the influence of the global financial crisis (see Figure 3).

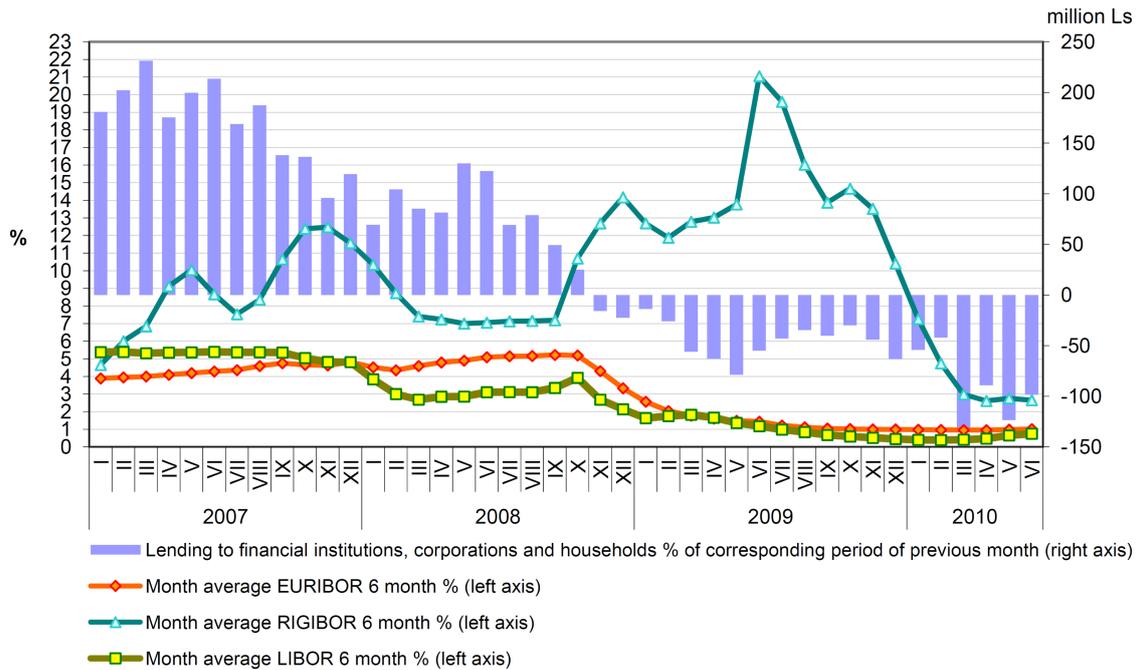


Figure 3. The Total Credit Portfolio Growth of Mortgage Lending to Resident Financial Institutions, Non-financial Corporations and Households at end of period % of corresponding period of previous month (in millions of lats) and Interbank Offered Rates average dynamic, by quarter in 2006-2010 years

Source: author's made using the statistics of the Bank of Latvia

Data from the Bank of Latvia shows the fantastic growth during the first half of 2007 year in the mortgage market in Latvia. The amount of the granted **mortgages** grew very rapidly over the preceding years (by 39% in 2007 and by 13% in 2008). In 2009, granting mortgages basically stopped, and this tendency continued also in 2010. At the beginning of 2010 (at the end of January), the mortgage loan balance decreased by 5.2% in comparison with the corresponding time period of the year 2009, at the end of the third quarter of 2010, in comparison with the same period in 2009, – by 8.4 percent. [5]



2. The Current State of Play of Latvian Household Finances

A paradigm shift in consumer confidence has taken place on a global scale. The worst recession on record has forced everyone, whether rich or poor, young or old, to evaluate their personal and household finances, and to think about the implications for future generations to come. [7]

Overall, however, when asking the population to comment more generally about their financial circumstances at present, people do appear to be coping a bit better in 2010, with a ordinary decrease on the 2009 figures of respondents saying “rather bad” or “very bad” for them financially. Correspondingly, there has been a small (in March 41 per cent and in April 43 per cent) increase in respondents saying “middle” (see Figure 4).

Q: How do you think the financial situation of your household at present is ...

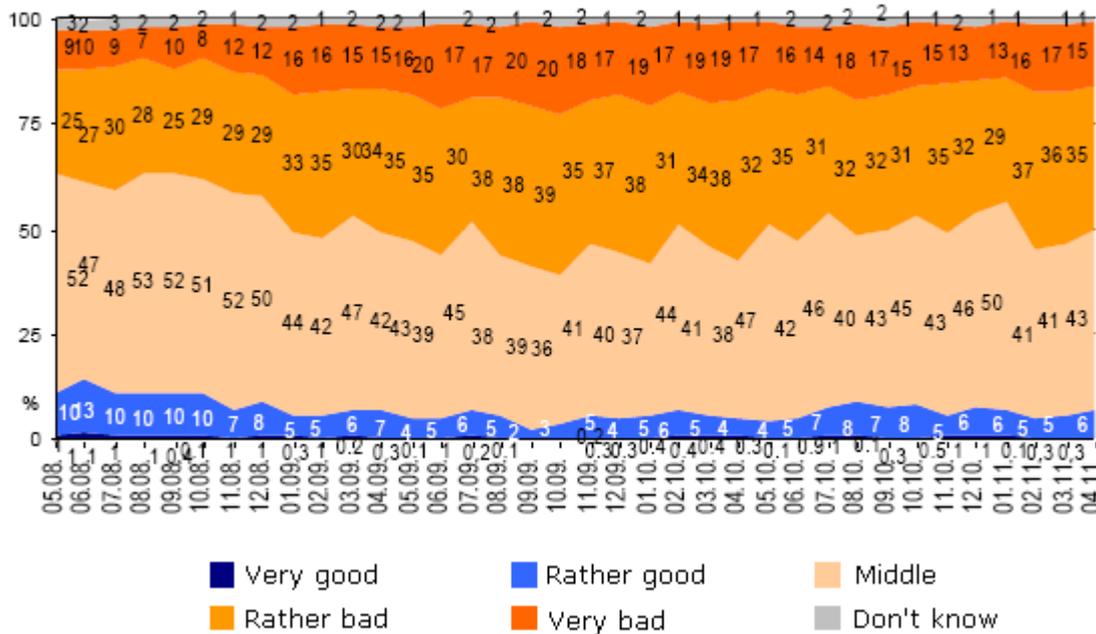


Figure 4. Evaluating of Latvian households’ financial situation, May 2011, n=1014

Source: DnB NORD Latvijas barometrs (May 2011), No. 37

This, however, is at odds with consumers’ likely satisfaction with the Latvian economy. Here, we see more people adopting a little bit optimistic outlook in December 2010, evaluating the economical situation in Latvia and purporting to be more satisfied with the economy than last seen in early 2009 (see Figure 5).

Q: How do you evaluate the economical situation in Latvia?



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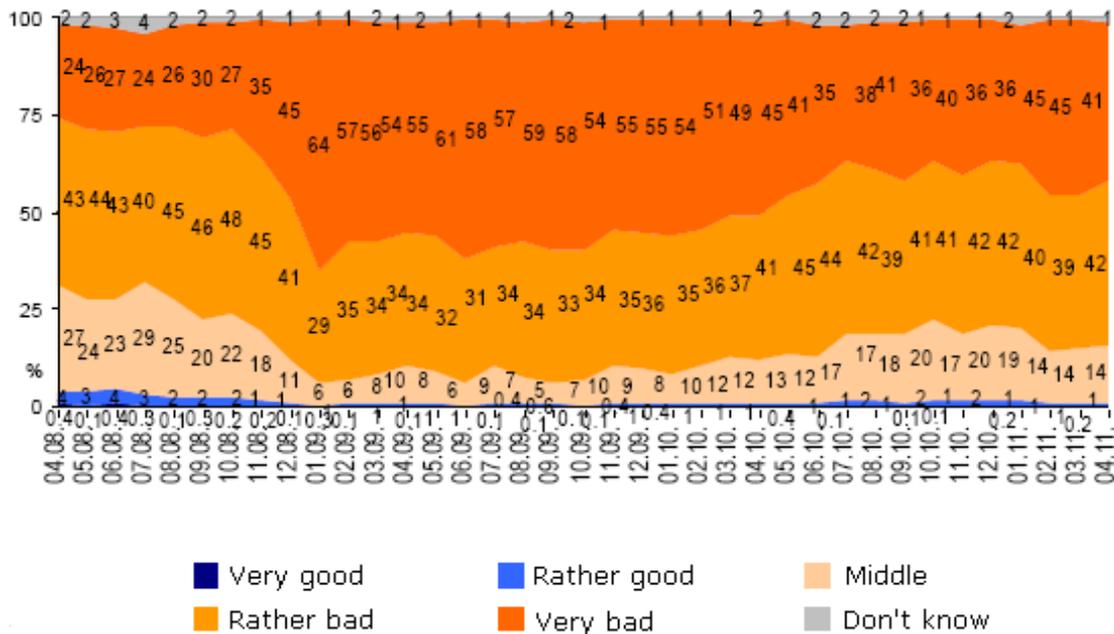


Figure 5. Evaluating of economical situation in Latvia, May 2011, n=1014

Source: DnB NORD Latvijas barometrs (May 2011), No. 37

Many people feel let down by a system and by institutions that had promised, and often claimed to guarantee, to protect them and their assets. For those who have had the rug pulled swiftly from under their feet, it will take financial services institutions a long time to rebuild constructive dialogue and long-term, meaningful relationships with their customers again. Any form of marketing communications or advertising that ignores either explicit or implicit acknowledgment of consumer's financial plight will further alienate and disengage consumers, rather than start to pave the road to recovery and rebuild constructive dialogue with potential audiences. It is important to consumers that financial services institutions acknowledge the major part they have played in the crisis, and that they have all been culprits to varying degrees. Explicit apologies will work if they are genuine and consumers feel that lessons have been learned. Simply carrying on with marketing strategies that ignore what has happened over the past 24 months or so will come under fire. [7]

So whilst some things have stopped getting worse, for many people, the economic recession is still painful, and it is this that drives consumers' financial behaviour.

Consumers are main judges of their financial situations, and due to this fact they decide, to a large extent, about their actions in home loan market. Consumers, who are more and more aware of their financial position and solvency, expect a satisfying offers form commercial banks.



3. The Overview of the Latvian Banks' Lending Policies

According to Financial and Capital Market Commission data on 2011 beginning were still 21 banks and eight branches of EU banks operating in the Republic of Latvia. [8]

During the year 2010, the market share of five largest banks dropped in assets, as well as loans and deposits, and by the end of the year CR5 stood at 59.3%, 67.1% and 54.9% respectively (compared to 68.2%, 74.2% and 67.1% on 31 December 2009). [8]

Although market share of five largest banks slightly decreased in the Latvian banking sector, they still form the biggest part of banking market.

In the reporting year the five leaders of mortgage loans were *Swedbank*, *SEB Bank*, *Nordea Bank Finland*, *DnB Nord Bank*, *Aizkraukles bank*.

Each of them has defined credit policy.

Credit policy is clear, written guidelines that set the terms and conditions for supplying goods on credit, customer qualification criteria, procedure for making collections, and steps to be taken in case of customer delinquency. [9]

In order to show the differences between banks' credit policies author have created the table (see Table 1). The time period of analysis is three years – from 2008 April to 2011 June.

Table 1

Comparison of five Latvian largest banks' credit policy June 2011

Factor		DnB Nord	Nordea	Swedbank	SEB Bank	Aizkraukles Bank
Interest rate		1.8% (only for VIP clients) – 3.8%	1.7% (if clients plus household's earnings are more than 1200 Ls) – 5%	Bank don't give any information about rates. It is determined only for concrete clients after application review	3-6%	2.5% – maximum not defined
DnB Nord Bank offer Economy (collared) dwelling loan which sets out both cap and floor interest rates. In contradistinction to DnB Nord Nordea offer fixed rates						
Max maturity	New dwelling	40 years	40 years	35 years	35 years if client's age at maturity end won't over 70	25 years
	Old dwelling	If client's age is not over 45, the maturity is 30 years. If it is over 45, so maturity is 20 years	20 years	Centr 40 years Other 25 years	20 years if client's age at maturity end won't over 70	20 years



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Factor		DnB Nord	Nordea	Swedbank	SEB Bank	Aizkraukles Bank
Currency		LVL, EUR	LVL, EUR	LVL, EUR	LVL, EUR	LVL
The loan facility	New dwelling	75-85% depends on loan size	Till 85%	Till 75%	Till 60%	Till 70%
	Old dwelling	70-80% depends on dwelling series	Till 75% (for „good” dwelling series, example, 119 series)	Till 70%	Till 70%	Till 65%
	Land	75% of market value	50% of market value. Max maturity 15 years	75%	Limit is defend individually	Till 55% for 15 years
	Building	75% of future value	Till 75% of future value	80% of future value	Till 90% for 40 years	Is defined after individual application review
Minimal amount		2000 Ls or equivalent EUR	1000 Ls or equivalent EUR	Is defined after individual application review	6000 Ls or equivalent EUR	Is defined after application review
In order to get loan in Swedbank it is necessary to transfer earning to bank min 3 months and at least 450 Ls						
Commission fee	New dwelling	1% min 50 Ls	For Gold clients 1.0% of loan amount min 60 Ls. For Silver clients and Student 1.75% min 90 Ls. For Standard clients 2.50% min 120 Ls	1.5% min 50 Ls	1.5% min 50 Ls	1.5% min 50 Ls
	Old dwelling	1.5% min 50 Ls				
DnB Nord is only bank which defines fee to be guided by dwelling series. Nordea bank is only bank which consider client status						
Clients' earning evaluation		All household's earning are considered. It is not obligatory to be guarantor in order to take participant in evaluation	All household's earning are considered. It is not obligatory to be guarantor in order to take participant in evaluation	All household's earning are considered. It is not obligatory to be guarantor in order to take participant in evaluation	All household's earning are considered. It is not obligatory to be guarantor in order to take participant in evaluation	Bank finances only own clients. In order to get loan in Swedbank it is necessary to transfer earning to bank min 4 months



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Factor		DnB Nord	Nordea	Swedbank	SEB Bank	Aizkraukles Bank
Loan purpose		Flat or house purchase, renovation, building, land purchase for building	Flat or house purchase, renovation, building, land purchase for building	Flat or house purchase, renovation, building, land purchase for building	Flat or house purchase, renovation, building, land purchase for building	Flat or house purchase, renovation, building, land purchase for building
Other	Grace period	Till 3 years. Depends on going agreement terms	For new dwelling till 2 years, for old dwelling till 1 year	Till 1 year	6 months	Till 1.5 years. If instantly after contraction – 1 year for building, reconstruction. If appear special conditions (redundant, babies birth) – 6 months
	Dwelling insurance	With PLUS service 60 Ls	40 Ls	Depends on insurance companies pricelists	Depends on insurance companies pricelists	Starting from 0.12% of dwelling value
	Evaluate		40-170 Ls Depends on evaluating companies pricelists			50-150 Ls
	Indiv- duality	In order to get loan it is not obligatory to be bank's client. In order to get better interest rate it is necessary to agree with bank's conditions – 80% of earnings should be transfer to bank's count, Classic cart purchase, at least 5 product are using, positive letter of credit	In order to get loan it is not obligatory to be bank's client. In order to get better interest rate it is necessary to transfer earnings to bank's count	In order to get loan it is necessary to be bank's client and transfer earning to bank min 3 months and at least 450 Ls	In order to get loan it is necessary to be bank's client for 4 months	It is necessary to be bank's client. In order to get loan it is necessary to transfer earning to bank min 4 months
DnB Nord offers PLUS service which include dwelling evaluation, insurance, layer, registration on the Land Book						

Source: made by author, consulting at banks' branches and using information from banks' web-sites



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The author is examining the mortgage loan market's offers and is resulting that there are two strong participants *DnB Nord* and *Nordea*. According to the author's investigation in 2011 April [9], the main factors are interest rate, maturity, loan facility and grace period. Both *DnB Nord* and *Nordea* offer better conditions of these factors as they can allow such lending.

Mortgage loan purpose in all banks is same – it is a long-term loan given to private individuals for buying, renovating, repairing or building a dwelling (apartment or house), and also land buying for building.

The advantages of *DnN NORD* and *Nordea* mortgage loans also are:

- the funding may amount of up to 85 per cent of the real estate valuation;
- the maximal maturity for new dwelling is 40 years.

The advantage of *DnN NORD*'s mortgage lending policy is fact, that the grace period for repayment of the principal may be as long as 60 months.

Additional offers of *DnN NORD* and *Nordea* are:

- registration of the collateral and inclusion of the related costs in the loan amount;
- payment card with the credit limit of up to 3 monthly salaries.

DnN NORD and *Nordea* diversify their offers with interest rate's types:

- floating interest rate with borders (Economy (collared) dwelling loan);
- floating interest rate.

SEB un *Aizkraukles Banka* offer the most unattractive products – the rates are raised and maturities are not so competitive as in other banks.

Comparing result with author's investigation in 2008 spring [10] it is clear that all banks establish strictest conditions for loan getting. It is related with banks' fear of risks and with wish to reduce costs and accumulate the money for unsafely credits.

There is no war for any clients in the mortgage loan market. There is no more aggressive policy using lowest interest rates. Banks work with long-term reputation and thinking about safety.

Conclusion

The investigation of the main economic indicators in Latvia provides the conclusion that there is not economical background for the mortgage lending growth in the recent future. The article highlights the most important economic indicators, such as GDP growth indices, GDP per capita, consumer prices, unemployment rate and labour costs. So the potential consumer of mortgage loan is household with middle or high incomes.

There are five commercial banks, which lend mortgage loans for households in the loan market in 2011 April. Commercial banks develop the possible variants of mortgage loan product and create long term reputation.

The author is examining the mortgage loan market's offers and is resulting that there are two strong participants *DnB Nord* and *Nordea*.

Banks have moved from the aggressive lending policies to the conservative.



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MOTIVATION IN THE AUSTRIAN BANKING SECTOR WITH REGARDS TO THE TWO FACTOR THEORY BY FREDERICK HERZBERG

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1. Introduction

In the present economic situation the long term success of a company primarily depends on its innovation and productivity. The most critical aspects when it comes to these two factors contributing to the company's success are its employees on the one hand. As for an increase in productivity, this aspect on the other hand is, besides modern technology, closely related to the adjustment of each employee as well. It is almost self-evident that an employee who identifies himself with the company he works for is much more productive and innovative than an employee who merely keeps looking at the clock and waits for the work day to come to an end.

Over the last years the concept of "motivation" has become a recurring issue to be discussed when thinking and talking about supervision and teamwork since motivation is seen as a viable technique which makes autocratic leadership obsolete. However, it is also seen as an instrument for manipulation. Moreover, it is pragmatically understood as one of the many guiding principles of a company.

The society we live and work in today is a globalized one which is dominated by economic aspects and organizations. Four out of five people in the global world work in an organization at least once in their life. Many people even spend half their lives working in an organization. The importance of understanding how motivation affects the behavior of individuals is not to be denied. Vice versa studying motivation in such a working environment is highly conducive since organizations control what happens to employees eight or more hours a day [1]. What cannot be denied either is the fact that we nowadays live in a time of immense global competition which causes almost every company to search for new ways to achieve higher attendance for work as well as a higher motivation of each individual employee. The direction board is not only responsible for personnel questions, coordination, agreeing upon targets but also for motivating the organization's employees.

Today a lot of employees have a higher qualification, they are enlightened and confident. Moreover, work is no longer only pursued to satisfy basic needs like hunger, thirst, etc. for it is rather perceived as a means to unfold oneself what has to be well considered when trying to motivate one's employees and to ensure their motivation.



Jobs should be designed in such a way that employees can identify with the company they work for and with its goals. This is the only way to achieve higher productivity and satisfaction.

The main part of this paper is to the critical discussion of Frederick Herzberg's Two Factor Theory.

The paper will (1) discuss the theory of Frederick Herzberg, (2) describe the existing structure of the banking sector, and (3) analyze the motivational behavior of bank employees on the basis of a primary study.

The findings of this survey should give banks an outlook on further developments and provide them with a basis for making decisions in human resources management.

2. Two Factor Theory

2.1. Definition

Frederick Herzberg was a clinical psychologist and pioneer of "job enrichment". He is regarded as one of the great original thinkers in management and motivational theory. As a professor of Management at Case Western Reserve University Herzberg established the Department of Industrial Mental Health and he was active as an advisor for international companies like General Motors, British Petrol and IBM [2].

For Herzberg it is not enough to eliminate dissatisfactions since satisfaction is not merely achieved by eliminating dissatisfaction. There has to be an additional asset: motivation.

Similar to Maslow, Herzberg believes that the primary function of any organization, whether religious, political, or industrial, should be to implement the needs for man to enjoy a meaningful existence. Together with his assistants he analyzed incidents at work in which engineers and accountants felt exceptionally good or exceptionally bad about their jobs in order to find out ways to increase productivity, decrease turnover and absences, and improve relations at work. The results showed that for employees contentness with their job is a primary source of motivation and satisfaction, while the work context or hygiene factors are the source of dissatisfaction, hence the name "Two Factor Theory" or also "Motivation-Hygiene Theory" since the two factors are motivators and hygiene factors [3].

In his studies, Herzberg made the observation that it is often the managers who are motivated rather than their employees. They are the ones who want their employees to fulfill certain tasks and to reach certain goals. However, motivated managers are likely to produce movement rather than to motivate.

2.2. The Method of the Critical Incident Technique

The method of the critical incident technique is dedicated to both the positive and negative experiences of employees by asking them to [4]

"Think of a time in the past when you felt especially good or bad about your job. It may have been on this job or any other. Can you think of such a high or low point in your feelings about your job? Please tell me about it [4]."

For Herzberg and his assistants these are not descriptions of specific incidents at which an employee felt good or bad about their job but rather accounts of longer periods of time during



which the over-all feeling about the job was exceptionally good or exceptionally bad since this approach allowed them to describe the factors, attitudes, and effects. For this reason the responses were divided into a [4]:

- short-range sequence of events;
Those events caused a temporary change of the attitude towards work, both in a good or in a bad sense, which only lasted for a few days though.
- long-range sequence of events;
The changes in behavior caused by certain events lasted several weeks and the attitude towards work remained either good or bad over this entire time period.
Besides differences in the duration of the change, another classification was made based on [4]
- “first level factors”;
On this level, employees knew the reason for their good or bad adjustment to their work.
- “second level factors”.
Employees described their motives and wishes.

Motivating factors contributing to the employees’ content like the work itself, advancement, acceptance, or achievement are known as motivators, while the hygiene factors are related to work environmental including supervisors, payment, or the company policy. Hygiene factors avoid disaffection, yet they cannot actively contribute to satisfaction [5]. However, motivation can only be successful if these factors have been eliminated. Then it is important to identify appropriate motivators.

2.3. Hygiene Needs

Herzberg’s “hygiene” needs at the workplace include:

Company policy and administration. This category of factors describes some of the over-all aspects of relevance in a company referring to the adequacy or inadequacy of the company’s organization and management as well as to the effects of the company policy [4].

Supervision-technical. Although it is difficult to differentiate between personal feelings towards supervisors and their professional qualification and behavior, it should not be seen as impossible. In this category the competence or incompetence, fairness or injustice of the supervisor are critical [4].

Working conditions. These conditions include the physical conditions of work, the amount of work, or the facilities available for doing the work together with the adequacy or inadequacy of the ventilation, lighting, tools, space, and other environmental characteristics [4].

Salary. This category includes all aspects in connection with compensation: wages, salary increases, or unfulfilled expectations of salary increases [4].

Status. In order to see status as a crucial factor, it has to be a need that is made explicit by employees when it comes to their satisfaction at work [4].

Job security. This category does not refer to feelings of security but to objective signs of job security such as tenure and company stability or instability [4].

Interpersonal relations. This category includes interpersonal relations with superiors, interpersonal relations with subordinates, and interpersonal relations among peers [4].



Personal life. This category does not consider problems in the personal life of employees even if they affect their feelings towards their job. What it does take into consideration, however, are effects their job have on the employees' personal life [4].

As already mentioned, hygiene factors have to be considered in order to avoid dissatisfaction among the employees, even if they are not able to induce satisfaction in employees [6]. However, wage and salary play an exceptional role in Herzberg's two factor theory since they are both hygiene factors and motivators which can be both, dissatisfying and satisfying. In this context, Herzberg argues that "giving a person a pay raise does not long, satisfy, the desire for money; in fact, it may even heighten desire [1]."

2.4. Motivators

In his study, Herzberg identified the following motivators [2]:

Achievement. As for this category, achievement is related to the successful completion of a job, finding solutions to problems, and seeing the results of one's work. However, achievement also includes its opposite: failure and the absence of achievement [4]:

Recognition. The source of recognition can be almost anyone: supervisors, superiors in management position, management as an impersonal force, a client, a peer, a professional colleague, or the general public [4].

Possibility of growth. Including a possibility as an objective factor may seem paradoxical. However, it is a crucial aspect for employees since it does not only imply the likelihood of an individual to be able to move upwards but it also means an actual situation in which they are able to do so [4].

Work itself. A job can be pure routine or varied in its tasks, creative or stultifying, overly easy or overly difficult, entail the opportunity to work on an entire project or it could be restricted to one aspect of it [4].

Responsibility. This factor refers to situations in which employees derive satisfaction from having responsibility for their own work or for the work of others or for being given new responsibilities [4].

Advancement. This category includes changes in the status or position of employees in a company, for instance situations in which an employee is being transferred from one part of the company to another with increased opportunities and responsibilities [4].

Motivational factors are to be cared for in order for employees to be satisfied [6]

2.5. The Results of the Pittsburgh Study

Especially two aspects of Herzberg's theory are unique in the study of motivation. According to the two factors theory, satisfaction and dissatisfaction do not exist on a single continuum from satisfaction through neutral to dissatisfaction. Quite on the contrary, two independent continua exist, one from satisfied to neutral and the other from dissatisfied to neutral.

Moreover, the theory stresses that different facets of a job influence the feelings of satisfaction and dissatisfaction [1].



Starting from the neutral 0, the relevance of each factor can be determined along this line in percent. The percentage refers to the times a factor was mentioned in the accounts of employees in a positive or negative way. The factor “achievement” was four times more often mentioned in a positive than it was in a negative way [1].

Another dimension indicated in the chart is the duration of the change in attitude. The broader the box in the chart, the more influencing is the factor in terms of changing an attitude in the long term. “Responsibility” is for instance one of the factors contributing to long term changes in the attitude to work.

As a result of this study three main factors can be determined which possibly induce a positive attitude to work: “work itself”, “responsibility” and “advancement”. In contrast, the factors that are likely to influence a negative attitude to work are “company policy and administration”, “supervision-technical” and “working conditions”. It can be noted that three out of four high factors caused an improvement in performance as a result of an improved attitude to the job. Moreover, longer sequences of change also have effects on the employees’ performance since lasting attitudes tend to affect performance more than just a momentary attitude changes. According to Herzberg, satisfaction is mostly derived from work itself, the employees’ appreciation of their work and their own achievement efficiency [5]. What is, however, seen as problematic is that the study did not quantitatively measure changes in output [4].

2.6. Conclusion/ Drawbacks of the Two Factor Theory

Even though Herzberg’s theory was very popular in the 1960s and although it is easily understandable, it has been extensively criticized both in terms of its content and its method. [5]

The reliability of Herzberg’s methodology has been questioned since the findings of the study may have easily been compromised by interpreting the questioned employees’ responses differently [7].

The classification system has also been criticized since it could be found out that the employees saw the reasons for their satisfaction in their own efforts and successes at work, while they attributed their dissatisfaction to factors in the work environment [8].

Due to individually different value systems employees are differently influenced by motivators and hygiene factors.

The concept “job satisfaction” was not clearly defined in the study [5].

It can also be criticized that satisfaction is difficult to measure and it is not clear if Herzberg’s questionnaires really evaluated it.

It might be possible that a factor like payment might be a motivator for one group of employees while it is a hygiene factor for another [9].

Another point of critique is the reference to past events in the employees’ accounts. Since it could be determined that certain factors have a short term effect while others have a long term effect. Thus, the interviewees should have been provided with specific periods of time.

When analyzing and evaluating the data, Herzberg interpreted the frequency of mentions of different factors as an indication for their relevance to the employees. However, this would only be admissible if all factors had the same probability of being mentioned. Otherwise



hygiene factors might for instance be less likely to be mentioned with reference to very positive attitudes since they were already taken for granted.

Herzberg assumed a relationship between satisfaction and productivity, but the research methodology used only considered satisfaction not productivity [7].

There is no evidence that satisfaction and dissatisfaction at work really are two different parameters which do not correlate on one and the same continuum [1].

The effects of extrinsic and intrinsic work factors were determined on the basis of the employees questioned. However, Herzberg and his team did not develop theoretical terms to explain why these work factors influence the employees' performance [1].

The theory is inconsistent with previous research. The two factor theory ignores situational variables [7].

Herzberg claimed that motivation (prospects of promotion, success, recognition, responsibility) leads to satisfaction at work which in return motivates employees to perform even better. However, he only concentrated on the motivational aspects of the employees' performance without considering if an employee is actually able to perform certain tasks.

2.7. The Austrian Banking System

The Austrian banking system can be described as a universal banking system. Just like in Germany, there is no statutory requirement to separate commercial banking from investment banking. However, the Austrian banking system is organized in several sectors. Austria's 896 independent banks (in December 2010) are divided into seven sectors, including what is known as special purpose banks established for special financing purposes (which do not have full banking licenses though):

- 63 joint stock banks;
- 63 savings banks;
- 9 state mortgage banks;
- 596 Raiffeisen banks;
- 69 Volksbanken;
- 5 housing construction savings and loan associations;
- 91 special purpose banks.

There are historical reasons for the sectorized organization of the Austrian banking industry. This sectorized structure is still in place even though there are only few differences between the activities of the different sectors nowadays. In practice, almost all banks are universal banks and there are only a few credit institutions specializing in particular lines of business.

The Austrian banks are classified according to their legal form or the industry association they belong to. Moreover, the banking sectors are subdivided into banks with a single-tier and a multi-tier structure. Joint stocks banks, state mortgage banks, housing constructions savings, and loan associations as well as specialized credit institutions have a single-tier structure, while savings banks and the Volksbanken have a two-tier structure, and the Raiffeisen banks have a three-tier structure. In the multi-tier sectors, which are also known as the decentralized sectors, central organizations or umbrella institutions are responsible for the coordination of the business



including sectoral funding. Above all, these institutions are at the center of all the business with the other sectors.

As for the decentralized sectors, savings banks, the Volksbanken, and the Raiffeisen banks share a strong sense of belonging together. This means for instance that if difficulties should occur in an institution in one of these sectors it can usually count on the support of the other credit institutions in its sector.

2.8. Analysis of the Employees' Attitudes Survey

For the statistic analysis of the data several methods have been applied. First univariate analyses were made with only one variable being analyzed. Then bivariate distributions with two variables were analyzed to find out statistical connections which could then be mostly interpreted as causalities.

The general analysis gives a statistical overview of the participants in the survey, the general statements that can be made on the results of the questionnaire, and the differences that occurred due to the different analyses carried out.

The questionnaire has been filled out by 158 employees and managers in the banking sector of Austria in the period from February to April 2011. Only 149 of the questionnaires could be analyzed since eight of the participants were not working in the banking sector and therefore could not be taken into consideration.

Besides questions on the six aforementioned topics the employees have also been asked to answer the following optional questions:

- Are you a bank employee?
- Gender
- Age
- Highest academic qualification
- Do you have an executive position in the bank?
- Do you have to deal with external clients?
- How long have you been working in the banking sector?
- The answers to these optional questions resulted in the following findings.

Question 1: Are you a bank employee?

Table 1

Are you a bank employee?

Answers	Questionnaires	Percentage
yes	149	94.6%
no	8	5.4%

On the basis of this result the remaining 149 questionnaires have been analyzed further and these questionnaires are seen as 100%.



Distribution of employees and managers.

Table 2

Distribution of employees and managers

Answers	Questionnaires	Percentage
Manager: no	113	75.84%
Manager: yes	36	24.16%

Distribution according to external clients.

Table 3

Distribution according to external clients

Answers	Questionnaires	Percentage
External clients: no	119	61.07%
External clients: yes	30	38.93%

149 participants gave their gender of which 58.39% were male and 41.61% female. The correlation between the gender and an executive position is displayed in the following graph.

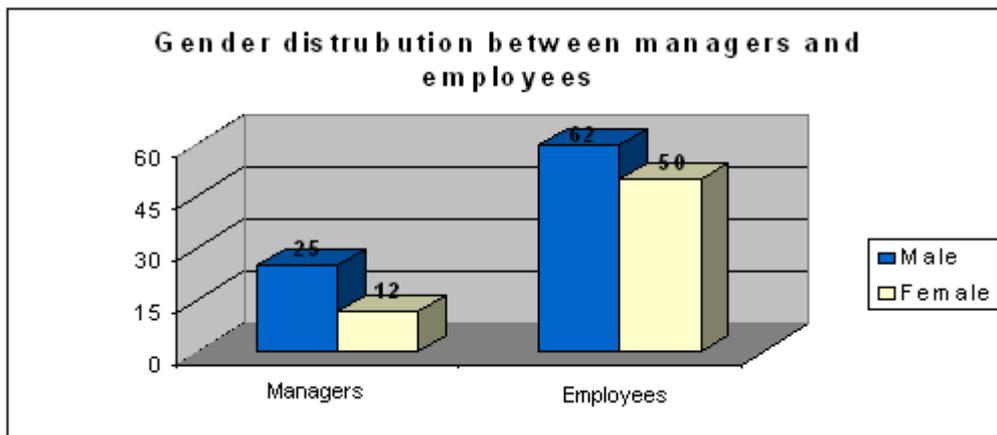


Figure 1. Gender distribution between managers and employees

Another optional question was the age of the participant with the answer possibilities:

- under 29;
- 30-39;
- 40-49;
- over 50.



The age distribution in correlation with the gender of the participants can be seen in the following graph indicating a significant difference in the age structure between 30 and 39 years where the percentage of men was 51.4% higher than the percentage of the women.

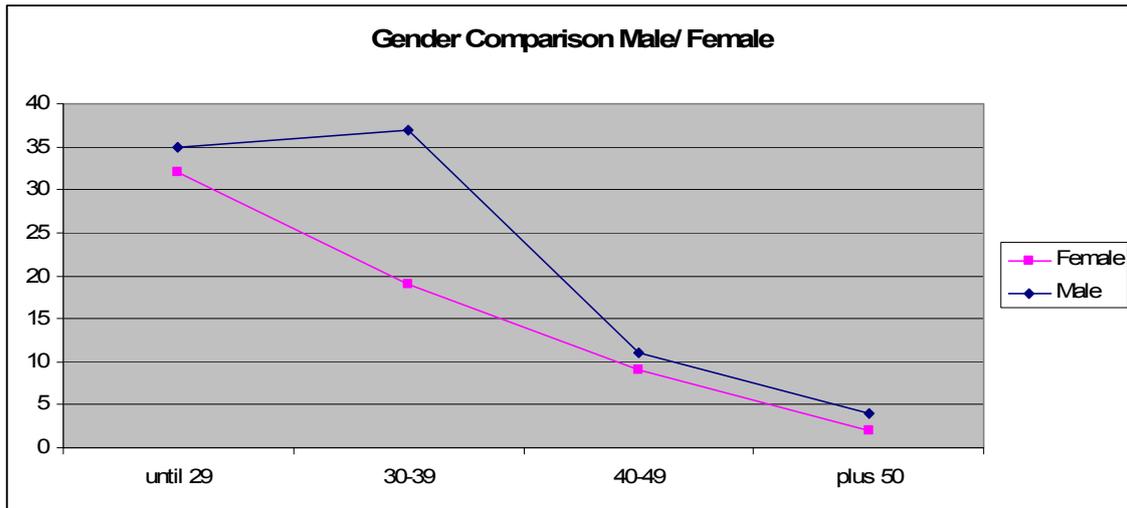


Figure 2. Gender Comparison Male/Female

However, the correlation between the age and the distribution of employees and managers did not result in a significant difference.

For further analyses the originally five age groups were combined into three representative groups with the 40 to 49 years old participants and those over 50 years in one group. These three groups with a special focus on the groups under 29 and over 40 were then used to find out differences in the motivational behavior among them.

The correlation between the age distribution and the highest academic qualification shows a difference in the entire age structure in the banking sector as the following figure displays.

Table 4

Correlation between age distribution and the highest academic qualification

	Apprenticeship	High School	University	Other
under 29	13.43%	37.32%	47.76%	1.49%
30-39	1.79%	30.36%	62.5%	5.35%
over 40	11.54%	26.92%	42.31%	19.23%

The 30 to 39-year-old participants have the lowest percentage in the category apprenticeship while they display an above-average percentage in higher academic qualifications. When comparing the participants under 29 to the participants over 40 it becomes clear that younger employees invest more time and money in a higher qualification.



As for the time the participants have been working in the banking sector, the results can be seen in the following graph.

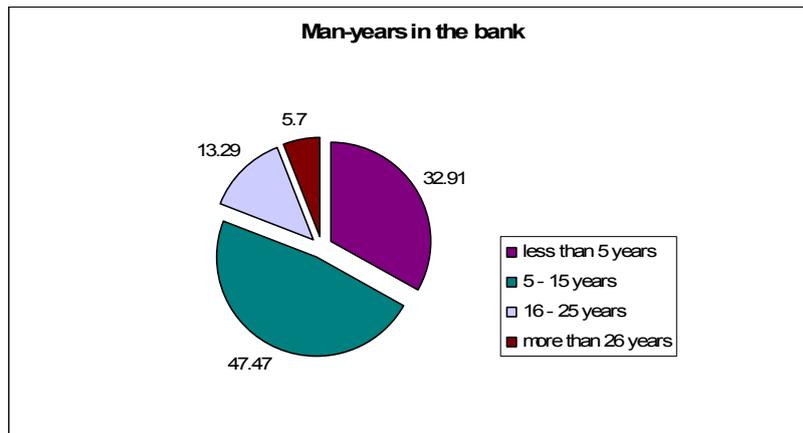


Figure 3. Man-years in the bank

Almost half of the participants have been working in the banking sector for five to fifteen years, 47.47% to be more precise, followed by 32.91% who have worked as bank employees for less than five years. These results can be ascribed to the fact that many of the participants of the survey were younger employees.

2.9. Mean Values of the Attitudes Survey

A brief overview of the means indicates the topics the human resources departments should especially concentrate on in the future.

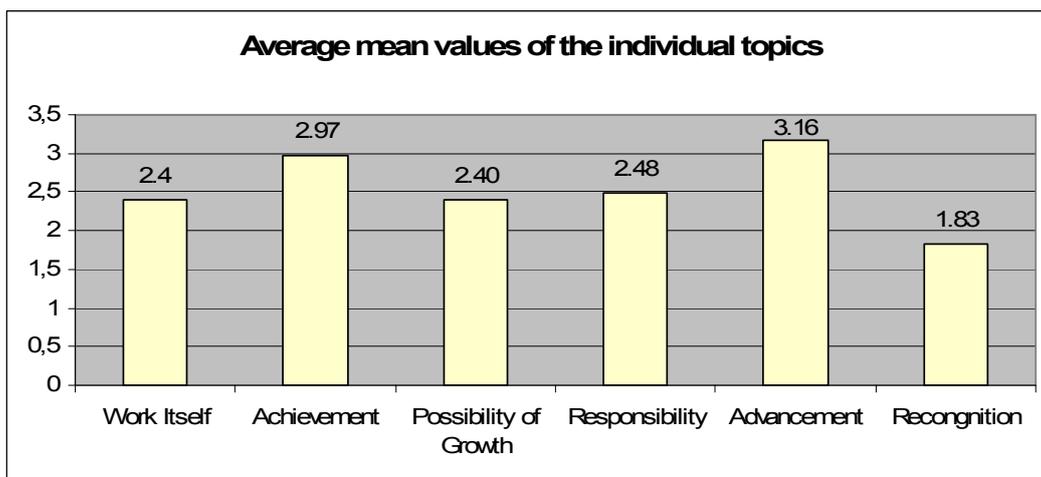


Figure 4. Average mean values of the individual topics



The following table lists the means from the above shown figure which have been calculated on the basis of all questions of a topic, without considering the answer “not applicable”. The value 1 is the most positive value while 5 is the most negative one. What has to be mentioned here is that there have not been any values in the range of 4 or 5.

A correlation of these values with the three age groups results in the following findings.

Table 5

Correlation between values and age groups

Topic	Average ratio under 29	Average ratio – 30-39	Average ratio over 40
Work itself	2.37	2.30	2.53
Achievement	3.08	2.71	2.81
Possibility of Growth	2.29	2.23	2.67
Responsibility	2.49	2.40	2.55
Advancement	2.60	2.91	3.97
Recognition	1.53	1.89	2.08

The average value of the topic “Achievement“ is 3.08 among the participants under 29, yet no focus has been put on this value since the difference to the participants over 40 has been estimated as minor. With the participants over 40 the topics “Possibility of Growth”, “Advancement”, and “Recognition” have the worst values especially compared to the values among participants under 29 (thus they are bold in the table). These topics should be immediately tackled by human resource managers which are also confirmed by a more detailed analysis of the answers to these questions.

Explanatory Notes on the Category “Work Itself”

The questioned employees are satisfied with their work in the respective banks. However, a certain potential for development and improvement could be detected, especially as far as the younger employees are concerned. An interesting result is that younger employees see a higher potential for development than older employees since it reduces over the years. In the author’s opinion a reason for this result could be the fact that younger employees have just started their careers and thus also have more perspectives for promotion and development than older employees who might already have a certain position in the bank and since the distribution of roles and responsibilities is clear for them there is hardly any potential for development for them. Over the years a reduction of 50% takes place as for the potential for development and promotion. Yet as far as the general satisfaction with work and the prestige are concerned the motivation is constant over the years.

Explanatory Notes on “Achievement”

As the general analysis of that topic showed more than three fourths of the participants have the possibility to play a part in the determination of the working processes in the bank. Moreover, those employees who are involved in the bank’s working processes also have the possibility to take



part in the management's decision making of which most belong to the age groups of the 30-39-year-olds and those over 40. In contrast to these two groups the employees under 29 show the lowest value which means that their inputs are least acknowledged or not even asked for since only one fifth of the participants is involved in decision making. This tendency indicates that the management sets great store by the experience of the employees whose inputs are considered while younger employees might have new ideas to offer which have no relevance to the management, though.

Explanatory Notes on "Responsibility"

In general it can be stated that there is an adequate amount of responsibility in the banks with the least deviations among the three age groups. Only 0.06 do the values of the responses of the employees under 29 differ from those of the participants over 40 in an average distribution according to topic and age group. With a slight difference the age group of the 30 to 39 years old employees shows the best value with 2.40 in terms of responsibility compared to a mean value of 2.49 among the employees under 29 and 2.55 among those over 40.

Furthermore, the results also indicate that responsibility is adequately distributed in the banks since both, younger and older employees feel comfortable with the responsibility they bear since it seems to correspond to their experience.

Explanatory Notes on "Advancement"

As can be seen from the results of the topic "Advancement" a career plan is critical for the motivation of the employees since they have the wish for advancement as well as they wish for transparency and traceability when it comes to promotion possibilities. Younger employees have the desire, even if hidden, for advancement and personal development while this wish reduces with the age of the employees. Older employees with more man-years stated that they cannot really comprehend and retrace as to how positions are staffed in the bank which results in a certain dissatisfaction. While older employees are more skeptical and tend to question the staffing policy of the bank, younger employees are not so concerned about the personnel policy and comprehend decisions of the management in terms of staffing positions, probably because they still have time for advancement and are sure that in the future there will be opportunities for advancement for them as well.

Explanatory Notes on "Recognition"

Recognition is only partly given in banks. Almost one fourth of the employees stated they do not get any feedback on the part of their superiors and thus do not know if any changes or improvements are required. Those who stated that they are given feedback receive it in their appraisal interviews. Especially younger employees are bestowed with recognition showing the best value in this category and among all topics of the survey, while the recognition gets less with the increasing age of the employees. Older employees get less criticism but also less praise for their work.

2.10. Comprehensive Analysis

When answering the questionnaire the complete anonymity of the participants was ensured. There was no optional field to submit one's name or other personal data. Thus the



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participants had the possibility to state their opinion honestly and openly which is a clear advantage. However, the drawback is that no constructive or concrete suggestions for improvements can be asked for from the individual participants.

The questionnaire was sent to all employees in the banking sector in Austria. Thus it was not considered to send it to a specific number or a specific group of employees which are seen as representative for the entire employees in the banking sector since the questionnaire has been answered as the individual employee saw fit. The consequence of this approach is that the results cannot be seen as representative and thus the results cannot be transferred to all employees in the Austrian banking sector and are only contingently usable.

As for the analysis of the results it is expedient to consider Oswald Neuberger's response sets (tendencies) which indicate that answers are subject to certain tendencies [5]. In this sense it can be presumed that some employees deliberately try to answer in a positive way (yes tendencies) since they are afraid that negative answers might lead to negative consequences. They are afraid that the survey is not anonymous after all and that their "true" answers might have negative consequences for them [5]. In contrast, there is also the tendency to be especially critical in anonymous surveys so that criticism prevails and negative aspects are highlighted rather than positive ones.

In order to motivate employees to take part in a survey, usually the relevance of their participation is pointed out. Employees are told that their answers will lead to improvements in the institution at question and that they will be put in use. Moreover, appeals are made to the loyalty and support of the employees with further general values being mentioned (freedom of speech, service to science etc.) [5]. As for the employees' attitudes survey in the banking sector, the employees have likewise been asked to voice their opinion in order to influence improvements and developments in the informative mail about the survey as well as in the introductory text to the survey itself.

Moreover, Neuberger assumes that employees are more willing to participate in a survey when their answers will lead to concrete and realizable changes at the workplace [5]. According to this theory closed questions lead to a clear result since the topics that lead to frustration or satisfaction can be precisely determined and together with them needs for action [5].

The results of the attitudes survey indicate that the employees in the banking sector are proud to do interesting and meaningful work and who is worried about changes or developments that might impair the quality of their work. With respect to the results it can be concluded that the employees are motivated but that there is need for improvement especially as far as older employees are concerned.

2.11. Conclusion

As a conclusion an overview of the entire survey is given, however, without elaborating on or referring to the separate categories.

The objective of this thesis was to analyze the Austrian banking sector in terms of the motivators according to Frederick Herzberg's Two Factor Theory with a special focus being placed upon the motivational differences between employees under 29 and employees over 40.

In order to conduct the survey Herzberg's Two Factor Theory was used while only the motivators have been analyzed.



2.11.1. Main Results of the Employees' Attitudes Survey

According to the objective of this thesis the findings of the employees' survey can be summarized as follows:

As could already be seen certain topics seem to be especially interesting for future decision making in human resources according to the findings that could be gained from the survey.

In literature further education is often understood in different ways, as gaining an in-depth knowledge of certain topics and updating already existing knowledge in a certain area or as a means of change and orientation. Thus, further education can be seen as a training parallel to work and as educational means to be able to change work-wise [6]. As for the banking sector both kinds of further education are applicable. Banks clearly focus on further education and welcome it. However, the survey's results show that further education is not adequately communicated to employees over 40 and that trainings are not adjusted to their specific requirements either.

In the author's opinion employees over 40 would like to talk about further education with their superiors and to gain new perspectives while superiors might not see a reason to do so due to the experience of employees over 40. However, the findings show that those employees are interested in further education and thus would like to talk about their options with their superiors. This wish should be acknowledged by the management.

Human resources development is a central aspect in banks and employees are likely to avail themselves of possibilities for development. Especially the aspects of advancement and recognition are positively evaluated by younger employees while employees over 40 would like an improvement in these areas.

"Superiors should not be satisfied with the mere statement 'I am (dis)satisfied' but should find out more about the reasons for (dis)satisfaction" [10].

A possible instrument for human resources development would be the introduction of quality circles which give employees the possibility to voluntarily discuss problems or weaknesses in their departments and to develop possible solutions which then could be implemented by human resources [11].

Especially the answers on the transparency and traceability of career possibilities in the bank showed that employees over 40 find it hard to comprehend human resources decisions. Thus it should be found out how they could be motivated in terms of advancement possibilities. What is of importance is that career plans are developed individually and that individual wishes are taken into account of course in accordance with human resources possibilities in the bank. Career planning can be part of appraisal interviews or it can be discussed with the superiors in special meetings dedicated to developing a career plan. It is crucial that employees over 40 have the same possibilities to talk about their career plan as their younger colleagues since they have the same need to talk about their career and to get feedback on their work.

Another possibility would be focusing on a career plan. The findings show that employees who have a career plan in the bank are supported by their superiors to accomplish it. Such a measure would also contribute to the transparency and traceability of human resources decisions.



2.11.2. Conclusive Remarks

The findings of the survey suggest various possibilities for improvement as regards the current work situation in the Austrian banking sector. In general the motivators of both younger and employees over 40 are quite similar and their motivation is good. However, there is the potential for improvement. Improvements could be achieved by measures on the part of human resources or the management. Sometimes it would only require minor changes to significantly improve the work situations for younger and older employees.

Even though this paper did not explicitly refer to the complex issue of globalization, it can still be pointed out that motivation is likewise crucial in international enterprises. In this context, it might be interesting to find out if older employees with a long experience in the banking sector compare the current situation to former times and only see the drawbacks of globalization or if they perceive this global phenomenon as a chance of which they avail themselves.

Major differences in the motivators according to Frederick Herzberg could not be compared as was discussed in the beginning of the paper. Motivators do change satisfaction but their absence does not necessarily lead to dissatisfaction which is clearly reflected by the findings of the study. It was also confirmed in the findings that growth and complacency are at the center as was stated by Herzberg.

Due to the comparisons of the attitudes of younger and older employees it can be ascertained that Herzberg's theory is still valid in the 21st century.

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COMPLEXITY OF NEGOTIATION AND NEGOTIATION OF COMPLEXITY GETTING TO TRUST...

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Abstract

Negotiation is back and forth communication. [1, p. 279]. Communication is ubiquitous, we communicate even if we do not want to or do not intend to communicate. Thus communication is unavoidable, so why not communicate successfully and achieve the managerial objective. We negotiate not only with other individuals on daily basis, but we negotiate with ourselves as well, *should I...?, or should I not...? How will it benefit me...? Should I eat that ice cream...? Hmm, only if I promise to run 10 minutes longer tomorrow...., Should I ask her for date...? What if she says no....? What do I have to loose, if she says no, I will be still at the same position as I am today...*

But negotiation is more complex than that. We can also observe negotiation as managing *complexity*. However, complexity is more than the buzzword understanding and usage of it in our common language and observation. To reduce the complexity of complexity, the author suggests the following description and hypothesis:

Complexity is an adoptive-, self-organizing-, emergent-, unpredictable (and complex system (s)'s or) agent (s)'s number of possible states, parts, behaviours, interactions, variables, varieties, and choices, which need to be attenuated, absorbed and observed for the system to be under control or for the objective to be of mutual satisfactory result between the agent agent's interaction, agent machine's interaction or agent and environment's interaction.

In negotiation, information is critical. Agents (managers) often have information they do not need and want; they get information that they do not need, but above all information they want is information they do not need. The challenge is to obtain information that an agent actually needs and they are more than he wants to pay for or the situation he will be in, if he tries to obtain them, thus obtaining information is giving information. [2. p. 229]

Interaction of any form is communication; only through communication control¹ is maintained, executed and possible. Knowing "*The Best Alternative to a Negotiated Agreement*" (BATNA) [3. p. 97] of one self's and/ or an opposed agents may reduce a vast

¹ Used as a cybernetic term, means; navigating and steering an organization



amount of variety² for *the negotiation system*, thus it requires precise assumptions, which also must have the capacity to be questioned as assumptions for computing the best alternative possible. However, negotiation is about a win-win game and agents are better served if their interaction is about increasing their number of choices mutually for better agreements and results.

Purpose. The purpose of the author is to underpin and substantiate the claim that in order to navigate organizations for success and survival, we must negotiate since we manage and control through communication and communication requires negotiation.

Findings. Negotiation is a complex but necessary task. Agents, managers, politicians and mediators must negotiate for survival and control. There are some essential, critical and necessary steps and information, which bring agents in a situation of absorbed complexity. These steps are trust, computing and relying on environmental regularity and all agents BATNA. The author would apply these methods to test them in one of his managerial tasks as an entrepreneur, how these findings can be put as a best practice for managers.

Originality/value. There is almost no Ivey League University in the Western world, which does not offer a program for successful negotiation. This research from a cybernetic and systemic lens is among the very dynamic and fresh approach to negotiation

Science has explored the microcosmos and the macrocosmos; we have a good sense of the lay of the land. The great unexplored frontier is complexity.

Heinz Pagels, *The Dreams of Reason*

Introduction

The title of the paper in itself establishes the link that managerial objectives are complex issues and must be negotiated and bargained via complex steps and alternatives. Many authors and institutes have applied behavioural, psychological, diplomatical, militarial (threat) and legal insights and sciences to achieve the best possible outcome in a negotiation. However, as the complexity and conflicts of the current era increase additional sciences and insights need to be introduced to the field of professional negotiation to give the manager of today and tomorrow a viable and applicable method and understanding to succeed. This highly effective and much promising but forgotten science is called; the science of cybernetics. Cybernetics or the science of control and communication in the animal and the machine (Wiener, 1948) was introduced and coined by its founder Norbert Wiener one of the most influential MIT mathematician. In contrary to the reductionist trained view of our world the science of cybernetics is *holistic*.

² Used as a cybernetic term, means; number of possible states for a system to be under control.



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In managing business affairs marketers vary between four to eight *P*'s³ of marketing to position and to push their products, administrators of business have their four *M*'s to get their task accomplished. These *M*'s are:

- *Men*
 - *Materials*
 - *Machinery*
 - *Money*⁴
- } The world of *business administration*⁵ has been busy with easy calculable phenomenon.

This, to some extent very world of calculable metaphors, compartmentalization and the so called resources allocation on which the system of business administration and its productivity relies has only functioned through the lenses of *reductionism*⁶ or the dismantlement of the worlds systems, organizations and organisms to understand and manage them due to us being blessed with the *times of continuity and operating in environment of calculability and predictability*. Above all our basic definition of organizational success has been defined based on reductionistic short-sightedness, quick outcome and gain, and false doctrine and business model called the shareholder value [4, p.9]. The spectrum of a Multinational Corporation's (MNC) success, the prominence of the monetarist manager [5, p.2] and fitness as large as a business even country's economy is defined in quarterly compartments backwards. Our whole financial economy is based on unethical (Dăianu, Vranceanu, 2005, false (Beattie, 2009), exploitation (Frieden, Lake, 2000), easy made money (Norberg, 2009) and unreal economy (Zalloum, 199) instead of real productivity.

Reductionism began with Descartes, Galileo, Newton, and Laplace and has continued its 353 year reign. Although reductionistic physics is responsible for us understanding the world with its riches it still leaves us with limitations of having meaningless facts without values [6, p. 2]. *The paradigm the whole of science has had for the last 200 years has been based on reductionism*. [7, p. 2] However, real problems (Beer, 2002), challenges, changes, turbulences (Ramirez, *et al*, 2008), wars, conflicts, and disruptions (Anthony, 2009) do not respect the disciplines and chunkization of academia, the departmentalization of fields in business schools and the separatistic character and nature of Galilean and Newtonian view of scientific declarations and methods. According to the latter, a manager dealing with managerial problems, an organization based in a turbulent environment, two or more parties (countries) negotiating to avoid a war and two couples in love are merely particles in space, time and motion. An economic system, a society, country and nation, our eco- system, the financial markets, a language, culture, an ideology and business enterprise can not be understood and managed by us reducing them to lower level entities and parts, since here we

³ The *P*'s in marketing are: Products, Price policy, place, promotion, positioning, packaging, planning and people

⁴ Beer, (Heart), 1979-1994, p. 31.

⁵ Business Administration and management are not the same (see also Malik, (Management), 2007, p. 22)

⁶ Reductionism according to (Carnap, 1928/1967, p. 6) is; "*An object (or concept) is said to be reducible to one or more objects if all statements about it can be transformed into statements about these other objects.*"



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would need to dismantle a system, a living being (organism) or an organization. Biologists observe that, most of the human body 65-90% is made up of water (H₂O). We therefore understand that most of a human body's mass consists of oxygen. In addition carbon is the basic unit for organic molecules, which comes in as number two. That 99% of the mass of the human body is made up of just six basic elements as oxygen, carbon, hydrogen, nitrogen, calcium, and phosphorus is surprising.⁷ Knowing these elements via the notion and argumentation of *reductio ad absurdum* still does not explain the human behavior, action, consciousness, cognition, communication, coordination, and cooperation of its parts with each other for a common and larger goal and how they are managed and controlled. *Reductio ad absurdum* is a way of arguing to establish a notion by deriving an absurdity from its denial, thus arguing that a thesis must be accepted because its rejection would be indefensible. It is a style of reasoning that has been applied throughout the history in mathematics, physics and philosophy up until today. The author therefore proposes that we take a different approach to solve our complex problems. These approach as emphasized is via the lens of cybernetics and bionical cybernetics. Bionics or biomimicry is the art, to solve technical and holistic problems of communication via insights from natural systems. The author observes that cybernetics and bionics have not yet been applied in pursuit of achieving precisely negotiatinal objectives. But these sciences are highly powerful and may transform the future of negotiation. Negotiation is a human activity. Agreements and precisely prerequisites that can bring forth agreement and satisfaction on which both agents and parties become what they need to be successful can be designed and mobilized. This task is complex therefore we need tools and models that reduce complexities, so we can achieve our objectives.

Complexity

This very world of us and its problems are and work systemic [7, p. 2] they are not solved and resolved if we do not understand this fact. Trying to explain Holism and Systemism in terms of reductionism is impossible and if we are trying to discuss Holism and begin to describe it by looking at it from just two sides, that is insufficient and meaningless [7, p. 2]. There are systems and subsystems, systems and other systems, which combined give a larger whole in our world. As sufficiently described above after we have understood that the world's problems are holistic, we have to understand that not only understanding the whole spectrum of a separate entity, a viable system [8, p. 157] or a problem is essential but moreover its relation(s) and interrelation(s) is (are) essential and vital as well. It is precisely through these relations, cooperation and coordination that our world actually works. Therefore, it's high time that we understand and apply these insights to our problems and challenges for a better communication and results.

⁷ According to (Harper, Rodwell, Mayes 1977) the human body is made of Oxygen (65%), Carbon (18%), Hydrogen (10%), Nitrogen (3%), Calcium (1.5%), Phosphorus (1.0%), Potassium (0.35%), Sulfur (0.25%), Sodium (0.15%), Magnesium (0.05%), Copper, Zinc, Selenium, Molybdenum, Fluorine, Chlorine, Iodine, Manganese, Cobalt, Iron (0.70%), Lithium, Strontium, Aluminum, Silicon, Lead, Vanadium, Arsenic, Bromine (trace amounts)



Variety and Ashby's Law of Requisite Variety

Variety is the number and possible states of system. Fig. 1 describes the interrelationship of an agent (manager) with its environment. This relationship can only exist and be maintained if the variety of the environment, in which the business is embedded is creating and forwarding via disturbance to the agent is less or equal to the variety that the agent's system is capable of absorbing or coping with. To better understand this very law of management cybernetics, we need to understand *Ashby's law of requisite variety*. In the mid 50's Ashby emphasized that the fundamental processes of regulation and control in biology (Ashby, 1956) has revealed the importance of a certain quantitative relation called the *law of requisite variety* [9, p. 1]. The law of requisite variety; "*variety can destroy variety*", [10, p. 207] as explained below is:

- "*the amount of appropriate selection that can be performed is limited by the amount of information available.*"
- "*for appropriate regulation the variety in the regulator must be equal to or greater than the variety in the system being regulated. Or, the greater the variety within a system, the greater its ability to reduce variety in its environment through regulation. Only variety (in the regulator) can destroy variety (in the system being regulated).*" [11, *pespmc1.vub.ac.be*]

After this relation was discovered, it was related to a theorem in a world far ignorant from the biological that of Shannon on the quantity of noise or error that could be removed through a correction-channel (9, p.1). Shannon's theorem # 10 describes: "*If the correction channel has a capacity equal to $H y(x)$ it is possible to so encode the correction data as to send it over this channel and correct all but an arbitrarily small fraction ε of errors. This is not possible if the channel capacity is less than $H y(x)$* " [12, p.68].

Fig. 1 shows the relationship between the two theorems, and to indicate something of their implications for regulation, in a cybernetic sense, when the system to be regulated is extremely complex. Since the law of requisite variety uses concepts more primitive than those used by entropy.

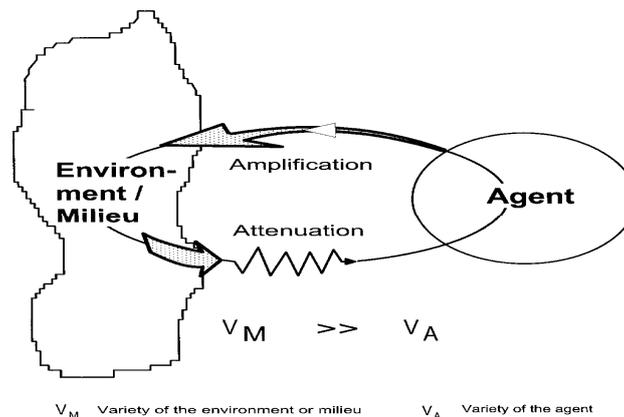


Figure 1. Difference of varieties between an agent and its environment and agent and environment relation via Ashby's law of requisite variety. Source: (Schwaninger, 2000)

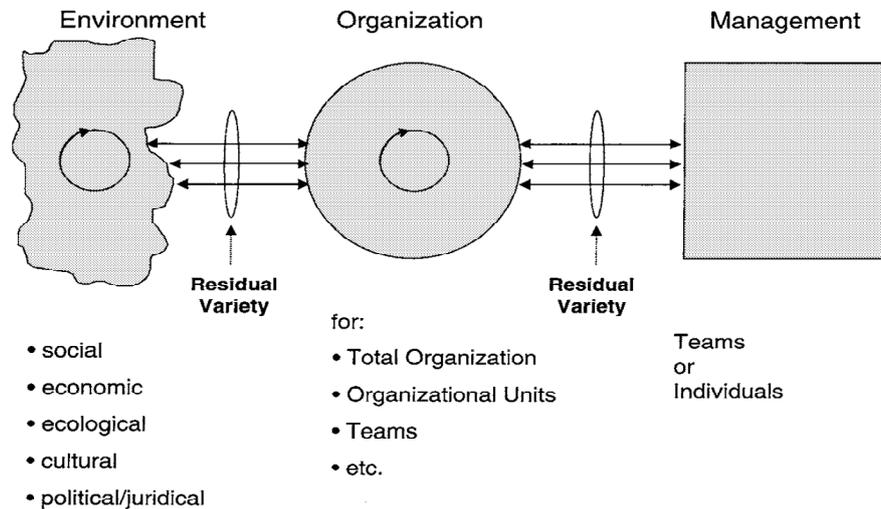


Figure 2. How organizations and their managements cope with complexity. Manager as amplifier of environmental complexity. Source: (Schwaninger, 2000)

The main objective and challenge of the manager is to balance the varieties of the interacting systems through both attenuation and amplification (see Fig. 1). Beer (1979) coined the term “*Variety-engineering*” in this context [13, p. 211]

Beer’s Viable System Model (VSM)

The VSM is a management model and organizational theory developed by Stafford Beer, the founder of *Management Cybernetics* (Beer, 1979, 1981, 1985, 1989). But before we understand the whole spectrum of this powerful organizational theory (Schwaninger, 2006), the author finds it necessary that some terms of cybernetics origin be precisely defined and explained they are more than the notion of words. These terms are “*Viability*”, which is the feature and characteristic of a system or a “*being*”, able to maintain a separate existence. A Being is an organism (organization and a system) with the ability of identity transformation and preservation. Living systems are able of self-repair, autopoiesis (self-reproduction) in a changing complex world. The fundamental feature that characterizes living- and viable, systems and beings are autonomy [14 p. 149]. Speaking of VSM as a theory, it is distinctive in several respects, in particular in view of the claim it makes (Schwaninger, 2006). This theoretical claim is as follows: A viable social system is viable if its structure fulfils a number of requirements, which the theory specifies in five managerial sub-systems (Schwaninger, 2006). These systems are:

- (1) System 1. Management of a basic subsystem or operations
- (2) System 2. Coordination of subsystems, attenuation of oscillations between them (Schwaninger, 2006)
- (3) System 3. Operative general management of a collective of subsystems
- (4) System 3*. Auditing and monitoring channel



- (5) System 4. Management for the long term organizational perspective, relationships and coping with the overall environment
- (6) System 5. Normative management, meta- management and corporate *ethos* ⁸

Any deficit in this structure will inevitably limit and endanger the viability of the organization.

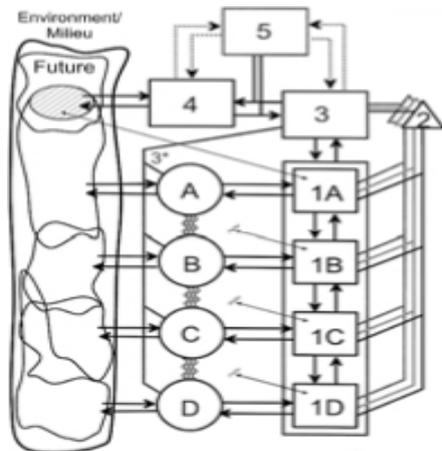


Figure 3. Stafford Beer's "The Viable System Model", an overview

Source: (Schwaninger, 2000)

Negotiation

Negotiation is the act of communication, giving and receiving information and benefits that meet and maintain the larger objective of an agent's (s') system (s) to be under control (acceptable and viable reach).

Disputes and conflicts can and will only arise, if the description above is not respected and maintained or not actively sought. Countries, organizations and agents do not generally seek negotiation, when their BATNA promises better results or when their overall grand- strategy wants to achieve a larger or other objective. To understand why conflicts arise we can examine the following case. The former US president George W. Bush did not want to negotiate with the Taliban, because negotiating with them did not meet the larger objective (see, fig. 5. meta-system) of the US foreign policy at that time. The Taliban and the civilized world asked for evidence, which the world is still awaiting, but nothing was delivered. Noam Chomsky of MIT the nester among public intellectuals and scholars told *Press TV*: "The explicit and declared motive of the [Afghanistan] war was to compel the Taliban to turn over to the United States, the people who they accused of having been involved in World Trade Center and Pentagon terrorist acts. The Taliban...they requested evidence...and the Bush administration

⁸ *Ethos* mean organizational *Identity*



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refused to provide any. We later discovered one of the reasons why they did not bring evidence: they did not have any." [15, <http://georgewashington2.blogspot.com>]. Prof. Chomsky also stated that nonexistence of such evidence was confirmed by FBI eight months later. To understand the problem we should understand the Taliban and their beliefs beyond their ultra religious identity. Speaking of the larger objective, the Taliban have mainly a Pashtun origin, which constitute 50% population of Afghans [16, p.621] and their identity. "Knowledge about the important factors in play when indigenous populations are making decisions regarding their support for government-sponsored counterinsurgency efforts, for example, can lead to better strategies for communication and decision framing on the part of the counterinsurgents to improve the relative attractiveness of the propositions they present to indigenous members in environments where counterinsurgent forces wish to expand their influence." [17. p. v] For instance, the *Pashtun Code* and doctrine encompasses the generous hospitality to guests and one must revenge and thus to fight to the death for a person who has taken refuge with a Pashtun no matter what his lineage [18, p. 40]). Would the knowing of this fact by the Bush administration have not made the world a safer and better place than it is today? If this \$ 4 Trillion spending on military means in the last decade would have been spend on seeing the problem from a holistic lens, making peace, ensuring security to the world and real justice to the terrorist, a much more successful Afghanistan, Iraq, US and Western world would have been the result. But as we clearly can observe the objective of Bush and the NewCons, it was not to make peace or to bring justice; it was the grand strategy of "total domination" of the world's Eurasia and Middle East and its resource and to achieve the opposite of a negotiation. Let's examine another case: Two organizations want to negotiate, they want to have gains by mutual agreement through negotiation.

Organization A wants to be the leader in the joint project, but B wants the same. Both are convinced that they can make a better job as the other one.

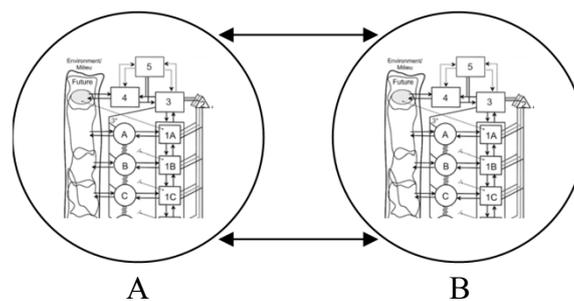


Figure 4. Two agents (VSMs) in negotiation

What would be the best approach in dealing with the problem? To analyze the situation precisely, we should first define the primarily objective of the joint-venture. Mostly its either to enter a foreign market, get- in into a market niche mainly reserved for the locals (for instance in China some line of products are restricted and cannot be entered by foreigners), or get a competitive advantage. Now what the objective of each agent or party is, may defer but the certain point is that coming together is of mutual benefit for both of the parties. Disputing over



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who should run the show as long as the determined objectives are reached, is not only counterproductive but will not bring the desired outcome into place. Therefore it is necessary to go beyond dominating the competitor and concentrate on the objective. Whatever the main interests are should also be pursued. Interests are commonly referred to as basic needs, wants, goals, and objectives. [1, p.280] Interests and positions differ from each other. A position seeks the objective to be resolved in a certain manner. Interests only seek the achievement of what is essential and/ or at stake. To apply cybernetics here it would give the situation a much more stability and promise of mutual satisfaction. In cybernetics as stated not only the agent, with whom we are negotiating, is essential but knowing the agent's objectives are essential as well. But we can go a bit further and find out not only what his interests are but what drives this agent, what are the larger objectives, in which environment is he embedded, who are his main competitors and what is the general bottleneck to his or his firm's objectives. And above all what are and could be the main constraints to our mutual agreement. As a natural system is designed of many parts to function for a larger whole cybernetics can design many systems to serve a larger whole. A pilot and a plane are one system as are a car and his driver. The same is with a company and its manager. They all give one larger system and can only function together to fly, to drive and to produce goods and services. In designing the man-machine system the law Ashby's law must be ubiquitously applied. If the variety of the plane is higher than what the pilot can handle his systems would be in crises and would bring a crash as a result. The same is with the driver and the car, since he would not be able to handle the car. If the manager lacks the training his firm's system would fail eventually, since the variety, which needs to be absorbed by the manager is higher than he can handle. The same would happen, if the variety of the environment with its disturbances, in which the firm is embedded, is higher than the *manager-firm system* can handle.

To apply bionics to the problem, we need to understand what the secrets of the interrelation of man's body are, and how the different parts are communicating with each other. The body is a combination of different parts working in unison to give a larger whole, which is the human being. The secret of the man being able to move his hands and legs are via a flawless communication. A patient visiting his doctor in a neurological clinic can move his legs or arms, but he suffers from a severe disability, he walks with a peculiar uncertain gait with eyes downcast on the ground and on his legs and starts each step with a kick, throwing each leg in succession in front of him [19, p. 95]. What is the matter with him and if we blindfold the man he might not even be able to walk one step? Another patient if you give him a glass of water he is not able to drink, his hand will swing and will empty the glass, before he has drunk one single sip. The problem is known as *ataxia* [19, p. 95]. The patient's muscles, arms and legs are healthy but can not organize their action to achieve the objective. Here the way and line of communication is disturbed. The brain's stimulus for the body to move the arms and legs has a disturbance in communication. In order for the arms and legs to function the prerequisite is communication and trust. The brain will never question as long as the communication is maintained that the arms would do something else or question the brain's stimuli, nor will do other parts of the body which are under an active control of the brain (legitimacy). Two people as a system of negotiation not bringing the prerequisites of proper communication and trust may achieve something, but it will be far less than what they can bargain for. They will achieve what they would like to coin as "*ataxia of negotiation*". Professional negotiators can apply



cybernetics and design the act and process of negotiation in a way that brings the utmost outcome to the parties. The prerequisites are: 1) interests (the larger whole), 2) legitimacy, 3) trust (relationship), 4) communication, 5) commitments, and 6) options.

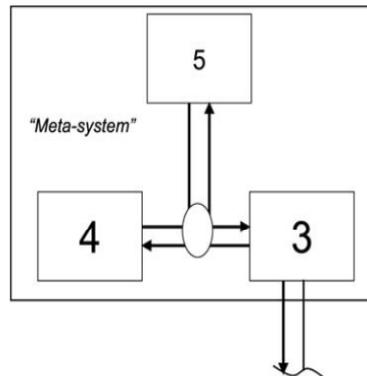


Figure 5. the Meta system of a VSM

Source: (Schwaninger, 2006, p. 964)

The Meta system of a VSM as fig. 5 describes is responsible for the internal stability of the system, the future, and the preservation of the system's ethos. Professional mediators before bringing the parties together to negotiate, applies the six described prerequisites to achieve the objectives. He/she asks: what are the real objective of each individual and party and what are not the objectives? He/she than seeks to find a common ground of legitimacy for both party, where respect and saving the face of the parties are maintained. Since both accepted the legitimacy of each other and know the mediator they can start to trust each other. By creating trust and maintaining it, superb communication is possible and so can other options be applied, which will bring more benefits to the both parties. Understanding how the Meta-system fig. 5. works gives the negotiating partner additional tools of professionalism at hand. If in negotiation the objectives, which benefit the internal system of the party (system 3), the future benefits (system 4), and identity preserving (system 5) are understood and respected, these facts will pave the way for much better understanding and better gains for both parties. **No system will ever knowingly act contrary to the requirements of the viable meta-system.**

Conclusion

Negotiation as described through the paper is communication, giving and receiving information, one of the basic forms of interaction (Patton, 2005) and it is ubiquitous and unavoidable. But for everything what we want or our organization wants, we must negotiate. Being a good and solid negotiator enhances the possibilities of success for all agents and managers. Therefore, much less energy drain is the result and vital organizational resources as time, partnership, money, cooperation, growth and coordination can be saved and preserved.

The author suggests a holistic approach to negotiation and to make use of all possible resources, steps and parts with harmony to each other, which in cybernetics also has been



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described as *recursion* for a better and successful outcome. Trust and superb communication are the keys to negotiation. They are vital and cannot be excluded if one wants to preserve relations and to create larger *partnership- systems*. This fact will be of use to managers of today but moreover to the managers of tomorrow. As the globalized world increases and out-sourcing, out-tasking and JV's or foreign market entries are necessary to survive the world needs able and professional negotiators. **In the future the ability to negotiate would be an essential competitive advantage of a firm, but moreover it can be handled as a commodity and as firm's assets.** The main obstacle to any organizational communication is the lack of trust. As described through out the paper before we can negotiate we must insure that: 1) a flawless communication between parties is ubiquitously possible; 2) trust as the fundamental part of a negotiation is ensured; 3) and, the grand objective (ethos) of the negotiation as a system is maintained. This means the whole *negotiation system* must follow a constructive rule of creating the ideal situation for all parties. Before we go any further the author needs to explain how negotiators can achieve these three states. 1) Communication: can be achieved if language barriers, cultural differences, personal issues as ego or need to display ones power, etc are resolved. 2) Trust can be insured if an experienced, just, candid and unbiased mediator or observer that both parties can accept as the *negotiation system's "conscious"*, is designed.⁹ 3) The larger objectives are only maintained if honesty, humanity and high moral order is a part of the negotiation system. As an example we can take the case of Israel and Palestine. Using public relations¹⁰, force, economical resources, pressuring global politicians, violations of human rights and international laws as a substitute to the author's mentioned three points will never solve the crises. Additionally having a mediator, who is loosing its creditability of honesty, non-partisanship and fair-mindedness, will certainly endanger the achievement of the overall objective, create other crises and the conscious system is dismantled. Thus, the main objective is getting lost and the conflict will never be resolved. What are the real objectives? 1) Securing the state of Israel in a hostile environment; and 2) Creating a viable and self-determining Palestinian state. We can apply Stafford Beer's celebrated dictum (Beer, 1979): "*The purpose of a system is what it does*", therefore before designing this negotiation system, the purpose of the whole system must be the objective of achievement of the system. To apply Ashby's law both parties must be given sufficient variety, this will ensure that the designed negotiation system is stable and can cope with the large amount of complexity that the larger objective requires to cope with. This means in addition cutting both parties' BATNAs, since any violation will proactively make one party not want to negotiate. In business the author's recommendations and method can be practiced first in larger organization for cost reasons, objectives importance, organizational challenges, etc. and lack of empirical data to this method. Having observed negotiation as complexity and giving it a systemic structure from a holistic lens, where we can apply additional sciences to solve the conflict is a major step forward. It will pave the way to see conflicts via a different lens and perspective. In a holistic world problems are only truly solved by a holistic lens. Complexity is a vital part of our life. We are complex beings; we live

⁹ Designed is used as a cybernetic term means: creating of a subsystem to support the objectives of a larger whole or system.

¹⁰ Public relation was coined by Edward Bernays the author of the book *Propaganda* as a respectable substitute for it.



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in work in complex organizations and every act of what we do from writing a book to driving a car is done by managing complexity. Negotiation is one additional complexity we need to master; this skill will bestow us having highly effective organizations and in international affairs, having security for our next generations and enhance the chances of peace. Moreover we will give them a tool to proactively dissolve conflicts. In the words of the legendary Stafford Beer: Rather than solving a problem, its better to dissolve it. Amen to that...

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EFFECTIVE BUSINESS COMMUNICATION INFLUENCE ON COMPANY MANAGEMENT

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Keywords: business communication, online communication, face to face communication, management.

Abstract

Productive management communication has been studied in academic research as it is one of the key factors for effective entrepreneurship realisation. Research has confirmed that companies which realise effective communication cost – effectiveness has been raised by 47% in comparison with the companies which have weaker communication programme or do not have it. Recent development of technologies and communication tools has worked out new approaches and more effective tools for business communication which have been examined also in academic research and scientific publications as well as mentioned by entrepreneurs and company managers. Obstacles, bothering effective business communication are often examined in research: among them – personal factors, differences in life perceptions, different communication skills, different experience and validity of information sources, demographic differences. Some differences in productive management communication related to historical traditions and values exist there. Authors have made empirical research to examine influence and significance of above mentioned factors on entrepreneurs in Latvia with special attention to productive management communication: online and face to face. Results of survey of 1464 entrepreneurs will be used for data analysis, as well as structured interviews will be used to develop more detailed questionnaire for fundamental research of business communication. Research methods used: academic publications analysis, survey of entrepreneurs, structured interviews of entrepreneurs. For data processing it was used methods: descriptive statistics – indicators of central tendency or location and indicators of variability.

1. Introduction

Communication is an important part of manager's world, it is a close interlink with management functions [1]. Effective employee communication is a leading indicator of



financial performance. Companies that are highly effective communicators have 47 percent higher total returns over the last five years compared [2].

Rapid developments in communication technologies have changed the nature of communication between individuals and organizations. Internet has made the greatest impact on communication channels [3]. Effective communication among international business partners is a critical for global success. Underlying national and cultural differences in international business relationships create hurdles for effective communication, hindering performance [4].

Authors have made empirical research to examine influence and significance of communication on companies' management in Latvia, examine how effective small and medium size enterprises (SME) use the Internet. The research methods used in the paper are academic publications analysis, survey of entrepreneurs, and structured interviews of entrepreneurs. For data processing it was used the following methods, such as descriptive statistics – indicators of central tendency or location and indicators of variability, correlation analysis.

2. Theoretical Background

Business communication is close related with management functions planning, organizing, motivation, and control. There is a significant and positive relationship between strategic management and strategic behaviour, strategic management and strategic alignment, strategic alignment and motivation, communication effectiveness and motivation [5]. The integration of project management, risk assessment, and communication has helped the project management team to coordinate and facilitate different aspects of the project [6]. The communication has the positive influence on supplier management performance, oral communication capability and purchasers' attitudes towards individual communication with suppliers play important role [7]. Telephone discussions, e-mail and documents and forms are the most frequently used methods of communication between small business owner-managers and their accountants, though meetings are most likely to take place at accountants' offices [8]. Favourable organizational climate leads to efficient job performance; trusting relationship is one of the factors that affect organizational climate and job satisfaction or performance. Communication plays an important role in the development of trust within any organization. The relationship between communication and trust is complex, and simple strategies focusing on either quality or quantity of information may be ineffective for dealing with all members in an organization [9]. Trusting relationship is positively related to measures of communication management, those employees receiving positive communication are more likely to be motivated to form trusting relationships with the management level [10]. The communication cultures of the supplier and buyer moderate the effects of innovative orientation and technological uncertainty [11]. The research results show that face to face communication groups present higher levels of positive conflict management and lower levels of negative conflict management than computer mediated communication groups [12]. Crisis management requires efficient internal and external communication, setting the persons and their roles expressed by special duties and responsibilities, effective collective decision making, control



and collaboration responsibility [13]. Communication practices may need to be differentiated at the national or regional level [14].

The studies suggest that the use of computers for communication changes group processes and outcomes, approximately 64% organizations integrates the Internet into communication [15]. There is the strong association between information and communication technologies and strategic planning [16].

Despite the importance of communications, it is not always effective. Authors have researched how small and medium size entrepreneurs in Latvia evaluate business communication significance and how communication affects innovativeness of enterprises.

3. Research Results

Results of the survey show that entrepreneurs evaluated the role of business communication on company management as significant: arithmetic mean was 7.16, standard error of mean was 0.067 (in scale 1 – 10), most of the entrepreneurs (43.14%) gave evaluation 8 and 10 (mode), 50% entrepreneurs estimated communication significance on company management with 8 and more points (median), the evaluation was quite homogeneous (standard deviation). Still there were managers whose estimation on the importance of communication were evaluated rather low, estimation 1 point were given 3.92% of entrepreneurs (see Table 1.).

Table 1

Statistical indicators of SME owners, managers' estimation of communication significance on company management

	Statistical indicators
Number of respondents	1377*
Mean	7.16
Std. Error of Mean	0.067
Median	8.00
Mode	8; 10
Std. Deviation	2.501
Variance	9
Minimum	1
Maximum	10

* Number of respondents who answered this question

Source: SME owners, managers survey in 2010 December - 2011 August (n=1464)
Estimation scale 1 – 10 (where 1 – is not significant, 10 – are very significant)

Evaluation of business communication significance was rather different, 7 and more points were given by 68.63% of entrepreneurs, maximum estimation (10) were given by 21.57% of entrepreneurs, 4 and less – 17.64% (see Figure 1.).

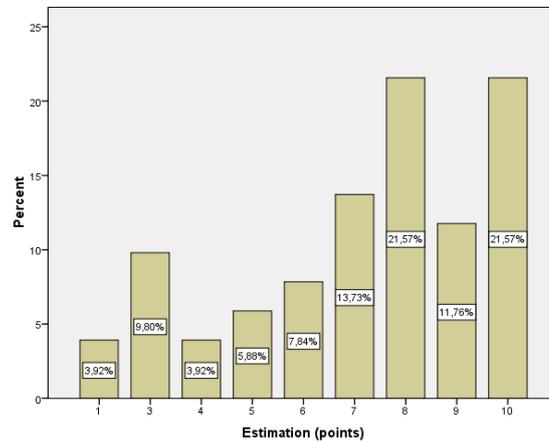


Figure 1. Entrepreneur(s) estimations of communication significance in the company management

Source: SME owners, managers survey in 2010 December – 2011 August (n=1464)
Estimation scale 1 – 10 (where 1 – is not significant, 10 – are very significant)

The communication significantly influences SME performance. The results of the correlation analysis had shown that relationship between communication and SME innovativeness was significant and positive, coefficient of correlation is 0.582 ($R=0.582$; $p < 0.001$) (see Figure 2.).

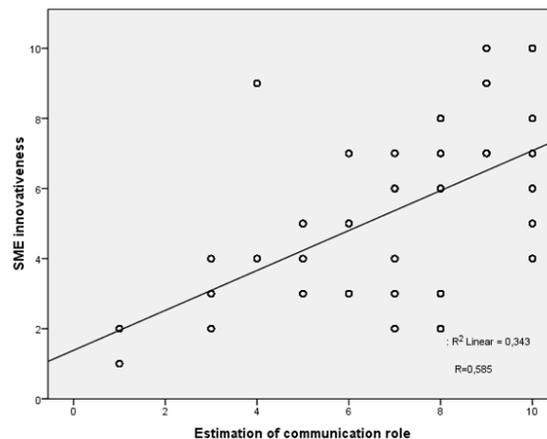


Figure 2. Relationship between communication and SME innovativeness

Source: SME owners, managers survey in 2010 December – 2011 August (n=1464)
Estimation scale 1 – 10 (where 1 – is not significant, 10 – are very significant)

Communication has the significant impact on motivation of employee. Correlation analysis had shown that relationship between communication and motivation was significant and very tight, positive, coefficient of correlation 0,796 ($R=0.796$; $p < 0,001$) (see Figure 3.).

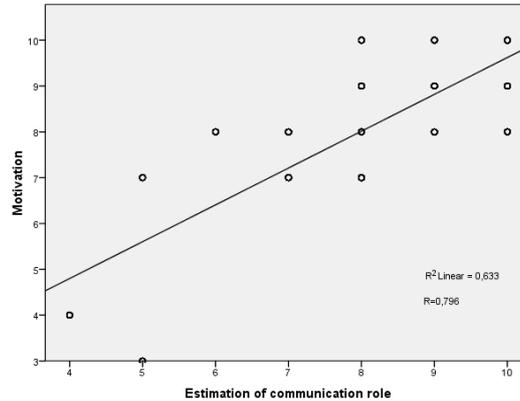


Figure 3. Relationship between communication and motivation

Source: SME owners, managers survey in 2010 December - 2011 August (n=1464)
Estimation scale 1 – 10 (where 1 – is not significant, 10 – are very significant)

The Internet is creating new channels for communication; it has a great meaning for company management. The 42% of owners evaluated Internet as a very significant communication tool, and gave evaluation 10; as significant – 22% gave 8 and 9 (see Figure 4.).

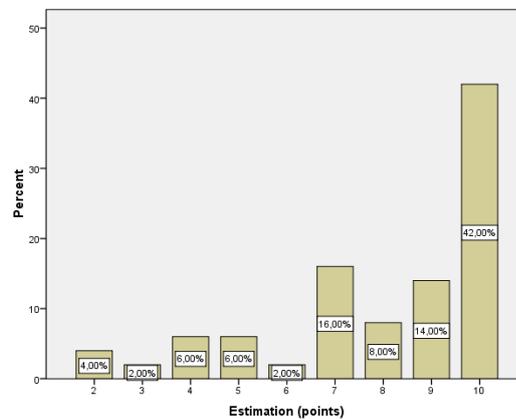


Figure 4. Entrepreneurs estimations of the use of Internet

Source: SME owners, managers survey in 2010 December – 2011 August (n=1464)
Estimation scale 1 – 10 (where 1 – is not significant, 10 – are very significant)

The SME owners, managers' evaluations of influence of Internet significance on company management were high, the most of managers' gave 10 points (mode), arithmetic mean was 8.02 standard error of mean 0.064, minimum evaluation points were 2, which gave 4% of respondents, 50% of respondents estimated Internet significance with 9 and more points



(median), the evaluation was homogeneous (standard deviation). Only 6% estimated Internet as no significant and gave 2 or 3 points. The given results indicate, that most of managers use Internet actively in their work (see Table 2.).

Table 2

Statistical indicators of SME owners, managers' estimation of Internet influence significance on company management

	Statistical indicators
Number of respondents	1350*
Mean	8.02
Std. Error of Mean	0.064
Median	9.00
Mode	10
Std. Deviation	2.346
Variance	8
Minimum	2
Maximum	10

* Number of respondents who answered this question

Source: SME owners, managers survey in 2010 December - 2011 August (n=1464)
Estimation scale 1 – 10 (where 1 – is not significant, 10 – are very significant)

The most frequently SME owners, managers' used Internet for communication with public institutions, customers, suppliers and others entrepreneurs.

The survey results indicate that more than a half (55.1%) of SME had web page, 16.33% were creating it, but 28.57% of SME did not have web pages (see Figure 5.).

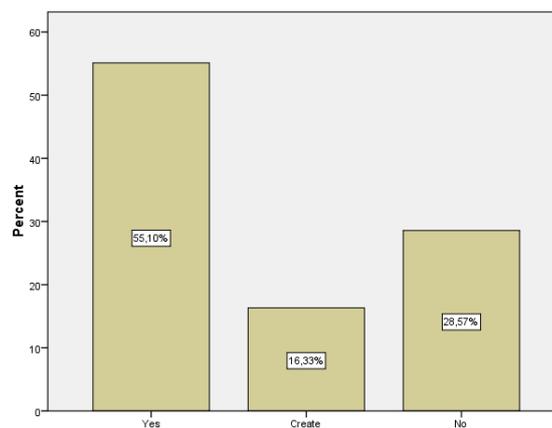


Figure 5. Distribution of answers to the question “Does your enterprise have a home page?”

Source: SME owners, managers survey in 2010 December – 2011 August (n=1464)



The SME owners, managers' mentioned that enterprise web page helped to support customers with exact information, it is important for enterprise to supply them information about its business activity, render services for wide circle of potential and existent clients.

The survey results showed that larger part of SME managers employ communication for company management, and one of communications tools is Internet.

4. Conclusions

Academic research results have shown that there is significant and positive relationship between communication and management functions. The communication has the positive influence on supplier management performance. Communication plays an important role in the development of trust within an organization. The studies suggest that the use of computers and Internet for communication changes company processes and outcomes. Small and medium size enterprises owners, managers' survey results indicated, that effective communication system, statistically, influence very significantly innovativeness of SME. Communication has statistically significant influence on motivation of employees. Still there are managers who the importance of communication have evaluated rather low. Most of the SME owners, managers actively use Internet for company management, more than a half of SMEs in Latvia have web pages.

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TRUST MARKETING FOR HIGH-RISK PRODUCTS: A CROSS INDUSTRY MARKETING FRAMEWORK VALIDATION

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Abstract

Many products involve such a high-risk for customers that the possible damage can be greater than the product's advantage (e.g. a cosmetic surgery contains the risk of numbness, a nuclear power plant contains the risk of losing human life, a cryptographic device contains the risk of getting hacked and exposing critical data). Thus, potential customers of high-risk products are very concerned in the buying process and corresponding vendors suffer from severe issues in their sales process (e.g. longer sales cycle, lower conversion rates, image issues) resulting in higher costs and lower revenues. In general, [1] proposes trust as a solution for high-risk situations "where the possible damage may be greater than the advantage". Thus if marketing would be able to build-up customer trust in high-risk products a significant problem for affected companies would be solved.

In this paper the Trust Triangle Marketing Framework (TTMF) is proposed, consisting of four marketing strategies: reframing, experiencing, involving and mitigating. The TTMF strategies build upon the interdisciplinary trust model from [2] and intend to build up trusting beliefs for a high-risk product. Trusting beliefs are the beliefs of an individual that "...the other person has one or more traits desirable to one in a situation in which negative consequences are possible" [2] and therefore make it easier for the trustor to trust the trustee. In this paper the marketing framework gets empirically tested via expert interviews across 15 industries on its ability to build up customer trust for high-risk products.

1. Situation and Research Question

Many products involve such a high risk for customers that the possible damage can be greater than the advantage (e.g. a cosmetic surgery contains the risk of numbness, a nuclear power plant contains the risk of losing human life, a cryptographic device contains the risk of getting hacked and exposing critical data). Thus, potential customers of high-risk products are very concerned in the buying process and affected vendors suffer from severe issues in their sales process (e.g. longer sales cycle, lower conversion rates, image issues) resulting in higher costs and lower revenues. In general, [1] proposes trust as a solution for high-risk situations "where the possible damage may be greater than the advantage". Thus if marketing would be able to build-up customer trust in high-risk products a significant problem for corresponding



companies would be solved. Accordingly the research question for this paper is as follows: Can trust in high-risk products be built up via marketing?

2. Literature Review

Despite the broad coverage of trust in the existing literature [3] a clear definition of trust is lacking: e.g. [3] talks about "...the problem of defining trust, a concise and universally accepted definition has remained elusive...", [4] points out that „trust in general has been given many different definitions...". According to [5] trust has been defined in "...widely divergent ways...". [6] sees trust as a "...term with many meanings", whereas [7] talks about a "...conceptual confusion regarding the meaning of trust...". [8] points out that "vagueness is apparent [...] in the multiple meanings given to trust" and [9] talks about "...a multitude of definitions of trust exist across disciplines...".

In the following some examples for the great variety of trust definitions are provided:

- [10]: "We define trust as follows: An individual may be said to have trust in the occurrence of an event if he expects its occurrence and his expectation leads to behavior which he perceives to have greater negative motivational consequences if the expectation is not confirmed than positive motivational consequences if it is confirmed."
- [11]: "Interpersonal trust is defined here as an expectancy help by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon."
- [12]: "In conclusion, trusting a person means believing that when offered the chance, he or she is not likely to behave in a way that is damaging to us, and trust will typically be relevant when at least one party is free to disappoint the other, free enough to avoid a risky relationship, and constrained enough to consider that relationship an attractive option."
- [13]: "Trust [...] is the generalized expectation that the other will handle his freedom, his disturbing potential for diverse action, in keeping with his personality – or, rather, in keeping with the personality which he has presented and made socially visible."
- [14] "Trust may be defined as confidence in the reliability of a person or system, regarding a given set of outcomes or events, where that confidence expresses a faith in the probity or love of another, or in the correctness of abstract principles (technical knowledge).
- [8]: "...we approached a [...] definition of trust in terms of the socially learned and socially confirmed expectations that people have of each other, of the organizations and institutions in which they live, and of the natural and moral social orders that set the fundamental understandings for their lives."
- [15] defines trust as the "...confidence in the goodwill of others..."
- [16] sees trust in a sociological perspective as "a set of expectations shared by all those involved in an exchange"
- [17] define trust as "...the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party."



- [18]: “Trust is anticipated cooperation.”
- [19]: “The positive expectation a person has for another person or an organization based on past performance and truthful guarantees.”

In their meta-analysis on trust [20] identified two major reasons for the broad variety of trust definitions. First, the huge variety of intellectual disciplines with individual world views (ranging from economics, sociology, psychology to philosophy). Second, “...trust is conceptually [...] massive in terms of the meanings it conveys. In everyday usage, trust has more dictionary definitions than do the similar terms ‘cooperation’, ‘confidence’, and ‘predictable’” [20]. Thus [20] conclude that “...trust is by nature hard to narrow down to one specific definition because of the richness of meanings the term conveys in everyday usage.” In the following the trust definition of [17] will be used that trust is the willingness to be vulnerable to another party, as it is “the most frequently cited definition...” [21] with over 1.100 citations since 1996 [22].

To develop an interdisciplinary trust model [2] reviewed in their meta-analysis about 80 books and articles on trust, of which 65 provided definitions on trust. These sources were across several scientific disciplines ranging from psychology/social psychology, sociology/economics/political science to management/communication. As a result [2] developed an interdisciplinary model of trust constructs (see exhibit 1).

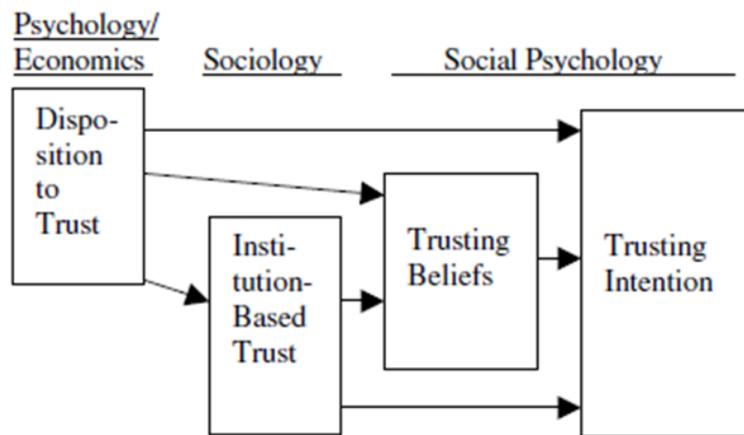


Exhibit 1. Interdisciplinary Model of Trust Constructs [2]

Within [2]’s model “disposition to trust” depicts the individual’s willingness to trust and “institution based trust” refers to the needed conditions of structural assurance (e.g. laws, regulations) and situational normality. “Trusting intention” reflects the individual’s willingness to depend on another person. Of particular interest for the scope of this paper are the trusting beliefs, as they are basically the single component which can be influenced by someone who wants to be trusted. Trusting beliefs are defined by [2] as “...one believes (and feels confident) that the other person has one or more traits desirable to one in a situation in which negative consequences are possible”.



The goal of this research is to validate a trust marketing framework that is intended to build up the trusting beliefs identified by [2] on its applicability to build up trust for high risk products.

The most influential research on building up trust is [16] who identifies three modes of trust production: process-based trust production, characteristics-based trust production and institutionally-based trust production. Existing trust research in the marketing discipline is very focused on specific topics like e.g. distribution channels (e.g. [23]), buyer-seller relationships (e.g. [24], [25], [26]), online business (e.g. [27], [19], [28]) or brands (e.g. [29], [30], [31]).

3. Model Development & Hypotheses

In the following the Trust Triangle Marketing Model (TTMM) in exhibit 2 gets developed based on the review of existing marketing and trust research. To the best of the author's knowledge currently no general trust marketing framework for high-risk products exists.

For the marketing discipline [32] points out that risk has to be differentiated from the concept of perceived risk, as "...true or actual probabilities of loss are not relevant to the consumer's reaction to risk except as that past experience is the basis for present perception. The consumer can only react to the amount of risk she actually perceived and only to her subjective interpretation of that risk." As [33] argues "...even if the consumer could calculate accurately the risk involved, it is not this objective risk which motivates behavior, but the consumer's subjective impressions of it". Moreover [34] stresses the customer's perspective on the risk is determined by his perception, as the customer can only "...respond to and deal with risk only as he perceives it subjectively".

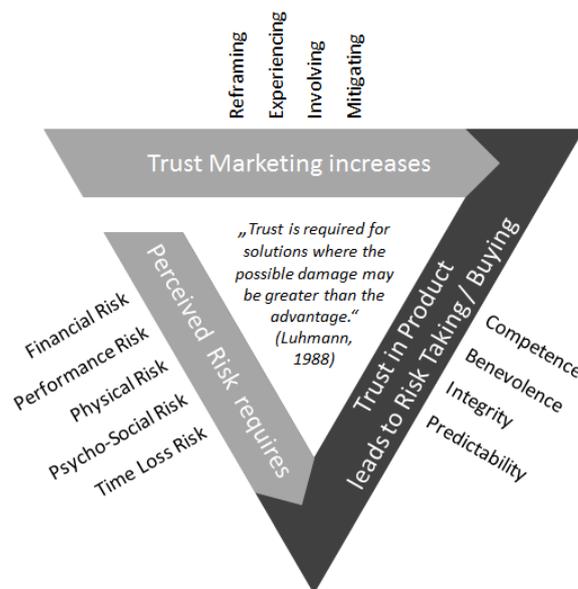


Exhibit 2. Trust Triangle Marketing Model (TTMM)



The concept of perceived risk was introduced to the marketing discipline in 1960 by [34] as "...consumer behavior involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty, and some of which at least are likely to be unpleasant." [35] defines perceived risk as "...a function of uncertainty and consequences." [32] regards perceived risk as "...the perceived uncertainty of a given event happening and the consequences involved if the event should happen." In addition to that [36] defines perceived risk as "...the fear that the product does not match the goals of purchase."

Perceived risk, consist of five risk types: financial, performance, physical, psychological, and social risk [37] whereas the risk types psychological and social risks "...are usually fused and treated as one (i.e. psycho-social risk) [37]. Thus, for the following the risk types psychological and social risk will be combined to psycho-social risk. Furthermore, [38] introduced the additional perceived risk type "time loss". Based on the definitions of [39], [40] and [38] the previous mentioned categories of perceived risk will be defined for this research as follows:

- Financial Risk: Potential loss of money due to the purchase or usage of the product. This also includes the costs for eventually replacing the product.
- Performance Risk: Potential loss due to a product's failure or insufficient quality.
- Physical Risk: Potential loss of non-mental health due to the purchase or usage of the product.
- Psycho-Social Risk: Potential loss of mental health, ego, social status or social relationships due to the purchase or usage of the product.
- Time Loss Risk: Potential loss of time due to a product's failure or insufficient quality.

TTMM Conclusion 1: Perceived risk consists of the five risk categories financial risk, performance risk, physical risk, psycho-social risk and time loss risk.

As the customer perceives the risk of a product, the critical issue for the vendor is if the customer also takes the risk in terms of actually buying the product. Trusting another party describes a willingness to be vulnerable but does not automatically include the actual activity of taking the risk [17]. However, trusting the other party leads to risk taking [17], which is conceptualized in the TTMM as buying the product (see also [41] "Trust plays a central role in helping consumers overcome perceptions of risk and insecurity"). Furthermore, the higher the perceived risk, the more trust is required by the customer in the product to take the risk of buying the product ([17], and see also the famous quote of [10]: "Risk-taking and trusting behavior are thus really different sides of the same coin").

TTMM Conclusion 2: Perceived risk requires trust to enable customer risk taking, i.e. buying the product.

The level of trust is determined by the trusting beliefs according to [2]'s interdisciplinary model of trust constructs. The trusting beliefs consist of the four sub-constructs competence, benevolence, integrity and predictability [2]:

- Competence belief: "...one believes the other person has the ability or power to do for one what one needs done." [2]
- Benevolence belief: "...one believes the other person cares about one and is motivated to act in one's interest. A benevolent person does not act opportunistically." [2]



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- Integrity belief: "...one believes the other person makes good faith agreements, tells the truth, and fulfills promises." [2]
- Predictability belief: "...one believes the other person's actions (good or bad) are consistent enough that one can forecast them in a given situation." [2]

Trust marketing aims at building up the trusting beliefs for a specific high-risk product or vendor.

TTMM Conclusion 3: Trust in the high-risk product is determined by the trusting beliefs competence, benevolence, integrity and predictability of the high-risk product.

Trust marketing is proposed to build up the trusting beliefs of a high-risk product. Therefore the TTMF consist of four marketing strategies (see exhibit 3): reframing, experiencing, involving and mitigating. In the following a short overview of the theoretical foundation of the trust marketing strategies is provided:

- **Reframing Strategy:** As [13] points out, familiarity is the precondition for trust. Furthermore [34] emphasizes that the perception customers have about a company is the dominant source of influence when risk is high. Thus the reframing strategy aims at providing information to the customers about the high-risk product, the company as well as information on how trusted third parties regard the high-risk product. Thereby the customer's familiarity with the product and the company should be increased and the customer should be enabled to make a better judgment of the product's and vendor's trustworthiness.

Definition Reframing Strategy: Building up the trusting beliefs benevolence, competence, integrity and predictability via sharing information about the company or the product from own sources or from trusted third parties.

- **Experiencing Strategy:** Based on [17] "...the level of trust will evolve as the parties interact". Thus it is the idea behind the experiencing strategy to build up trust via actively created interactions with the high-risk product and the vendor before the purchase, via e.g. product simulations, product trials, interaction with sales people or demonstrating that the vendor cares about the customer's needs. Thereby the customer is intended to build up an experience history that further builds up trusting beliefs. In addition to that the experiencing strategy is also intended to prove the information provided in the reframing strategy.

Definition Experiencing Strategy: Building up the trusting beliefs benevolence, competence, integrity and predictability via the customer experiencing the company or the product.

- **Involving Strategy:** [42] made an interesting finding on the "production of trust during an experiment on how to increase trust in the management of a nuclear power plant. From a range of alternatives only one was perceived to have a substantial impact on trust in the experiment, which was about giving an advisory board of local citizens and environmentalists the ability to monitor the plant and the ability to shut it down if they belief the plant to be unsafe". [42] refers to this principle as "delegation of authority". Thus within the involving strategy it is proposed to create customer trust via delegating authority to a limited extend via involving all customers, specific



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customer groups or trusted third parties in product design or significant customer-affecting business decisions. However, the involvement does not automatically lead to a guaranteed influence on the vendor's final course of action.

Definition Involving Strategy: Building up the trusting beliefs benevolence, integrity, and predictability via publicly involving customers or trusted third parties in the design of products and decisions that impact customers.

- **Mitigating Strategy:** This strategy is alluding to [16]'s findings that trust can be built by a party making use of insurance signals, i.e. "...doing everything to protect the other party from a loss and behaving in a responsible manner". Furthermore [16] notes that via regulation (e.g. laws, contracts) institutionally-based trust can be established which "...generalizes beyond a given transaction and beyond specific sets of exchange partners". In addition to that, regulation can be seen as a control mechanism for the trustor over the trustee which also reduces his risk. Moreover [22] sees in control systems "...an alternate mechanism for dealing with risk in relationships." For the TTMF the mitigating strategy provides regulation which offers an advantage to the customer in terms of reducing the perceived risk. Thereby a required trust threshold for a high-risk product can be reduced via offering product modifications, special support agreements, service and enforcement guarantees or financial insurances.

Definition Mitigating Strategy: Building up the trusting beliefs benevolence, competence and predictability by mitigating the perceived risk.

Each of the four trust marketing strategies consists of three marketing approaches. These four trust marketing strategies together with the twelve trust marketing approaches form the TTMF (see exhibit 3).

Reframing	Experiencing	Involving	Mitigating
Definition: Building up the trusting beliefs benevolence, competence, integrity and predictability via sharing information about the company or the product from own sources or from trusted third parties.	Definition: Building up the trusting beliefs benevolence, competence, integrity and predictability via the customer experiencing the company or the product.	Definition: Building up the trusting beliefs benevolence, integrity, and predictability via publicly involving customers or trusted third parties in the design of products and decisions that impact customers.	Definition: Building up the trusting beliefs benevolence, competence and predictability by mitigating the perceived risk.
Corporate Transparency Definition: Building up the trusting beliefs benevolence, integrity and predictability via sharing information signaling the company's high levels of responsibility, customer commitment and transparency. <i>Examples: security policies, privacy policies, financial situation, legal situation, business policies and practices, code of conduct,</i>	Caring Signals Definition: Building up the trusting beliefs benevolence, competence, integrity and predictability via free of charge services beyond the core product and processes to demonstrate self-commitment to the customer's interests. <i>Examples: risk assessments, tracking options, insurances, extended guarantees, complimentary services, early notifications, low</i>	Entire Customer Base Definition: Building up the trusting beliefs benevolence, integrity and predictability via publicly involving the entire customer base (breadth approach) in the design of products and decisions that impact customers. <i>Examples: customer feedback processes, crowdsourcing, integration in quality management, adaptation to standards, etc.</i>	Product Modification and Support Definition: Building up the trusting beliefs benevolence, competence and predictability by mitigating the perceived risk via individual product modifications and support agreements. <i>Examples: product modifications, customized service level agreements, extended guarantees, etc.</i>



Reframing	Experiencing	Involving	Mitigating
<i>vision & mission, business history, business size, court of jurisdiction, similarities, etc.</i>	<i>vendor lock-in barriers, re-work, etc.</i>		
<p>Product Explanation Definition: Building up the trusting beliefs competence and predictability via sharing information on how and why the product is able to handle the risk. <i>Examples: product information, technology, roadmap, logic, brand, trainings, how-to guidance, quality/performance statistics, “dogfooding”, etc.</i></p>	<p>Interaction Excellence Definition: Building up the trusting beliefs competence, predictability and integrity via high standards of professionalism and quality in core customer facing processes. <i>Examples: high standards regarding responsiveness, synchronous communication, accessibility/usability of information resources, professional conduct, complaint management, keeping commitments, etc.</i></p>	<p>Specific Customer Groups Definition: Building up the trusting beliefs benevolence, integrity and predictability via publicly involving specific customer groups (depth approach) in the design of products and decisions that impact customers. <i>Examples: “lighthouse” customers, user groups, customer advisory boards, specific customer segments (e.g. vertical focus), etc.</i></p>	<p>Service- and Enforcement-Guarantees Definition: Building up the trusting beliefs benevolence and predictability by mitigating the perceived risk via binding regulations guaranteeing customer rights. <i>Examples: auditing/monitoring/inspection regulations, acceptance procedures, return policies, free-rework, defined customer rights, enforcement policies, service levels, guarantees, dispute resolution services & mediation, etc.</i></p>
<p>Trust Extension Definition: Building up the trusting beliefs competence, integrity and predictability via extending the trust of third parties on the company and its products. <i>Examples: patents, certificates, vertical expertise as well as testimonials, ratings and references from experts, customers, opinion leaders, partners suppliers, verticals, etc.</i></p>	<p>Simulation and Usage Definition: Building up the trusting beliefs competence and predictability via experiencing a simulated or real application of the product. <i>Examples: Simulation, testing, demonstration, samples, showcases at existing customers, etc.</i></p>	<p>Trusted Third Parties Definition: Building up the trusting beliefs benevolence, integrity and predictability via publicly involving trusted 3rd parties in the design of products and decisions that impact customers. <i>Examples: partners, experts, scientists, residents, unions, public authorities, special interest groups, etc.</i></p>	<p>Financial Insurances Definition: Building up the trusting beliefs benevolence and predictability by mitigating the perceived risk via insurances that financially cover partly or fully the possible damages. <i>Examples: compensations, penalties, indemnification, risk transfer, etc.</i></p>

Exhibit 3. Trust marketing strategies

TTMM Conclusion 4: The Trust Triangle Marketing Framework (TTMF) consists of the four trust marketing strategies reframing, experiencing, involving and mitigating which build up the trusting beliefs of the high-risk product concerned.

In order to test the TTMF on its ability to build up customer trust for high-risk products, the following hypotheses are proposed:

- H0: Trust can be build up for high-risk products via the trust marketing framework.
- H1: Trust can be build up for high-risk products via the reframing strategy.
 - H1a: Trust can be build up for high-risk products via the reframing marketing approach corporate transparency;
 - H1b: Trust can be build up for high-risk products via the reframing marketing approach product explanation;
 - H1c: Trust can be build up for high-risk products via the reframing marketing approach trust extension;



- H2: Trust can be build up for high-risk products via the experiencing strategy.
 - H2a: Trust can be build up for high-risk products via the experiencing marketing approach caring signals;
 - H2b: Trust can be build up for high-risk products via the experiencing marketing approach interaction excellence;
 - H2c: Trust can be build up for high-risk products via the experiencing marketing approach simulation and usage;
- H3: Trust can be build up for high-risk products via the involving strategy.
 - H3a: Trust can be build up for high-risk products via the involving marketing approach entire customer base (breadth);
 - H3b: Trust can be build up for high-risk products via the involving marketing approach specific customer groups (depth);
 - H3c: Trust can be build up for high-risk products via the involving marketing approach trusted third parties;
- H4: Trust can be build up for high-risk products via the mitigating strategy.
 - H4a: Trust can be build up for high-risk products via the mitigating marketing approach product modification and support;
 - H4b: Trust can be build up for high-risk products via the mitigating marketing approach service and enforcement guarantees;
 - H4c: Trust can be build up for high-risk products via the mitigating marketing approach financial insurances;
- H5: The trust marketing strategy mix and their marketing approaches differ between industries.

A “high-risk product” in the context of this study means that a product involves a risk of a possible damage to the customer, which is greater than the products advantage for the customer.

4. Empirical Design

For the empirical test of the hypotheses expert interviews have been conducted across 15 industries (see exhibit 4) of high-risk products. The method of expert interviews has been selected for the following reasons:

- **Ex ante concept validation:** at the current point of the research the general feasibility of the trust marketing framework has to be tested.
- **Feasibility evaluation:** The feasibility of marketing and sales approaches has to be evaluated which requires significant domain expertise of the specific vertical, product and technology (e.g. legal constraints, market dynamics, channel structure, etc.).
- **Reasonableness evaluation:** The reasonability of marketing and sales approaches has to be evaluated which requires significant domain expertise of the specific vertical, product and technology (e.g. return on marketing investment, vertical specific buying center structure, etc.).
- **Asymmetric information:** high-risk products in general require a high level of expertise as they are mostly expert systems. This special knowledge is very often only available on the vendor side (e.g. eye laser surgery, nuclear power plants, etc.).



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For an expert to qualify for an interview on the corresponding high-risk product, the following criteria have to be met:

- 5+ years of relevant domain expertise concerning the product and its market;
- Market or customer facing role or experience;
- Management or consultancy position in one of the leading companies in the corresponding market.

The interviews have been conducted face-to-face using a semi-structured questionnaire with questions on:

- Perceived risk description;
- Perceived risk categorization;
- Extend of the possible damage to qualify as a “high-risk” product, i.e. that the perceived possible damage must be greater than the product’s advantage for the customer [1];
- Applicability of the Trust Triangle Marketing Framework strategies and marketing approaches (see exhibit 3).

5. Results

The expert interviews covered the products shown in exhibit 4 with the identified perceived risks. Out of the 15 high-risk products, eight products are from the business to business space, six are out of the business to consumer space, and one product is concerning both business types.

ID	Industry	B2B/C	Perceived Risk
1	Business Strategy Consulting	B2B	Possible bankruptcy
2	Fighter Airplane Software Quality Assurance	B2B	Death of human beings (from pilots to civilians)
3	Enterprise Antivirus Solutions	B2B	Breakdown of business operations
4	Private Financial Investment Consultancy	B2C	Loss of financial existence (e.g. retirement arrangement)
5	Private Insurance Consultancy	B2C	Incongruent risk coverage
6	Digital Content Protection	B2B	Loss of intellectual property and business model
7	Biometric Devices for Access Systems	B2B	Access to high value assets
8	Automated Production Solutions	B2B	Product specifications not achieved
9	New medicaments with high financial invest for patient	B2C	Disproportional treatment efforts
10	Eye Laser Treatment	B2C	Loss of eyesight quality
11	Urban Rope Ways in Western Asia	B2B	Damage of human health due to lack of quality
12	Cloud Computing in public Clouds	B2B	Loss of control
13	Nuclear Power Plant	B2C	Loss of health due to nuclear radiation
14	Airport	B2C	Losses regarding quality of life
15	Legal Counseling by Lawyers	B2B & B2C	Losses due to miscounseling

Exhibit 4. High-Risk Products & Perceived Risk



All of the regarded products were qualified by the experts as high-risk products, as they have rated the perceived possible damage of the corresponding product higher than its advantage for the customer.

Affected Perceived Risk Categories

Affected Perceived Risk Category	Frequency [abs]	Frequency [%]
Financial Risk	14	93.3%
Performance Risk	10	66.7%
Physical Risk	7	46.7%
Psycho-Social Risk	7	46.7%
Time Loss Risk	7	46.7%

ID	Financial Risk	Performance Risk	Physical Risk	Psycho-Social Risk	Time Loss Risk
1	●	●			
2	●	●	●		●
3	●	●			●
4	●	●		●	●
5	●	●	●	●	●
6	●	●			●
7	●				
8	●	●			●
9	●	●	●		
10	●	●	●		
11	●	●	●	●	
12	●			●	
13			●	●	
14	●		●	●	
15	●			●	●

Exhibit 5. Affected Perceived Risk Categories

The perceived risks were assigned to the perceived risk categories by the experts as shown in exhibit 5, whereby a perceived risk can affect multiple categories. All products, except nuclear power plants, affected the financial risk category, whereas performance risk was the second most affected perceived risk category, with 67% of all high-risk products.

Results in exhibit 6 depict the applicability of the TTMF strategies across the 15 high-risk products. A strategy qualified to be applicable to build up customer trust for a high risk product, if at least one of its corresponding marketing approaches has been evaluated of being able to build-up customer trust. As the TTMF is applicable with at least one marketing strategy to all of the 15 high-risk products, H0 is supported. Furthermore, also each of the four TTMF strategies builds up customer trust for at least one of the high-risk products (see exhibit 6). Thus, also H1, H2, H3 and H4 is supported.



Applicable TTMF Strategies

Trust Marketing Strategy	Frequency [abs]	Frequency [%]
Reframing	15	100%
Experiencing	15	100%
Involving	12	80%
Mitigating	11	73%

ID	Reframing	Experiencing	Involving	Mitigating
1	•	•	•	
2	•	•	•	•
3	•	•	•	•
4	•	•	•	•
5	•	•	•	•
6	•	•	•	
7	•	•	•	
8	•	•		•
9	•	•	•	•
10	•	•		•
11	•	•	•	•
12	•	•	•	•
13	•	•	•	•
14	•	•	•	•
15	•	•	•	•

Exhibit 6. Applicable TTMF Strategies

In addition to the four TTMF strategies, also each of the marketing approaches builds up trust for at least one high-risk product (see exhibit 7) which supports H1a, H1b, H1c, H2a, H2b, H2c, H3a, H3b, H3c, H4a, H4b and H4c. Moreover, exhibit 7 also shows that the TTMF strategies and their marketing approach mix varies from industry to industry, which supports H5.

6. Discussion

Regarding the affected categories of perceived risk (see exhibit 5), financial risk is the most dominant category, as either the high-risk products are very expensive (e.g. an urban ropeway) or have a significant impact on the value of other assets (e.g. encryption systems as the basis for an entire business model). Interestingly, performance risk is only affected for 66,7% of all products as some products expose the risk to customers independent of their performance (e.g. a nuclear power plant is also perceived as a risk, even if it is at a low utilization for a certain reason).

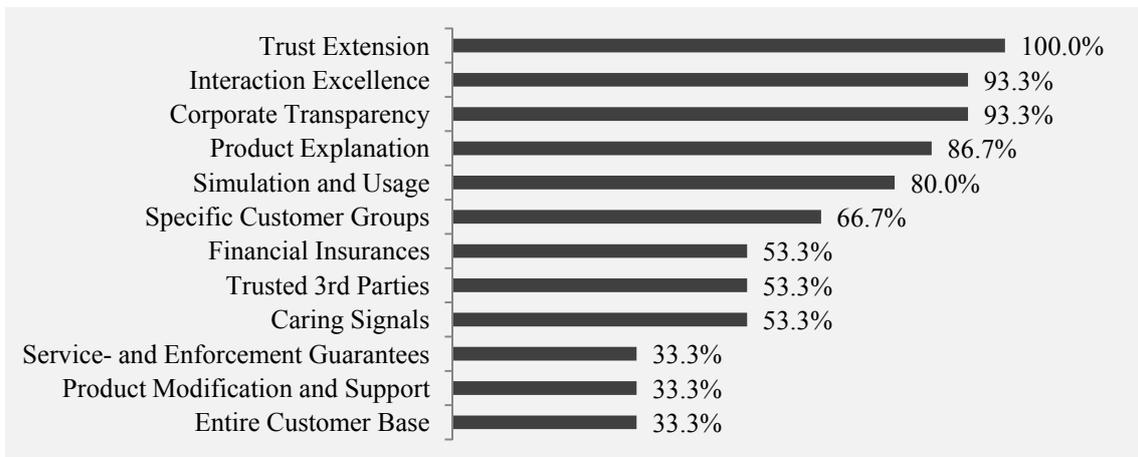
Given the empirical support for all hypotheses, the TTMF is proposed to be able to build-up customer trust for high-risk products. However, the TTMF strategy-mix is proposed to be varied depending on the requirements of the specific products and industries. On a TTMF



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strategy level, the reframing and experiencing strategy are applicable across all products with different marketing approach mixes reflecting adoptions to the unique requirements to the specific markets. As an exception to this, the trust extension marketing approach is evaluated to be applicable across all the high-risk products. The reason for this is suggested to be that in all industries an in general trusted third party exists like e.g. universities, government agencies, etc.

Applicable TTMF Strategies' Marketing Approaches



ID	Corporate Transparency	Product Explanation	Trust Extension	Caring Signals	Interaction Excellence	Simulation and Usage	Entire Customer Base	Specific Customer Groups	Trusted Third Parties	Product Modification and Support	Service- and Enforcement Guarantees	Financial Insurances
1	●	●	●		●	●		●				
2	●	●	●		●	●			●	●		
3	●	●	●		●	●		●	●		●	
4	●	●	●	●	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●	●			●
6	●	●	●		●			●				
7		●	●		●				●			
8	●		●		●	●				●		●
9	●		●	●				●	●			
10	●	●	●	●	●	●					●	
11	●	●	●	●	●	●		●	●	●	●	●
12	●	●	●	●	●	●	●	●			●	●
13	●	●	●	●	●	●	●	●				●
14	●	●	●		●	●	●	●	●			●
15	●	●	●	●	●	●				●		●
	Reframing Strategy			Experiencing Strategy			Involving Strategy			Mitigating Strategy		

Exhibit 7. Applicable TTMF Strategies' Marketing Approaches



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Interestingly for some industries (e.g. business strategy consulting, digital content protection, biometric devices, medicaments) the results suggests that the perceived risk cannot be mitigated for the customer by the proposed means of insurances, guarantees, product support, etc. As a root cause for this it is suggested that the costs for an insurance are either too high or the risk itself cannot really be mitigated (e.g. if the treatment with a new medicament does not show the intended effect). For some industries the involving strategy is not applicable, it is suggested that either the level of information asymmetry between the vendor and the customer is too big or the customer is not willing to invest resources in the involvement process.

7. Conclusion

The empirical test of the TTMF across 15 markets of high-risk products proposes support for its ability to build up customer trust for high-risk products. Thus, the TTMF is supposed to be a tool for vendors of high-risk products to overcome efficiency issues in their sales process like e.g. longer sales cycles, lower conversion rates and image issues. However, as the TTMF has been tested as an ex-ante concept validation, also an ex-post study indicates further research, i.e. measuring the impact on sales process throughput for a high-risk product with and without the TTMF being applied to it. Additional research is also indicated in the field of trust marketing, e.g. regarding a benchmarking of different trust marketing approaches on their effectiveness to build up customer trust. In addition to that, it is also of interest if an increase in trust marketing activities per se also has an impact on customer satisfaction, which indicates further research towards this direction. With the continuous upcoming of new technologies and their rising degree of interconnectedness, customers do more and more loose the chance of dealing with the fast growing rate of complexity. Thus, trust with its ability to reduce complexity [13] can be expected to become even more important for the marketing discipline.

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EMPLOYERS COMPANY IMAGE – SUPPORTING FACTOR FOR EMPLOYEES MOTIVATION

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Abstract

The speedy development of modern telecommunication technologies in the world as well as in Latvia has led to struggle and close contest in today's telecommunication industry. Telecommunication companies demand that their staff would be educated, creative, efficient, motivated and loyal. Preparation of good practitioners able to perform activities for creation of competitive products and services takes time and huge efforts. Companies are interested to keep their professional staff for the company development. For that efficient motivation ways and means are needed. To keep so good and motivated staff besides material and moral motivators is important also company image in the eyes of the current employees as well as in the minds of general public where are also possible future employees, but of course, current service users.

The purpose of the study was to explore relationships between motivation factors and company image; examine factors that are associated with likelihood that employees will engage in effective and efficient business performance. Author compared findings on factors associated with likelihood that employees will engage in effective and efficient business performance and analyzed what are the relationships among – motivation and company image in telecommunication and other industries in Latvia. Research methods used: scientific literature review, survey of employees (1098 surveys of general public and 473 surveys of telecommunications industry employees are used for empirical data analysis). The following measures in the survey were used to: 1) list of motivators; 2) list of statements on skills, engagement and resources available in company; 3) perceptual performance; 4) demographic profile of sample (age, gender, occupational type and detailed information on position, education, income, and industry). The respondents were asked to use 7-point scale ranging from 1 – inapplicable to 7 – applicable in higher extent to indicate which motivational instruments are applied in current working place. Skills were evaluated in 7-point scale, where 1 – strongly disagree and 7 – strongly agree. For data analysis indicators of central tendency or location and indicators of variability were used, as well as cross-tabulations are used.



Theoretical Background

Researches on employee behaviour in organizations have outlined several critically significant factors that can either positively or negatively influence the overall performance of an organization. There is common assumption in both academic and professional environment that qualitatively selected and managed human capital in the most important factor advancing a company's success. In times when unpredictable economic changes take place, the human capital available to organizations has to be managed and used so that it would be useful, reflective to society's changing needs, productive and effective in creating new value [2]. Researchers Meyer, Becker and Vandenberg [11] emphasize that although knowledge is recognized as one of the company's most valuable assets, most companies lack a systematic approach towards maintaining knowledge as a value and utilizing for company's needs. Researchers Humphrey, Nahrgang and Morgenson [9] emphasized that the return on investment in knowledge and the creation of skills is a long term process, therefore, from the viewpoint of return on investment and effectiveness, keeping an employee is important. Moreover, the skills and wish to utilize one's knowledge also depend on one's salary, professional development, career opportunities and job content [3]. In turn, researcher Meyer [15] associates knowledge transfer in a company with employee's commitment to it. Commitment component is included in an employee's intellectual capital definition and according to him/her, a company's intellectual capital is the competence of each one of his employees or skills, knowledge and personal characteristics in synergy with each employees readiness to work to their full potential. In scientific literature [17; 13; 25; 28], there exist conclusions that there are several reasons why employees become committed to companies. These factors can be both emotional attachment to an organization whose values correspond to those of employees and rational considerations on gaining material benefits, and also the feeling of responsibility towards an organization [15]. Organizational scientists and practitioners have long been looking for answers what does effective behaviour of employee drive more – motivation or commitment, is there a difference between motivation and commitment, are both concepts worth retaining and if so, how they are related and how they combine to influence employee's behaviour? One explanation for the relative independence of the two concepts is might be differences in their origin and objectives. Theories of work motivation evolved out of more general theories of motivation and have largely been applied to explain task performance. This emphasis is most evident in goal setting theory developed in great extent by Locke and Latham [18] which is dominant theory in work motivation literature [22; 14; 27]. In turn commitment has its roots in sociology and social psychology and is viewed as a potential predictor of employee turnover. However, motivation theories have since been used to explain turnover [19; 29] and commitment has been examined as determinant of job performance [4; 6] and organizational citizenship behaviour [24; 21; 5]. The motivation as concept is generally defined as a composition of powers and mechanisms which help to direct human behaviour in a desired manner or with a more specific context it is described as the all convincing and encouraging actions which employees fulfil their tasks willingly and to come closer to organizations' objectives. In turn commitment is defined in similar way as a force that binds an individual to a course of action that is of relevance to particular target [3]. Recently serious attempts have been made to insert psychological theories of motivation into economic theories mainly because of connecting extrinsic motivation and employee's productivity or work performance.



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Researchers Moorhead and Griffin [16] claim that retaining the employee and his productivity depends on his motivation. They conclude that a successful application of several motivators increases job satisfaction and therefore enhances job productivity. The relationship between motivation and productivity can be summarized as that productivity is directly linked to motivation, and motivation is, in turn dependent on productivity. Suitable motivation of employees can be hypothesized as a key contributor to maximizing workers' productivity [26]. The output or performance of employee is a function of effort, ability and incentives. Incentives being the fundamental of economics, grounded by agency theory which rely on perception that motivation and increased performance can be explained by external stimulus mainly [10]. Researcher Sumanth [26] defines productivity as the amount of work that an employee can perform in a specific period of time. More often productivity is being regarded as a quantitative measure of work and is being associated with speed in which an employee can perform a task in comparison with others performing a similar task. Perceptions of productivity concepts vary widely within engineering, academia, manufacturing and service industries. In academic research [8; 16; 23] continuously is confirmed that services are becoming increasingly important. As economies world-wide are experiencing a tremendous shift from manufacturing to knowledge-based service, the major competitive advantage of these industries has become service quality and customer loyalty consequently. Numerous studies support the idea that a link exists between employee satisfaction and customer satisfaction, productivity, and financial results [6; 12; 30]. As customer loyalty is viewed as a primary determinant of a company's profit and growth, the existing researches on human resource management in different businesses highlight that value to the customer is created by loyal and satisfied employees [7; 18; 22]. Employee involvement and satisfaction are acknowledged as two of the most important drivers of continuous improvement and satisfied customers. Total quality management concept argues that satisfied employees are highly motivated, have good work morale, and work more effectively and efficiently [15]. However currently a large amount of studies measured of effectiveness and motivation of employees are devoted to manufacturing industries, the measurement researched in the field of telecommunication industry are hardly fewer [29]. This study will provide insight into the fact how motivational forces can enhance performance of employees in telecommunication industry in countries like Latvia where productivity rate call to question issues which motivate or demotivate employees.

Companies values and culture may not only be a factor attracting employees but it also performs by retaining employees and enhancing commitment towards the company. Employees that wish to work in the company for a longer period of time mention company values and their realization in organization's culture as one of the attracting factors. However, the greater the discrepancy between the declared values and realized culture, the greater disagreements between the management and employee are expected, the greater the dissatisfaction with work and more cynical behaviour from employees. Moreover, it is believed that the more organization's preferable and real values and realized culture correspond, the more employees are trustworthy and motivated to work in this company [17] Therefore, the author sets to research whether company's culture could work as a motivational factor which strengthens motivation.

The main purpose of this study is exploring what factors influence motivation and commitment in service sector particularly in telecommunication industry in Latvia. The paper



will contribute to the explanation of understanding of the relationships between people motivation dimensions and effective performance in service sector. The results of this study can provide telecommunication operations with insights into resource allocation for motivating employees and getting competitive advantage as well as help with strategic decision-making, especially regarding operational styles under an intense competitive environment.

Empirical Research Results

The author has chosen telecommunications industry which has been characterized by one of the most stable growth trends also during the economic crisis, intense competition in the industry, especially in mobile communications niche, diverse range of products offered, and changes from being discretionary to essential service for customer needs. In Latvia, 2010 there were 419 registered electronic communications' merchants out of which 297 were operating [20]. 47 electronic communication's merchants [20] have indicated that they operate in whole territory of the Republic of Latvia, while the rest operates in some regions or cities. However, it should be noted that the majority of electronic communications' merchants are small and the offered services are available only in small parts of the region or in cities. Internet and mobile communications have developed particularly rapidly, therefore, these areas should be specifically analyzed when discussing the future and development of telecommunications industry. In the past years, the number of merchants that provide internet access services has decreased, while the number of provided access points significantly increases. The Latvian telecommunication industry can be characterized by a small group of strong players, possessing significant market power. For many years the major state owned telecommunication company *Lattelecom* took the leading role in providing fixed line services. The role was altered by two strong mobile operators *Latvijas Mobilais telefons (LMT)* (state and *Lattelecom* owned) and *Tele2*, acquired by foreign investors and being represented in all three Baltic countries. Lately *Bite* started price and marketing aggressive activities in Latvian market that shaped price and products' offerings in this industry. A telecommunications company must invest resources in company's development in order for it to be competitive and attracting clients. When comparing capital investments in telecommunications operators, it can be concluded that investments have decreased in all telecommunication companies' during the economic crisis in Latvia. A significant part of investment for mobile communications operators are channelled into the development of network because it is one of the main competitive advantages which is highly valued by clients. If the overlay of providing voice services practically covers all territory of Latvia for all three operators, then in order to provide a fast and qualitative data transmission operators actively invest in new generation (3G) network development. 3G mobile internet technology is able to provide data download speed up to 42 megabits per second [20]. Leading mobile communications companies in Latvia have already tested the next generation's – fourth's 4G network, however, none of the operators have intended to hurry up with its implementation due to the lack of a certain business model that would be attractive to both the consumer and the company [20]. Telecommunications industry is not only technologically rapidly developing sector, but also an industry that actively attracts and employs workforce. According to research findings from Lithuania telecommunication industry, the usage of



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non-financial company's performance measures for top level management decision making is prevalent against the usage of financial measures [12]. Such factors as customer service and service quality are high-ranked and always connected to employee satisfaction, loyalty and motivation. Moreover, employees working in this industry differ from other by demographic and social indicators. Also job content is different – employees are required to have higher competence, creativity and good communication skills. Possibly, the work culture in this industry is more client and quality oriented, therefore satisfaction of clients, good financial results and progressive technological solutions are among the requirements, goals for the employees.

To evaluate the situation of employees motivation and importance of the company reputation in telecommunication industry in comparison with other industries in Latvia, author has initiated survey of employees (1098 surveys of general public and 473 surveys of telecommunication industry employees). The respondents were asked to use 7-point scale ranging from 1 – strongly disagree and 7 – strongly agree. Distribution of main statistical indicators on evaluations of statements in telecommunication companies and other companies in Latvia in 2010 is presented in table 1.

Table 1

Distribution of main statistical indicators on evaluations of statements in telecommunication companies and other companies in Latvia in 2010

		Company has a clean slate (good reputation)		Good, comfortable working conditions (including location place, modern equipment and methodologies)	
		Telecommunication	Other	Telecommunication	Other
N	Valid	473	1098	473	1098
	Missing	0	0	0	0
	Mean	6.17	5.04	5.99	4.76
	Std. Error of Mean	0.038	0.046	0.048	0.052
	Median	6.00	5.00	6.00	5.00
	Mode	6	6	6	6
	Std. Deviation	0.821	1.512	1.044	1.733
	Variance	0.675	2.285	1.091	3.005
	Range	5	6	6	6
	Minimum	2	1	1	1
	Maximum	7	7	7	7

Evaluation scale 1-7, where 1 – strongly disagree; 7 – strongly agree

Source: Author's calculations, data of survey August-December, 2010: telecommunication employees (n=473) and other employees (n=1098)



Data of table 1 indicates that evaluations on statement “Company has a clean slate (good reputation)” are a little higher (arithmetic mean and median) in telecommunication companies, as well as variability of responses is lower in telecommunication companies. Distribution of evaluations on statement that employees have “Company has a clean slate (good reputation)” in telecommunication companies and other companies in Latvia in 2010 is presented in table 2.

Table 2

**Distribution of evaluations on statement that employees have
“Company has a clean slate (good reputation)” in telecommunication
companies and other companies in Latvia in 2010**

		Telecommunication		Other	
		Frequency	Percent	Frequency	Percent
Valid	1	0	0	27	2.5
	2	1	0.2	54	4.9
	3	4	0.8	87	7.9
	4	9	1.9	186	16.9
	5	65	13.7	257	23.4
	6	215	45.5	297	27.0
	7	179	37.8	190	17.3
	Total	473	100.0	1098	100.0

Evaluation scale 1-7, where 1 – strongly disagree; 7 – strongly agree

Source: Author’s calculations, data of survey August-December, 2010: telecommunication employees (n=473) and other employees (n=1098)

Data of table 2 indicates that evaluations on statement “Company has a clean slate (good reputation)” are higher in telecommunication industry (there are no lower evaluations, more that 80% of respondents give the evaluation 6 or higher), for other industries 2.5% of respondents gave the lowest evaluations and evaluation of 6 or more gave 44.3% of the respondents. Distribution of evaluations on statement that employees have “Good, comfortable working conditions (including location place, modern equipment and methodologies)” in telecommunication companies and other companies in Latvia in 2010 is presented in table 3.

Data of table 3 indicates that evaluations on statement that employees have “Good, comfortable working conditions (including location place, modern equipment and methodologies)” are higher in the telecommunication companies (evaluation of 6 or higher is given by 75.9% of the respondents), in other fields evaluations differ more and highest evaluations are much less (evaluation of 6 or higher is given by 40.1% of the respondents).



Table 3

Distribution of evaluations on statement that employees have “Good, comfortable working conditions (including location place, modern equipment and methodologies)” in telecommunication companies and other companies in Latvia in 2010

		Telecommunication		Other	
		Frequency	Percent	Frequency	Percent
Valid	1	2	0.4	72	6.6
	2	5	1.1	70	6.4
	3	6	1.3	105	9.6
	4	22	4.7	179	16.3
	5	79	16.7	232	21.1
	6	195	41.2	260	23.7
	7	164	34.7	180	16.4
	Total	473	100.0	1098	100.0

Evaluation scale 1-7, where 1 – strongly disagree; 7 – strongly agree

Source: Author’s calculations, data of survey August-December, 2010: telecommunication employees (n=473) and other employees (n=1098)

Conclusions

Among the motivation factors for employees on great importance is company reputation as well as good, comfortable working conditions (including location place, modern equipment and methodologies). Employees of telecommunication companies have evaluated the company reputation higher as representatives from other fields.

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DIVERSITY OF ADR SCHEMES: DOES IT MEAN DIVERSITY OF ADR EFFECTIVENESS?

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Abstract

This article is the second article of two, which highlights the issues regarding consumer knowledge and possibilities to turn for help in case of cross-border complaints, examining the concept of *alternative dispute resolution* (hereafter ADR) schemes and trying to determine which type of ADR is the most effective from a consumer cross-border complaint resolution perspective.

The article is created from empirical, quantitative and partially primary, partially secondary research perspectives and the aim of this article is to evaluate the effectiveness of different ADRs to be able to help consumers to choose the most appropriate ADR scheme when they are seeking redress for their cross-border problem. Thus the objectives are to update and finalize the classification of ADR schemes, which was developed in the previous research, with the feedback from author's ongoing qualitative research and results from the report "Cross-border ADR in the EU" published by the EU Commission at the end of August 2011. And in addition to evaluate the principles of effectiveness of ADR schemes and to determine which types of ADRs are the most effective in the EU.

Introduction

Although the boundaries of the European Union (*hereafter EU*) have expanded in the last decade and borders between different EU countries have disappeared, consumers are still pre-cautious to shop cross-border. The reason for that is the lack of information and knowledge where to turn for help in case of difficulties that could arise if there is a need to resolve cross-border problems such as complaints and returns of faulty products, hence withholding them from enjoying the benefits provided by the Internal Market. [1] [2]

The European Commission (*hereafter the Commission*) considers and promotes that one of the most effective consumer cross-border complaint resolution methods is *alternative dispute resolution* (*hereafter ADR*) schemes [3] [4] which are also known as out-of-court mechanisms. These schemes have been developed across Europe to help citizens engaged in a consumer dispute who have been unable to reach an agreement directly with the trader. ADR schemes usually use a third party such as an arbitrator, mediator or an ombudsman to help the consumer



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and the trader to reach an amicable settlement. The advantages of ADRs are that they offer more flexibility, are cheaper, quicker and more informal than going to court and can better meet the needs of both consumers and professionals. [5]

Today in the EU the number of these schemes have reached 750 ADRs [6] and reports indicate that they are developed differently across the EU [7], which makes it impractical or impossible for consumers from one Member State willing to complain at cross-border level to know how to access redress in the other Member States and which of the offered is the most relevant for his / her cross-border problem.

Therefore it is important to evaluate the effectiveness of different ADRs to be able to help consumers seeking redress for their cross-border problem to evaluate and choose the most appropriate ADR schemes for his / her cross-border consumer complaint. Thus this has become the main purpose of this research.

Researches so far have evaluated ADR effectiveness compared to other redress mechanisms from a general perspective. There have been as well researches evaluating the effectiveness of individual ADR schemes in certain countries and / or certain problem areas. Additionally most of the researches have focused on national ADRs dealing with complaints where a consumer and a trader are coming from the same country. Researches on consumer cross-border ADRs are conducted mostly on behalf of or by the Commission as this problem area is relatively new. [14]

To be able to evaluate the effectiveness of different ADRs, first a classification which would help to divide multiple varieties of ADRs in different categories according to their main characteristics had to be developed. This was done in the previous research. As this classification was developed only at a theoretical level, it had to be tested in practice, which was done by creating a qualitative research in the form of a questionnaire. The questionnaire was forwarded to multiple ADRs with the purpose to test if these ADRs are falling under the developed classification. The first results of the still ongoing qualitative research are presented below. After confirming the final classification the next step, in order to be able to evaluate effectiveness of ADRs, is to define the effectiveness of ADRs, which will be done by analyzing the Commission's Recommendations 98/257/EC [8] and 2001/310/EC [9], where effectiveness of ADR schemes is defined in several principles. Finally, when the types of ADRs are determined as well as effectiveness principles are recognized, evaluation of the most effective ADRs can be performed.

Thus the objectives of this article are: 1) to update the classification of ADRs by the results of author's qualitative research (*hereafter author's research or qualitative research*) and in addition with the results of recently published EC report on "Cross-border ADR in the EU" [10] (*hereafter the Commissions research*), 2) to evaluate the effectiveness principles created by the Commission and choose the one which will be further used to evaluate the ADR effectiveness, and 3) to determine which types of ADRs are most effective in the EU.

Classification of ADRs – Revised

In the previous published research [11], as a result of analyzing the concept and characteristics of ADR schemes, a theoretical classification of consumer ADRs was developed.



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This classification divided multiple varieties of ADR schemes according to their main characteristics in the following 11 categories:

1. After notification type – notified or not notified under the EC Recommendations 98/257/EC and 2001/310/EC.
2. After organization and funding type – public or private or partially public, partially private schemes; funded by public or industry or partially by public, partially by industry.
3. After geographical competence – national or regional.
4. After sectorial competence – cross-sectoral or sectoral.
5. After legislative procedural type – arbitration, mediation, consumer board or ombudsman.
6. After the character of decision – a non-binding recommendation, a decision which is binding on the business but not on the consumer, a decision which is binding on the business and on the consumer or a consensual agreement mediated by the scheme.
7. After character of trader participation – voluntary or mandatory.
8. After type of procedural communication – ADR or ODR.
9. After the origin of the complaint – cross-border ADRs and ADRs accepting only national complaints.
10. After limitations of value of the dispute – no limitations, minimum and maximum value limitation, only minimum or maximum value limitation.
11. After participation fee – no fee, fee for consumer and trader, fee only for consumer or trader.

To be able to confirm the classification, if the ADR schemes are falling under the created classification categories in practice, a qualitative research in the form of a questionnaire was made and sent to multiple ADRs all across the EU. The aim of this questionnaire, besides the particularization of the classification, was to examine the procedures and the work of ADR schemes which are dealing with consumer cross-border complaints across the EU. In addition, it had to explore the view of the ADRs on their future organizational and consumer cross-border complaint resolution development perspectives. Thus the results of the qualitative research would help consumers in the process of evaluating the most appropriate ADR for their cross-border dispute resolution and could contribute to the author's further research on the development perspectives of cross-border consumer ADR schemes.

To be able to update the classification more precisely, the results from the qualitative research had to be analyzed together with the results of the recently published Commission report "Cross-border Alternative Dispute Resolution in the European Union". [10] The report was issued at the end of August 2011 and was a result of the Commission's public hearing "*Public consultation on the use of ADR as a means to resolve disputes related to commercial transactions and practices in the EU*". [12] The public hearing was announced in the end of 2010 and invited all Member States, traders, consumers and consumer protection institutions to state their opinion on different issues on ADR schemes and their procedures including as well their future development possibilities. In this report, which is representing the results of the public hearing, the Commission has elaborated on different issues regarding cross-border ADR schemes across the EU including the classification of



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ADR schemes, thus confirming that a classification of ADR schemes is topical as well within the Commission.

When evaluating the first category “after notification type: notified or not notified under the EC Recommendations 98/257/EC and 2001/310/EC”, it can be seen that this category with subcategories was proposed by both researches. To be able to gain more information on ADR recent status and future intentions in this matter, the questionnaire, which was forwarded to multiple ADR schemes, included additional answer option “Not notified, but there are negotiations undergoing”. First results showed that this option was chosen by several ADRs indicating that although they are not notified so far, they intentions are soon to be notified. In addition, the research highlighted an interesting issue regarding ADR unawareness of their own notification status. For example, several ADRs pointed out that they are not notified or that there are negotiations undergoing to be notified, although in the Commission’s website the same ADRs was recorded as already notified.

The second category was as well chosen by both researches, but the qualitative research revealed that there are many ADRs which do not fully understand the term “public funding” as they chose to answer that they are funded “by the government”.

The third category “after geographical competence – national or regional” in the qualitative research was supplemented with the additional sub-category “cross-border” in the Commission’s report. In the qualitative research the “cross-border” category was extracted separately as a category “after the origin of the complaint – cross-border ADRs and ADRs accepting only national complaints”. The results of the qualitative research have shown that none of the proposals fully cover the nuances of ADR schemes. The reason for this is that the “cross-border” competence has to be divided more specifically as not all ADRs can deal with the cross-border cases where the consumer is from their own country against a trader located in another country. Therefore to be able to interpret the characteristics of ADR schemes in classification as precisely as possible, it is suggested to leave two separate categories as it was proposed by the author’s classification, but with adjustment of the “cross-border” category. The last category should include the following “after the origin of the complaint – cross-border (ADR which can handle complaints from national consumers vs. foreign traders and foreign consumers vs. national traders), partially cross-border (ADR which can handle complaints only from foreign consumers vs. national traders) and ADRs accepting only national complaints. As suggested by few ADRs those ADRs who have chosen cross-border competence could additionally be named as ADRs with global / international competence.

Categories four, six and seven were chosen and divided the same way by both researches. The last four categories were only elaborated at the author’s research and the first results indicated that all ADRs fall under one or another sub-category offered, although some of the ADRs experienced difficulties when trying to determine which legislative / procedural type of organization they are.

Overall it can be concluded that the classification with the minor changes can be applied to all of the ADRs across the EU which was confirmed not only by the author’s research but as well by the Commission’s individually performed research. Thus it will help in the future to introduce the concept of ADRs to the consumers and traders in more clear and demonstrative way.



Development of a classification has helped to divide ADRs in different types, which is a step closer to achieve the aim of this paper. As the next step in order to be able to determine which of the ADR schemes are more effective than others, the effectiveness of ADRs has to be defined.

Effectiveness of ADR Schemes

The Commission within EC Recommendations 98/257/EC and 2001/310/EC created a set of principles regarding impartiality, transparency, fairness and effectiveness which ADR schemes across the EU should follow. In the earlier recommendation the Commission had elaborated four principles of effectiveness whereas in the later recommendation the Commission has added one more – the effectiveness principle, which could be explained by the drastic IT technology development. According to the Commission, the effectiveness of ADR schemes should be guaranteed with the following principles:

1. It should be easily accessible and available to both parties, for instance by electronic means, irrespective of where the parties are situated.
2. The procedure should be either free of charge to consumers, or any necessary costs should be both proportionate to the amount in dispute and moderate.
3. The parties should have access to the procedure without being obliged to use a legal representative. Nonetheless the parties should not be prevented from being represented or assisted by a third party at any or all stages of the procedure.
4. Once a dispute has been submitted it should be dealt with in the shortest possible time commensurate with the nature of the dispute. The body responsible for the procedure should periodically review its progress to ensure the parties' dispute is being dealt with expeditiously and appropriately.
5. The conduct of the parties should be reviewed by the body responsible for the procedure to ensure they are committed to seeking a proper, fair and timely resolution of the dispute. If one party's conduct is unsatisfactory, both parties should be informed in order to enable them to consider whether to continue the dispute resolution procedure.

As this article is not allowing considering all principles of effectiveness, then the further research will be focused only on the first principle regarding accessibility of ADR schemes across the EU. This principle was chosen because the accessibility of the scheme is the first and the most important step for the consumer to be able to start implementing his / her consumer redress rights. When evaluating the cross-border complaints, easy accessibility by electronic means and in English is even more important for consumers seeking cross-border redress.

Although the first principle is indicating the accessibility and availability of ADR schemes for consumers and traders from the communications perspective and this research will focus only on this perspective, there is one more perspective which is very important and from which the accessibility could be analyzed from – the ADR coverage perspective. ADR scheme coverage signifies accessibility of ADRs within the consumer cross-border problem areas, i.e., is there available ADRs which are dealing with consumer cross-border complaints in the areas where consumers are submitting their complaints. This gap of ADR scheme existence in the



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areas where consumers are mostly complaining cross-border was discovered and highlighted in the beginning of 2010 in the research “Cross-border Dispute Resolution Mechanisms in Europe – Practical Reflections on the Need and Availability” made by European Consumer Centre Denmark. [13]

When focusing on accessibility of ADR schemes from a communications perspective, in practice it is a very important issue especially for cross-border complainants. The authors latest research has shown that the largest database on ADR schemes is available at the Commissions own website where the Commission has assembled the names of all ADRs which are notified under Recommendations 257/98/EC and 2001/310/EC. [5] This list is on the first page of the Google search when words “alternative dispute resolution” are searched and this list includes 540 ADRs all across the EU, Iceland and Norway.

When analyzing the information about ADRs on the website, only 59% of all ADRs had a translation of its name in English. Such countries as France, Portugal and Spain did not provide almost any translation of the ADRs included in the list which makes it difficult for the consumer not knowing Spanish, Portuguese or French to understand the meaning of the ADR.

Further studying accessibility by electronic means which was highlighted by the Commission in its elaborated principles of effectiveness, only 57% of ADRs listed in the list had provided an e-mail address where consumers could turn to with questions or for help. Additional examination revealed as well that approximately 15% of the provided e-mail addresses turned out to be invalid, thus indicating that information on the Commission’s website is obsolete and not regularly updated.

Finally the possibility for consumers to visit ADR websites to get acquainted with the matters they are interested in is possible only for 36% of ADRs as only this amount of ADR schemes has provided their website address. Further investigating the addresses ADRs has provided, 10% of them turned out to be invalid, thus prohibiting consumers to gain the information of interest. 42% of ADR scheme websites were available only in one national language which was typical for such countries as Denmark, France, Germany, Luxembourg and Norway. In those countries from all ADR websites, 62% or more were available only in their national language. Overall only 33.5% of the websites were available in English from which almost a third offered 3 or more language translations of their websites, for example, the Financial Ombudsman Service in the United Kingdom offered information on its services in 29 languages. Regarding this issue it has to be mentioned as well that the first results of the qualitative research has shown that some of those organizations who are not having their website in English yet, are planning in the nearest future to develop an English version of their website. There were as well a couple of countries which provided their websites in two languages typical for their region, for example, Belgium in French and Dutch and Luxembourg in French and German. Finally there were as well 14% of the ADRs which although indicating on their website that it is available in English, the English version was under reconstruction, which was very typical for Bulgarian ADRs.

The above mentioned analysis of effectiveness by electronic means has helped to find those ADRs which are most accessible for consumers looking for information and access to redress cross-borders, i.e., ADRs which website information was as well available in English. Further these ADRs will be analysed after their types, thus accomplishing the main aim of this research which was to determine which types of ADR schemes are more effective than others.



Effectiveness Evaluation of Different Types of ADR Schemes

To be able to determine which types of ADRs are the most effective, several steps in the previous sections were made. First, the classification of ADR schemes was elaborated to be able to categorize ADRs in different types. Secondly, the effectiveness principles defined by the Commission were evaluated and because of the limited space of the article only one was chosen for further evaluation which was accessibility of ADR schemes by electronically means. Last but not least, ADRs from the list provided by the Commission was examined using the effectiveness “accessibility” principle, and 66 ADRs from 540 fell under the criteria as accessible to consumers looking for cross-border redress as they provided information on their websites in English. Rechecking information on these ADR websites decreased the number of ADRs for 20% as it was not possible to obtain information on consumer complaint resolution matters.

Finally the remaining ADR schemes were examined to determine which type of ADR schemes they are according to the type of organization, sectorial coverage and procedural / legislative type. The results of the analysis indicated that public ADRs had a small predominance being more effective in providing information in English on their websites than private ADR organizations. When evaluating a legal / procedure type of ADR organizations, then there was a clear dominance of the organizations which dealt with complaints using ombudsman and consumer complaints board methods thus indicating that ombudsman and consumer complaints boards are much more effective in informing consumers in English on complaint resolution issues. Much interesting results revealed analysis of sectorial coverage. The analysis displayed that both sectoral and cross-sectoral coverage was presented equally, but when it was analysed after specific sectors then it revealed that there was a significant dominance of ADRs which provided resolution of complaints in banking, insurance, financial and energy sectors. Thus it indicated that ADRs in these sectors were more effective in providing information on their websites in English than those who represented other sectors.

The above mentioned clearly indicates that there is a difference between the types of ADRs and the effectiveness of ADRs, ie., not all types of ADRs are equally effective when it comes to providing information in other languages than their own.

Conclusions and Avenues for Future Research

Overall research which has been presented throughout two papers has revealed several interesting issues as well as patterns.

It has highlighted once again that the main obstacles which is withholding consumers from shopping cross-border is unawareness of institutions, where to turn to, if there would be a need to resolve a problem such as a complaint or a return of faulty products. It has indicated as well that the most appropriate institution to turn to in case of cross-border complaints would be ADR schemes, but unfortunately consumers are not aware of the concept of ADRs, which is broad as ADRs across the EU are implemented differently. Thus it created a problem if there was a wish to explain the concept of ADRs to consumers or stakeholders in an easy manner. As well it was problematic to compare effectiveness between the different types of ADRs if



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consumers would like to know which of the ADR schemes are most effective and appropriate for their cross-border complaints.

As a solution to this problem, the classification was created, which was further tested with the help of the qualitative research. The feedback received from ADRs and additional results from the report published by the Commission confirmed the validity of the classification with minor adjustments. Following the main aim of this research, the effectiveness principles were evaluated and the first principle of accessibility of ADRs was examined in more detail. It was concluded that the largest database of ADRs is available in the Commission's website with 540 ADR contact details, but it was as well deduced that only a little more than half of these had indicated their e-mail address for contacts and only one third has provided their website address where consumers could acquaint with the information regarding the organization. Unfortunately, the research revealed as well that around 15% of the email addresses and 10% of the website addresses were invalid which indicated that the Commission or the ADRs themselves are not regularly updating their contact information. In addition the research discovered that only one third of the ADR web addresses provided information in English, which is very crucial in case of cross-border problems, which thus indicated that many of consumers either have to be in possession of knowledge of the national language of the ADR where they are planning to complain to, or they have to look for help in other organizations.

Finally, the analysis was made to determine if some types of ADRs are more effective than others according to the "accessibility" effectiveness principle which was chosen as the ability to access the ADRs in other countries is the first and the most important step for a consumer to be able to implement his / her consumer cross-border redress rights. The results indicated that the majority of websites in English was represented by ADRs which were offering ombudsman services or working as consumer complaints boards. And most interesting finding was that most of these ADRs represented assistance in resolving disputes in banking, insurance, energy and financial sectors.

Thus it is concluded that so far the most effective ADR schemes for cross-border consumer complaint resolution when evaluated after their accessibility are schemes which are working as ombudsman or consumer complaints boards and those which are located in Finland, Ireland, Malta, Poland and UK as more than half of their ADRs provide information on their homepage in English. Additionally, consumers who are having cross-border complaints regarding financial, banking, insurance and energy services have easier access to ADRs than those consumers who have cross-border complaints in other areas.

Overall recommendations for making ADR schemes more effective in relation to their accessibility for consumers having cross-border complaints are several. First, it is crucial that ADR institutions have a website informing about their actions and procedures, and it should be available not only in their national language, but as well in English and languages which are typical for the region. Secondly, it is important that the website includes clearly detectable information regarding submission of complaints, resolution procedures, fees and contact details. And last but not least, it is crucial that the largest ADR list at the EC website would be regularly updated with the latest website information, e/mail details, translation of ADR names and desirably as well short descriptions of what is the competence of each ADR.

This article has evaluated only the "accessibility" effectiveness principle which is the first principle from five in total appointed by the Commission. In the future the remaining four



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effectiveness principles will be evaluated in order to determine which types of ADRs are the most effective with the focus on consumer cross-border complaint resolution. The results of these researches should help not only consumers, but as well traders to evaluate and choose the most appropriate ADR schemes for the resolution of their cross-border complaints.

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MUNICIPALITY FUNCTIONS AND THEIR ROLE IN THE PROVISION OF ACOUSTICALLY ACCEPTABLE LIVING ENVIRONMENTS

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Abstract

The environmental noise management responsibilities for municipalities are defined in EU and national legislation only for cities or agglomerations with more than 100,000 inhabitants. Meanwhile the national laws give authority to all municipalities to ensure acceptable living environment for their inhabitants and define the municipalities' obligation to participate in noise management processes. Unlike other environmental factors, the impact of environmental noise is dependent on the subjective perception of the receiver. This is one of the main aspects which determine the necessity of noise management as well as its complexity. The impact of noise is dependent not only on the physiology of the receiver and state of health, but also on external factors.

The municipality plays an important role in the environmental noise management process because of its legal powers in noise control, development planning, permitting business operations in their territory, and balancing the needs of residents as well as local environment protection.

In accordance with the factors above, the objective of this research paper is to provide municipality noise management strategies intended to provide an acoustically safe and acceptable environment. This objective is achieved by describing the role of the municipality, evaluating actual delivery of the strategy, analyzing best practice examples and contributing suggestions for improvements to noise management processes.

Introduction

Environmental noise – a noise that is produced outside as a result of human economic activity, nowadays is becoming one of the most significant types of environmental pollution and



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the main sources for it are: motor transport, air traffic, railway, construction works, industry and entertainment events as well as household [1].

Although initially environmental noise was considered to be mainly a problem associated with the urban environment, the growth of business activities such as the production of alternative energy and infrastructure such as traffic means that the issues related to environmental noise are becoming an important factor outside cities as well.

The importance of the effects of environmental noise is clear and this is closely linked quality of life in terms of physical health, psychological wellbeing, social relationships and the overall living environment. According to the holistic view on health, environmental noise can cause several impacts on human health and the environment and could be considered as important environmental stressor. These impacts can include social and economic effects, for example: hearing impairment, migraine headaches, hypertension, coronary artery disease, peptic ulcer disease, irritable bowel syndrome, an increase in cardiovascular symptoms, cognitive effects, hearing disorders, speech impediments, sleep disorders and such aftereffects of nighttime noise as fatigue, irritability, and decreased performance [2, 3]. These can lead to psychological health problems, a reduction in operational capacity, as well as irritability, depressed mood annoyance [3].

Accordingly to research of Weber, M. et al. [4], the highest rates of noise nuisance are found at the municipal level because of spatial planning problems, development of local noise sources and their emission intensity as well as a lack of appropriate national level noise policy, which would aim to solve noise issues for railways, roads and airports of national significance, as well as every municipality.

Accordingly to S.O. Ryding [5] the acoustical comfort in the municipalities is mainly determined by two factors: the municipality's socio-economic development and noise management policy. The socio-economic development includes all economic sectors, including industry and transportation, which, as mentioned above, are considered to be the main noise sources with most impact on the inhabitants, the conflicting problem of territories' development and environment degradation due to noise appears (see Figure 1).

To avoid the conflicting problem, the municipality, as an institution, through its actions has to have an input to the provision of a good living environment and must strike a balance between business and infrastructural development and environmental issues, whilst considering the needs of local residents. Accordingly to the data from sociological surveys in other countries [7], more than 70% of inhabitants consider that the municipality has responsibility for solving noise issues.

Therefore municipalities have to develop methods of permitting necessary development whilst preserving an acoustical favorable living environment for the whole territory of municipality.

In addition there are external factors such as legislation, state level guidelines or activities of noise causative agents, which direct the municipality to adopt a particular stance.

The existing legislation defines the need for the municipality to undertake practical and strategic environmental noise management activities and preserve and/or achieve noise levels that are not injurious to residents' health thus providing an acoustically acceptable living environment. Despite this the legislation gives different management approaches for environmental noise issues in direct relation to the size of cities that belong to the particular



municipality. The population is the main parameter that causes differences in obligations assigned to a municipality.

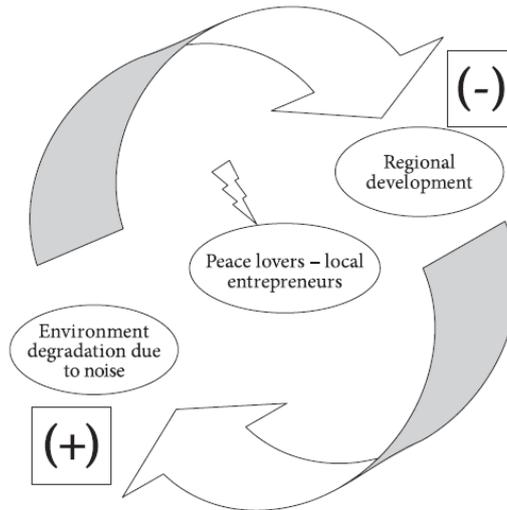


Figure 1. A conflicting problem of regional development and environment degradation due to noise [6]

In order to evaluate, in this article a detailed analysis of the practical municipal noise-issue management strategy is provided, along with details of a collaboration mechanism between the municipalities and state institutions. The study methodology includes studies of literature, documents and legislation, as well as structured interviews with the representatives of local administrations and responsible state institutions about the practical noise management activity implementation.

Normative Order – Obligation and Functions of a Municipality

The regulation of environmental noise issues within municipalities is defined by Latvian and EU's laws and regulations. The principle statutory article relating to the assessment and management of environmental noise is the Law on Pollution of 15 March 2001 [8], Regulation No.597 of 13 July 2004 of the Cabinet of Ministers (hereafter – Regulation) [9], as well as the European Commission Parliament and Council Directive 2002/49/EK (hereafter - Directive) [10] of 25 June 2002.

The main regulation of the sector, which is transposed in the national legislation, is defined in the Directive and is applied to manage environmental noise, that has an influence over people, especially in built-up regions, public parks or other quiet regions in an agglomeration that is situated in the country, near schools, hospitals and other buildings and zones that should be noise-protected. The Directive sets forth the requirement for strategic mapping and the acquisition of data that is necessary to create an environmental noise



management plan. However environmental noise management in this aspect is applicable only to municipalities or their agglomerations that have more than 100,000 inhabitants.

Meanwhile Regulation states the nature of the environmental noise management order that is used in municipalities of any size in Latvia. The Regulation determine that those persons who own or use the source of noise are required to limit noise emissions defined depending on the functions that are assigned for each territory. However the obligation of the municipality is to execute territory planning and assign different function zones thus controlling environmental noise issues. Municipalities have the rights to implement lower noise limitations in administered territories by means of mandatory regulations in order to preserve previously designated lower noise areas. The monitoring of noise emissions from economic activity (including ventilation, freezing equipment, compressors and elevators) and the noise produced by transport vehicles is done by State Health Inspectorate, whereas the control of music noise and other public noise sources is controlled by the respective municipal institution to which the municipality has assigned the responsibility. If the responsible institutions have established violations of environmental noise limitations, the persons in responsible for the source of the noise, or are performing the activity that has extended the noise limitations, has to pay all the costs that are related to the measurements of the environmental noise. In a territory in which the indicated noise strategic map or other noise measurement values are higher than the noise limitations mentioned in the Regulation, construction of buildings is permissible only in compliance with the territory planning type that is set forth in the territory planning of the local municipality. In that case the developer is required to implement noise control according to the requirements of Latvian construction standard LBN 016–03 “Construction acoustics”.

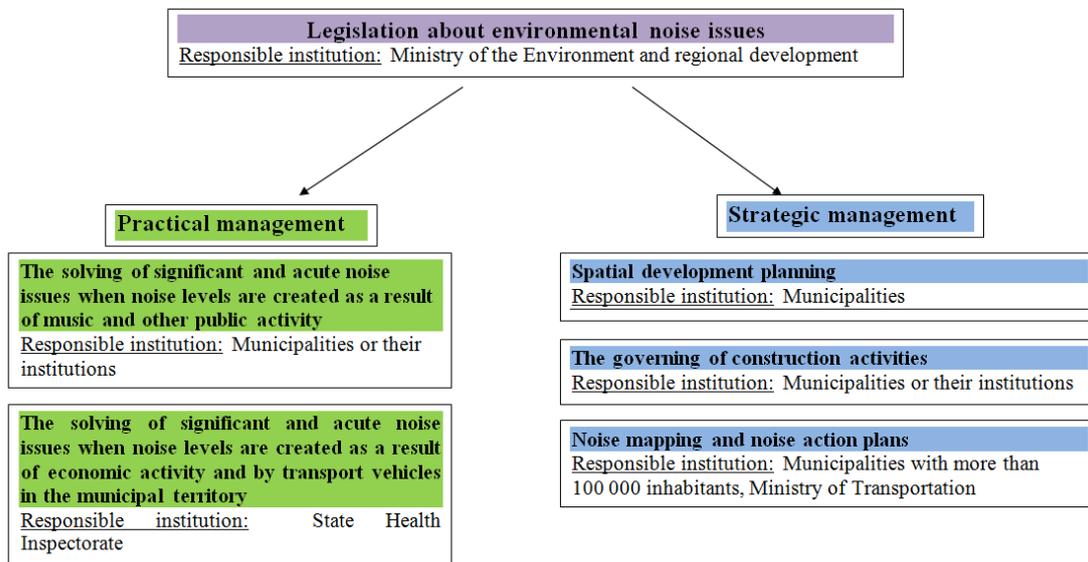


Figure 2. Environmental noise management basic frameworks as defined in national legislation (author, 2011 using [9])



However the Regulation does not include the noise that is created by the person who is affected by the noise, the noise in working places or vehicles, the noise that is created as a result of military activity in military areas, public events which are organized with municipalities as well as the operation of alert system sirens.

The previously mentioned factors show that:

- The national legislation, developed by the Ministry of Environment and regional development, determines municipal requirements for environmental noise management. These functions are mainly related to the practical solving of significant and acute noise issues when noise levels are created as a result of activity in the jurisdictions, the governing of construction activities spatial development planning as well as noise mapping and noise action planning (if appropriate);
- Municipalities should collaborate with the State Health Inspectorate in cases when excessive noise levels are created as a result of economic activity and by transport vehicles in the municipal territory (see Figure 2).

Practical Settlement of Environmental Noise Problem Situations in Municipalities

Previous author's research on environmental noise management in Latvia [11, 12] has provided evidence of its imperfections. These are related to the lack of initiative, practical actions and planning of noise management both in municipal and state level, low understanding about noise nuisance, shortage of quantitative and qualitative information for the inhabitants and developers regarding noise issues. In addition there is scant data on existing noise levels and their impacts on the inhabitants and on the municipal social and economic development as well as weak noise level control. Meanwhile the differences in the management approaches between different size municipalities were identified – in the municipalities of the cities of national significance, compared to other municipalities, the strategies and practical activities for noise complaint resolution are better developed. The national legislation lacks a detailed description of practical noise management procedures and this is exacerbated by a lack of guidance from the governing state institutions. Specifically in relation to dealing with noise complaint issues and collaboration between public, municipalities and state institutions, there is a strong need for clear management strategies to practically solve significant and acute noise issues in municipalities. This includes regulations for cases where residents make complaints about high noise levels. Taking into account the above, in order to investigate the actual situation for practical noise management dealing with noise complaint issues, and to analyze a detailed action description of the municipalities of the cities of national significance are provided. This includes examples for the smaller municipalities.

The first practical noise management step which must be taken in the municipalities is to define which of the respective municipal institutions is responsible for the control of the noise that is related to music and other with public noise sources. The usual practice of Latvian municipalities is to assign this function to the municipal police. Meanwhile municipalities sign contracts with certified noise measurement laboratories, which in accordance with national legislation are solely able to make legally defensible measurements. Only after this step can municipalities solve environmental noise problems in practice.



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It is proposed that on receiving inhabitant complaints about high noise levels municipalities, or their assigned responsible institutions, should take the following steps:

- 1) identification of the noise source,
- 2) determine whether the complaint is within the municipalities' competence,
- 3) inform the noise measuring laboratory of the complaint,
- 4) undertake noise measurements (carried out by the noise measuring laboratory with the participation of the responsible institutions' representative), with prior contact with the complainant,
- 5) preparation of a notice to be served if there is a violation in terms of permitted noise levels,
- 6) decision on the appropriate fine or penalty and its amount (this action is taken by the administrative commission of the municipality).

To manage environmental noise problems which are not in their competency, municipalities must collaborate with State Health Inspectorate, either by forwarding complaints to the necessary institution with competence, or informing the complainant of the responsible institution.

In the cases when complains are received about noise created by economic activities, they must be considered by inspecting officers within 30 days of the date of presentation. The officers should initially identify noise source and undertake calculations to determine the probable noise level generated by the noise source, assess the predicted noise, and undertake a site inspection.

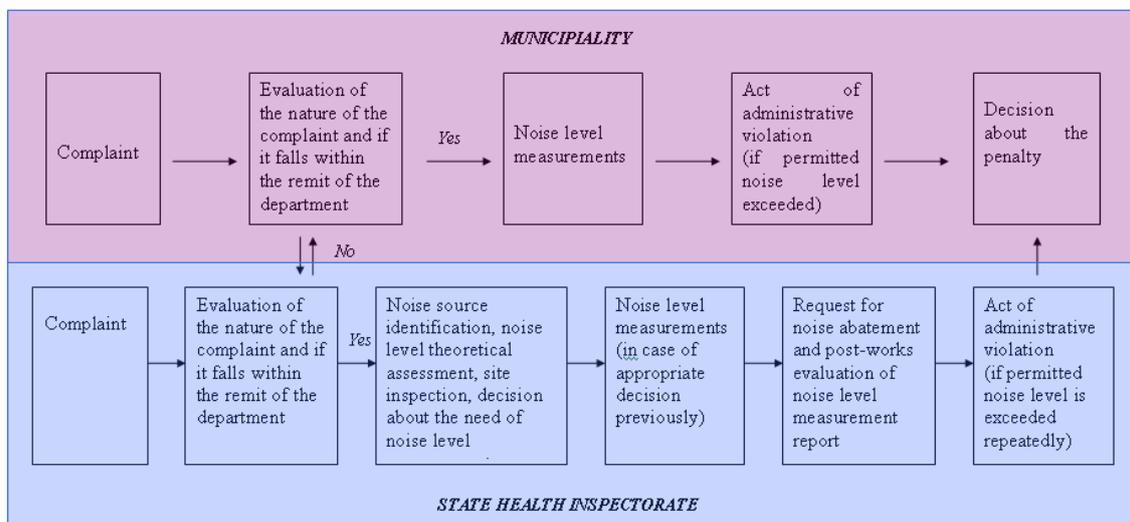


Figure 3. Noise practical management block scheme in Latvia (author, 2011)

In the cases when the inspector having assessed all the available data considers that the permitted noise levels could be exceeded, they must require noise measurements to be carried out by a certificated laboratory. If the results of the noise measurements show that the noise levels are exceeded, the developer receives a notification from the State Health Inspectorate detailing the noise reduction need and time period during which this must be carried out



(usually 1 – 2 months). To prove that the noise levels are reduced to permissible ones, the developer must submit a report of further noise measurements. The health inspector must then evaluate the report, but it is not necessary to recheck the correctness of the data on the site.

Only in the situations when the developer fails to abate the exceeded noise levels, the State Health Inspectorate will require the administrative commission of the municipality to consider the case and decide about the appliance of a penalty.

A summary of the above is shown schematically in the practical noise management block scheme, which contains the information about systematic activities of the municipalities and State Health Inspectorate as well as their mutual collaboration which is achieved by interviewing municipality and State Health Inspectorate officials (see Figure 3).

It should be also mentioned that there are no clear descriptions of the noise complaint management strategy available from municipalities or State Health Inspectorate. Though the information about noise created from economic activities is featured on the website of the State Health Inspectorate, the information featured is general and only related to the submission of noise complaints. In addition there is almost no information about the complaint procedures. The municipal internet home pages feature no information on noise control at all or any description about general complaint management.

Comparatively in the other EU countries inhabitants get more information about noise and complaint management. For instance in the United Kingdom inhabitants are informed through leaflets, websites, governmental and non-governmental institutions booklets detailing multiple methods of complaint relating to noise nuisance (and the relevant steps in complaining) – contact those responsible for the noise emissions complain to the responsible institution or use a mediation service. In the cases when the listed actions fail to resolve the situation there is the possibility of making a complaint to the magistrates' court for noise nuisance proceedings or even action under anti-social behavior powers [13]. Meanwhile the municipality websites, for example Birmingham, West Lancashire, Elbridge and many other council homepages, contain detailed information about noise issues including contact details, details of complaint investigation procedures, as well as helpful publications about noise management in the municipality. Inhabitants suffering from noise nuisance are advised to complete noise nuisance record sheets and fill in witness statements.

Discussion

The study shows that the duty of practical noise management in Latvia is assigned by legislation to two responsible parties – municipalities and State Health Inspectorate –, but neither legislation nor any state level governing documentation specifies the structure for this arrangement.

The evaluation of actual noise management procedures shows that both responsible parties are dealing with noise control using comparable approaches. Several points for consideration can be identified:

- Responsible institutions do not always make noise measurements, but ground their preliminary assessment on theoretical approaches and on the site inspections without noise measuring devices. Though this approach is economically beneficial, it fails to be always reliable and objective;



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- Before the State Health Inspectorate requires the administrative commission of the municipality to consider the case, and decide about the appliance of a penalty, the notification detailing the noise reduction requirements and time period during which this must be carried out is sent to the noise emitter. Using this approach developers are given an opportunity to remediate the problem before sanctions are applied, though firmer economical instruments could be used to prevent the high level noise emissions and dealing with the noise issues only in case of violation;
- The approach is appropriate when the noise level exceedences are frequent and not a one-off case or repeated cases in an extended time frame.

The investigation further indicates that even in cases when the valid complaints about noise issues related to economic activity occur, the decision on the appliance of appropriate fines or penalty and its amount is taken by the administrative commission of the municipality. Consequently this not only shows the municipality's role in controlling entertainment and neighborhood noise, but also its function as a controller and regulator of permitted environmental noise created in municipal territory by any source through permissions and punishments.

Taking into account that municipalities perform an environmental noise management function, alongside the State Health Inspectorate activities, as well taking decisions on fines or penalties, it can be suggested to the state institution responsible for environmental noise policy to perform an institutional audit of the noise management sector. This would include assessing the possibility of delegating the noise management, from all sources, to municipalities or to entitle the State Health Inspectorate to decide on the appliance of appropriate fines or penalties. This approach would ensure that control and all the sanctions are discharged by the same institution. This could help to accelerate the whole process and avoid different opinions (if thus appear) about permitted noise sources deemed essential and sanctions.

This study also provides details on the legal noise management policy provided by the Ministry of Environment and regional development. The practical actions of noise control and management are implemented by municipalities and institutions under the Ministry of State Health Inspectorate. In 2008 an intersectional task group incorporating members from the health, transport, national accreditation sectors for appropriate environmental noise management legislation development were founded. This did, however, not include municipality members. Although consultation was undertaken, the questions discussed with municipality association were specific aspects rather than covering the full range of noise issues.

The investigation indicates that there is a need for municipalities and state institutions to determine the best practical noise management practice in other EU countries, to determine a suitable approach. In order to inform the decision, the best practice evaluation should be carried out and discussions about noise management policy in the intersectional work group carried out, including municipal members. After a decision is taken, the change management should be provided by modifying legal regulations about noise management policy, as well as preparing state level guidelines for noise management in municipalities.

Conclusions

1. Infrastructure, social, economic activities in the municipalities create noise, which, affect the living environment in terms of acoustic comfort for the public, and influence perceived and



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- actual life quality. In order to minimize the noise nuisance and its possible effects, practical and strategic noise management in the municipalities should be provided;
2. The national legislation determines the municipalities' environmental noise management responsibilities. These are mainly related to the practical solving of significant and acute noise issues when noise levels are created as a result of music and other public activity. The governing of construction activities as well as development planning related to economic activities is controlled by the State Health Inspectorate. Both parties should collaborate to ensure acoustically acceptable living environments in the municipal territory.
 3. The state institution responsible for environmental noise policy should perform an institutional audit of the noise management sector, assessing the possibility to delegate the noise management of all sources to municipalities or to entitle State Health Inspectorate to determine the appliance of appropriate fines or penalties. This would ensure that control of these noise sources and necessary sanctions are controlled by the same institution.
 4. To ensure these improvements in the environmental noise management sector in Latvia, there is a necessity to analyze and adapting the existing experience and best practice from other countries. A deeper involvement in the area by the municipalities in legislation making processes, as well as development of state level guidelines for noise management in municipalities, is identified.

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STATE EXPORT PROMOTION POLICY IN THE CONTEXT OF THE GROWTH OF ECONOMY

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Keywords: export promotion, endogenous growth theory.

Abstract

The consequences of global economic crises appear in frontline of most countries around the world, pushing the governments to examine the principles, how national economy is functioning and their expenditures for implementing various policies in order to find solutions for efficient budget spending. The positive impact of national export promotion policy on the national economic growth and the arguments for implementing the policy according to endogenous growth theory are examined in this review article. The aim of this Paper is to give theoretical basis for common global tendency for growing number of countries broadening or starting to implement national policies for export promotion as well to point out possible challenges for implementing such policies or risks of sustainable development and growth. In conclusions the insight of possible complications for implementing export promotion policy and risks of sustainable development and growth is provided.

The global economic crises have influences national economies of most countries around the world. As budget income decrease the governments seek for various possibilities to reduce spending and increase effective spending of available funds. The government expenditure is reviewed under budget consolidation processes, costs are cut and various policies suspended generating public protests. While cutting public spending, the governments faced complicated challenge – to provide arguments for the suspension, sustaining or even increasing the funding of each and any policy. The governments have chosen often to continue or expand export promotion policies during mentioned process of reviewing the structure of policies for various industries. The organisation “*Enterprise Estonia*” is responsible for support of national export policy implementation in Estonia and it has started largest export promotion and educational programme for exporting companies “*Export Revolution*”. The managers of medium sized companies will be educated within the framework of the programme. [1]



Whereas *National Export Initiative* – policy implemented to stimulate economic growth and create jobs by increasing exports was ratified by USA President's decree dated of 11 March 2011. [2]

The increasing attention for wider State's export promotion policy to suppress consequences caused by economic crises from governments of different countries in terms of country's size, asks for intensified research attention for theoretical basis of positive impact of such policies to economic growth. In this paper authors summarize opinions from scientific literature, which fortify the positive impact of implementation of state's export support policy on national economic growth.

The Impact on National Economic Growth from State's Engagement in International Trade

By analysing economic growth theories authors have concluded that endogenous growth theory is most corresponding in terms for reaching the aim of the research and providing theoretical basis for national exports' support policy. The concept of "endogenous growth" appeared in various theoretical and empirical researches during 80ties of XX century according to P.Romer [3, 1994, 3]. Those researches differ from neoclassical growth theories previously rarely analysed in scientific literature mostly by regarding the economic growth as the result caused by endogenous not exogenous forces, including technological changes as factor creating regular increase amount of income *per capita*.

Significantly for endogenous growth theories, that variable K is interpreted within the production function $Y = AK$. The logical assumption is that the value of K would decrease, if K includes only production basis (production equipment and plants). The capital included in endogenous growth theory brings wider sense, including human capital and other factors. Widespread way for interpreting endogenous growth model is to include knowledge as capital, which differ from other forms of capital by less devaluating. As pointed by P.Romer [4, 1986, 1007] it is observed that economic growth accelerates in line with accumulation of knowledge in contrary.

P.Romer [3, 1994, 12-13] indicates several factors for theoretical economic growth researchers to include in their models. Scientific findings are different from other factors because those can be used by multiple numbers of persons simultaneously as well those are not excluding in between various users. Knowledge (know-how) include possibility to repeat physical activities without necessity to double input of knowledge amount and these can be used by larger number of actors in contrary to other types of capital. As regards to the society scientific findings are endogenous factor because potential coefficient of scientific findings depends on a number of researchers involved in scientific work. Therefore society may impact the amount of scientific findings. Simultaneously authors emphasize that knowledge (know-how) should not be perceived as an object of public good as though they may be used simultaneously by wider range of individuals, usually economically significant scientific discoveries do not comply the second criteria to become an object of public good – these are not available for all, who would wish to use them as a fact companies or individuals may have legal rights to limit the usage of the discovery. Sequent the creation of knowledge (know-how) may provide individuals or companies possibility to impact the market and obtain certain benefits from monopoly of protected rights to use scientific discovery.



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Increasing exchange of goods and ideas has supported growing interdependence between countries as well providing technological progress and long-term development. The endogenous growth model provides possibilities to explain economic growth by including foreign activities within economic growth model not by usage of isolated models. Authors indicate that endogenous growth models are expanded by including flows of international capital, international movement of goods and knowledge (know-how) and provide theoretical basis for forecasts of economic development [5, 1994, 38-39]. Thereby the economies with relatively larger access to professional human resource would specialize for activities requiring more resources of human capital i.e. industrial research. Even if this country would produce relatively small number of knowledge based products initially, the country with bigger human capital resources would gain leading positions in more high tech industries in long term and will be able to start the export of its production in exchange of production requiring more human capital from other countries. Thereby the development of human capital in long term may impact the system of international trade, if each country exports production of such industries, where it has production advantages (e.g. technological advantage) and imports production from underdeveloped industries in home country.

There are several insights given by endogenous growth theory proving positive impact on economic growth from country's participation in international trade [6, 1991, 538-546]. Compared to residents of isolated country, representatives from country integrated within international trade have wider opportunities to access knowledge about new scientific discoveries worldwide as well international trade as such may promote expansion of Technologies. As well inclusion within international trade may prevent overproduction in industrial research and promote the demand for industrial research. The integration of economy within international trade may provide positive impetus for qualitative development of industrial research by the increase of potential client base. Though authors point out that there are some mutually compensating forces: the openness towards international trade may increase research activities and implementation of innovations in production in the country only, if the companies may stand the competition pressure imposed by foreign players.

After all the participation in international trade may encourage local entrepreneurs to implement new, innovative ideas thus increasing speed of technological progress and development of new Technologies. On the one hand, companies confront stronger mutual competition, when foreign producers enter the market, but they get also Access to new markets and wider trade possibilities simultaneously [7, 2001, 662].

An economic advantage in the field of technologic innovations provides several advantages in international trade [8, 1998, 11]:

1. technological innovations may reduce production costs as well the product's price improving competitiveness;
2. small innovations in production process enhances compliance of the consumption goods in accordance with consumers' needs makes them more attractive both in internal and foreign markets;
3. innovative products provide the innovator with monopolistic advantages usually, even if for short term only, and this may provide better positions in the market as well possibilities to use the advantages from monopolistic position.



Indicators of economic growth have often been associated with the participation of the country in international trade and following amounts of export. Researchers explain differences in economic development by successful export indicators or vice versa [9, 1992, 211-212]. Researchers emphasize that endogenous economic growth based on exports in long run has to be interrelated with innovative development, technological progress and introduction of new discoveries into production. Authors outline “*Dutch Disease*” phenomena described in scientific literature, where export amount increase was based on inelastic supplied and intensive usage of natural resources and products requiring substantial human capital resources, production though remained without technological innovations. Such export could not provide necessary impetus for endogenous growth and sustainable development.

Does National Export Promotion Policy Impacts Economic Growth?

International trade, especially export, plays important role for economic growth. Export development is important for national economy on macroeconomic level as it impacts international trade balance.

Export as an activity is related to a search for new consumers in the city or region nearby, but in case of export goods and services cross the state’s border and payments are settled in foreign currencies. Exact distinctions make export substantial for development of national economy and therefore require particularly applicable national policy [10, 1994, 91]. Though the interchange of goods and services happen to take place in-between economies, the decision to begin, to stop or to expand exporting is taken on company level [11, 2005, 855].

It is important to indicate that large companies for entering foreign markets may choose various ways (by establishing joint ventures, creating subsidiary or through foreign direct investments etc.), whereas the most convenient and accessible way for small and medium sized companies for entering foreign markets is to start exporting. Export amounts created by SME’s provide sustainability by diversification of risks simultaneously. As stated by authors [12, 2005, 736] starting an export is the most popular, fastest and simplest way for small company to engage in international activities, because in comparison with other ways for entering the markets it requires less administrative resources, provides wider possibilities for manoeuvring and comprises less risk. Whereas other ways for entering foreign markets, e.g. work order for manufacturing, licensing, joint ventures, are chosen by bigger companies.

Export on a company level [10, 1994, 91] means savings of resources firstly. Company may increase efficiency of its production and diversify risks related to decrease of demand in home market by widening market research and focusing on foreign. Increasing the efficiency of the production provides for the company to offer more competitive goods in the home market. Altogether development of exports enables the company to reach lower costs and higher revenue as well as in home or foreign markets. Company benefits from usage of market differences in various countries as well as it would not be tied to only one market that would make operational activities continuous. Operations performed in foreign markets develop managerial skills and ability to adapt to different needs of consumers and intercultural differences, forms the abilities to operate in less familiar market environment and adapt fast



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enough to prevent risks of high costs. As pointed by Czinkota M.R. all these skills simultaneously increase competitiveness of the company in the internal market.

Nevertheless, when undertaking export activities, companies face various complications. These may be classified in five larger groups [13, 1992, 639] issues related to logistic, legal and administrative procedures, provision of supporting services, marketing and knowledge of foreign markets. Such possible, expected or real complications restrain companies to start an export because decision makers face more complications than benefits from operations in foreign markets. If the producers and potential exporters possess limited resources and poor knowledge of foreign market, market situation and norms and standards, then State support for entering foreign markets and undertaking export activities should take place.

As pointed by Plümper and Graff [7, 2001, 663-665] the success of endogenous economic growth is closely related to active government's role in economic development. Far East countries' long-term economic development success is mentioned as an example, this is explained by focused orientation of state implemented policy towards suppressing the gap in technological development and simultaneous intensification of the efficiency in strategic sectors. Such concept indicates indirectly that not all economic sectors shall be perceived equally effective for economic growth. The most competitive sectors engaging in global competition in line with adequate governmental support policy may bring additional impetus for growth. Authors suggest that intensified governmental support for definite sectors (e.g. in form of subsidies) to raise their international competitiveness may bring to decrease of international competitiveness in other sectors and successive replacement of home production by imported goods. Therefore coordinated and reasonable implementation of governmental policy is highly important as promoting of one certain sector's competitiveness and investing additional capital for its development may have negative impact on foreign trade balance.

It is relevant to understand that government's concern for export support policy shall include two dimensions [14, 1992, 116]:

1. Holding the national economic positions in existing export markets and entering new ones, aiming for better position in international trade and thus providing positive impact of the export on economy in general;
2. Ensuring international competitiveness of the economy both in foreign and internal markets by promotion of international competitiveness of entrepreneurs.

As stated by Czinkota M.R. [10, 1994, 98 -101] the aims of implemented activities according to state's policy for supporting export has to be understood otherwise they may be mutually competitive. Especially it concerns evaluation of governmental activities for aims, whose attainment envisages spending state budget finance. Similarly important to recognize a scheduled time limit for the implementation of governmental export support activities as short and long-term aims has to conform. Specifically, governmental export support policy and activities comprise possibilities to decrease risks of the companies' operational activities in foreign markets as well to increase prospective revenue. Thus this support shall concentrate in the fields, where risk and profit margins create market gaps and has to be related with improvement of exact organizational and managerial capabilities, which are demanded. Alongside Czinkota emphasizes [10, 1994, 99], that during the process of planning state's export support activities the highest importance and attention has to focus on coordination. The government sets export support activities on national



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level and sets for the implementing instances particular assignments. It is necessary that activities provided by State's export support program would be received by the most important and perspective sectors for economic growth. To ensure that implemented activities reach particular companies, coordination is necessary as well on the level of organizations' implementing State's support policy and most significant players (industrial associations, chambers, unions, and confederations). It has to be emphasized that State's export support policy has to offer activities in such fields, where the State has better competencies and obtains unique (e.g. contact information of foreign cooperation partners, politic lobby for entering foreign markets and problem solution). State export support program should not be a solution and provide aid for industry in critical situation as it is not internationally competitive. The State's export support program has to be focused on competitive industries and has to add value for companies' performance in foreign markets instead.

It has to be noted that simultaneously with the appearance of endogenous economic growth theory scientific literature and researchers show more attention to State's role and participation in export promotion. Even though organizations providing public or private support for the companies entering or expanding export activities exist already since the beginnings of XX century (Finnish export promotion organization *FinPro* was established in 1919), more extensive research awareness regarding the efficiency and impact of such organizations appears only during the last decades of XX century. As to these scientific research developments in context with the development of endogenous economic growth theory authors conclude following – as developed the understanding, how endogenous growth factors impact economic growth and development, the overall abilities for companies to undertake export activities are more frequently tied with economic growth. In the same time the necessity of the State's to participate in promotion of endogenous factors was defined, thus turning research focus on efficiency of organizations implementing state export support.

Conclusions

- Endogenous growth theory considers capital including human resources i.e. knowledge and provides arguments for implementing State's export support policy for economic growth. Acquired knowledge and successful exploitation of knowledge brings possibility to develop technological innovations and improve economic competitiveness both in internal and foreign markets. Whereas intensive participation of national economy within international trade provide possibility to focus on industries incorporating certain developed advantages.
- Within the frameworks of State's export support policy more extensive participation of the national economy is promoted in the international trade. Thus promoting not just macroeconomic gains from export increase, but stimulating development of industrial research and technological development.
- The implementation of the State's support policy is most important for small and medium size companies as involvement in export activities is more convenient way to engage in international trade. However the policy tasks include implementation of economic interests by providing and improving positions in foreign markets as well the increasing competitiveness of the production in the internal market.



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- The export support policy has to be focused on the development of such national industries, which facilitate wider usage of innovations and technological discoveries. The increased development of the industries based on usage of resources and include small potential for innovations may endanger successful economic development both in short-term and long-term.
- Albeit the aim of export support policy is to offer the companies resources unavailable for successful operation in foreign markets, it is important that during implementation of the policy most resources are targeted towards most competitive industries. The aim of the policy is to provide maximum increase of the capital not to provide support for further existence of ineffective industries.

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INVESTMENT DECISION-MAKING IN THE DYNAMIC ENVIRONMENT OF EMERGING MARKETS

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Abstract

This paper contributes to strategic decision-making literature by analyzing foreign direct investment (FDI) decision-making in the emerging market of Russia. After the collapse of the Soviet Union, Russia earned a reputation for being a chaotic business environment [cf. 1, p. 417]. “Presently, the business environment in Russia is characterized by scarcer resources, increased competition, higher customer expectations and a quicker pace of change” [2, p. 150]. In regard to such dynamic environments, the paper at hand aims to analyze investment decision-making in face of recent changes, and to summarize a set of recommendations for its improvement with a focus on crisis and post-crisis times. For this purpose, first of all, the main distinctive features of emerging markets are summed up. Secondly, the “state of the art” in the area of strategic decision-making processes is concluded. After that, derived from the “state of the art” and from previous empirical investigation done by the author in 2010 [see 3], some statements concerning research topic especially in crisis and post-crisis times are postulated and proven. Finally, conclusions and practical implications are presented.

Introduction

Emerging markets have become very attractive due to their high profitability and strategic importance. Investment decision-making in dynamic environments of these markets is a topic of increasing interest both in academics and practice. Complex, uncertain, and often contradictory business environments entail challenges that investors have to cope with. Managers and employees are expected to do more with less, to maximize both short-term gain and long-term investment, and to be more efficient as well as act more humane and ethical. The recent economic crisis just “worsened” the situation and changed not only certain markets but the economic system as a whole. E.g. the pre-crisis level of foreign direct investment in Russia was about \$70 billion per year, and was reduced to \$30 billion in 2008-2009. The Finance Minister of Russia, Alexey Kudrin, expects to have FDI back at \$60-\$70 billion by 2013 [cf. 4]. This ob-



viously refers to the conclusion that the economic crisis has an impact on FDI. Thus, it can be pointed out that dynamic external environment has an influence on investment decisions.

Amitai Etzioni in the article "Humble Decision making" wrote that "not only is the world growing more complex and uncertain at a faster and faster pace, but the old decision-making models are failing, and we can expect their failure to accelerate as well" [5, p. 46]. In this regard, the main changes concerned with the dynamic environment of emerging markets (the market of Russia as an example) especially in crisis times will be highlighted.

Summing up all the above, the following question arises in the underlying research: *How are investment decisions made, and which changes should be taken into account regarding investment in crisis and post-crisis times?* For this purpose, it needs to be identified, how decision makers or entrepreneurs deal successfully with the dynamic environment of emerging markets. Famous management books and MBA schools obligate conducting business plans, or different risk management calculations and market research. However, an interesting issue is, whether all these procedures lead to a successful business performance, especially if we not talk about developed western countries but e.g. about dynamic environments of emerging markets. Furthermore, Kahneman and Tversky (1979) found that decision making under uncertainty systematically deviates from these assumptions (analytic procedure, rational decisions) [cf. 6]. Saras Sarasvathy also explains that "successful entrepreneurs do not try to predict the future; they try to design the future" [7].

In order to achieve the main purpose of the underlying work, the paper is structured as follows: first, significant issues concerning emerging markets and their development will be presented. Particular focus will be laid on changing environments as a main distinctive feature of such markets and, therefore, the need for modification of decision-making processes. Afterwards, the "state of the art" in the area of FDI as strategic decisions is summarized, and, finally, the results and main implications from the underlying investigation are concluded. In closing, the paper suggests directions for future academic research and presents practical managerial applications.

1. Emerging Markets

Many researchers from all over the world investigated various aspects of emerging markets. These markets (especially such countries as BRIC) are supposed to have an increasing influence in political and economic spheres [8, p. 6]. Daniel Wilhelmi points out that the potential of developed countries like USA, Germany or France is running out, whereas investing in "emerging markets of the 21st century" is an investment in the future, as such processes cannot be stopped anymore. [9, p. 11] Because of their potential growth, emerging markets present different environmental features and challenges for firms from developed countries [cf. 10, p. 249 ff.]. Nevertheless, along with great opportunities, emerging markets bring also threats which force companies to take respective challenges. Anyhow, despite high risks, many companies do make investments in emerging markets and expand their business. In recent years (until 2008) FDI worldwide has grown heavily and faster than income and trade in general [cf. 11, p. 3]. However, this challenge requires an appropriate choice and implementation of a suitable com-



petitive strategy [cf. 12, p. 125]. This notion becomes to be highly important especially in the light of the last economic crisis.

The development of GDP growth is presented on the Figure 1. As shown in this graph, the world economy is slowly recovering after the world crisis. Whereas the growth of EU countries and Japan is slow, the economy of such countries as China, Brazil and Russia is still continuing to increase after the drop-off in 2008-2009. Nevertheless, China continues to drive the global growth.

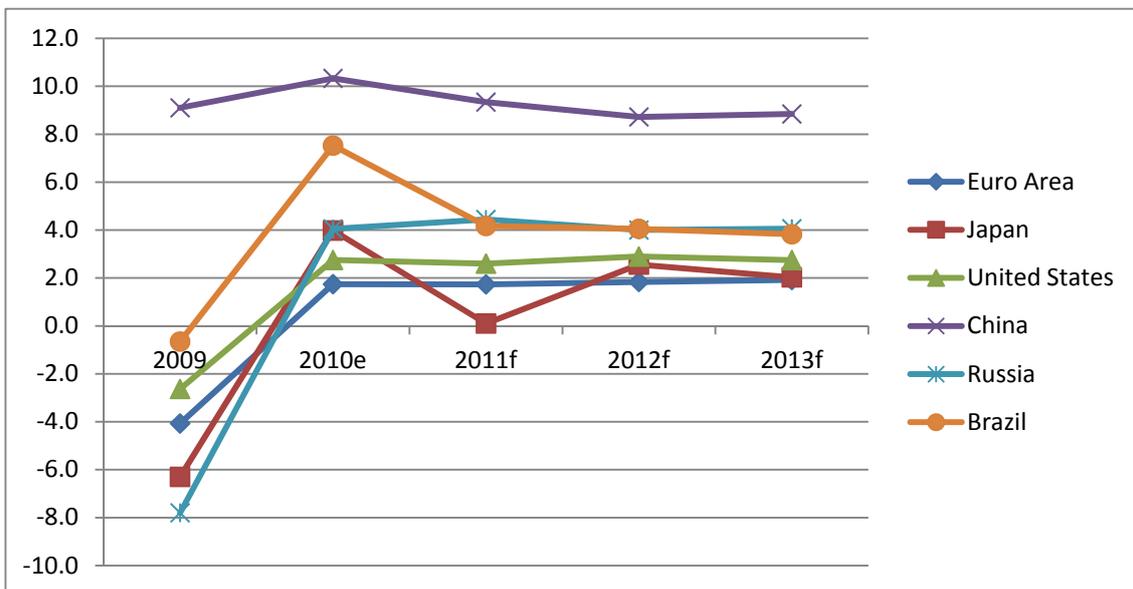


Figure 1. Real GDP growth, percentage change from previous year. Own illustration, based on data from the World Bank (e- expected; f-forecast numbers) [13]

Therefore, the stream of research regarding emerging markets economies is also increasing, and different studies have explored the internationalization processes in emerging markets, e.g. International Journal of Emerging Markets, or the special issue of Journal of International Management. Nevertheless, there are many discussions and debates in this field. And, of course, there are also significant differences within the group of emerging markets. All these “contradictions” confuse investors and, therefore, ask for “clarification” [9].

However, most researchers argue on distinct features of emerging markets which differentiate them from the developed markets. These features are presented in the figure below (see Figure 2).

Generally, the distinctive features characterizing emerging markets can be divided into two groups: change and uncertainty. Concerning this fact, the need for adapting the decision making process to such environments is evident. E.g. the results of survey “Future of risks” conducted by Ernst&Young in Russia in 2009 shows that more than half of respondents (52%) agree on the increasing of risks during the last 12 months, whereas 42% argue on the increasing of strategic risks, 40% - legislative risks, 39% - operative risks [cf. 14, p. 20]. The notion of un-



certainty and the influence of different kinds of uncertainty on investment decision making has already been empirically proved in the previous research of the author [see 3, p. 5ff.]. This paper particularly focuses on changes and dynamic environments of emerging markets from the process management theory's point of view. *As decision making is always a process, the paper at hand aims to analyze this process, and to find ways for improvement especially in crisis and post-crisis times.*

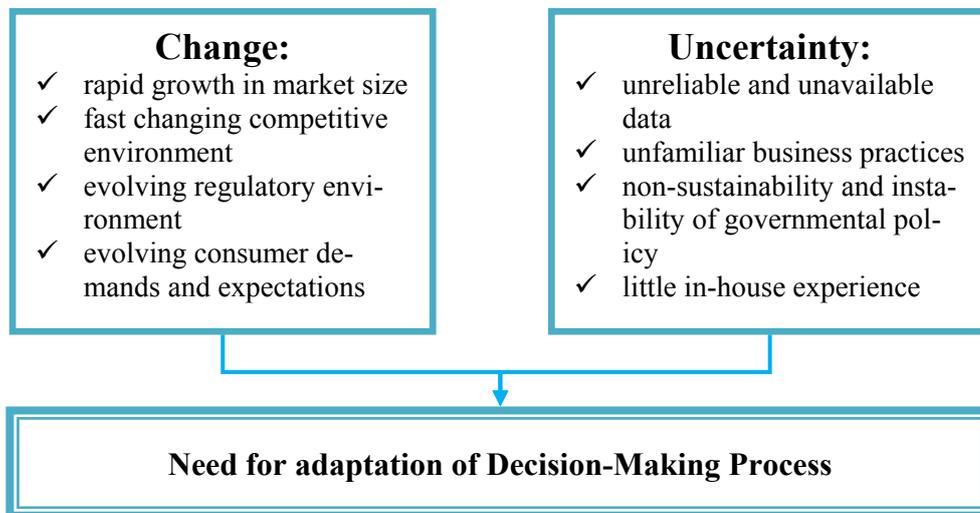


Figure 2. Distinctive features of emerging markets (own illustration)

As mentioned above, especially in crisis and post-crisis times investors need more certainty and stability than ever. The main lesson from the economic crisis, concerning the market of Russia, consists in realizing the fact that stable and sustainable development has higher importance than just profit in short-term. Therefore, the notion of risk management is increasing. It is important to integrate an effective risk management system in strategic decision making which reflects the complexity of the dynamic environment of the market, and allows improving decision-making under new conditions. Hence, this paper aims to examine investment decision making processes in Russia in order to find ways for its optimization. For this purpose, the decision making process will be concerned as a process that consists of some steps presented in the next paragraph. But before that, the state of the art in strategic decision making processes is presented.

2. Strategic Decision-Making Processes: State of the Art

Mintzberg defines strategy as Five Ps – plan, ploy, pattern, position and perspective, - and discusses their interrelationships in his article about strategy [cf. 15]. Porter explains strategy in terms of achievement of competitive advantage in a long-term period [cf. 16].



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Although there are numerous features characterizing strategic decision, many authors agree on the following terms: long-term direction, accordance with mission and vision, dealing with organizational growth and development, complexity in nature, including uncertainty and risk, and last but not least – involving changes [cf. 17, 18].

Moreover, strategic decision making involves “fitting the internal capabilities to the external environment by choosing the best among the possible alternatives” [19, p. 5].

Change is an opposite of relative stability in the past [cf. 20, p. 34]. Ansoff as a “father” of strategic management on the company’s level referred to strategic change as being “so rapid, that firms must continually survey the product-market environment in search for investment opportunities” [21]. In his monograph “Corporate Strategy” he defined a strategic process in organizations as a consequence of the following steps: formulation of strategic goals, analysis and development of strategy, strategy implementation and control. The “classic” strategic process can be generally represented the following way: 1. Analysis 2. Plan 3. Strategy formulation and evaluation 4. Implementation.

According to these definitions, not all investment decisions can be concerned as strategic. However, FDI in emerging markets can be seen as strategic process. Therefore, all problems at the strategic level are usually presented in terms that are “uncertain, fuzzy and confusing, while problem-solving techniques based on sound mathematical principles can only be applied to systematic and well-formed problems” [19, p. 3]. This “gap” between problems and their solution methods leads to the frustration of top decision-makers [cf. *ibid.*].

Bhushan defines the following critical problems associated with strategic decision-making processes: 1. Uncertainty: coping with uncertainty resulting from inadequate knowledge and excessive complexity. 2. Self-fulfilling and self-defeating prophecies: Coping with the fact that conditions are not fixed externally but are strongly affected by decisions. 3. Fragmentation: Coping with the fragmentation of the policy planning process into isolated but connected regional functional groups [cf. 19, p. 5].

In order to summarize the “state of the art” in the field of the topic, Figure 3 presents an overview of the main researchers who made a significant contribution to the different areas within the research topic. The differentiation between concerned areas is also presented in the Figure 3. Foreign direct investment decisions can be seen as a part of strategic decisions in organizations. E.g. researcher Larimo investigated the foreign direct investment process from a behavioral investment theory’s perspective [cf. 22, p. 25]. Based on the general model of the strategic decision process developed by Mintzberg et. al. in 1976 he investigated the FDI decision process made by Finnish firms. The author came up with the result that although there are many factors influencing the FDI decision making process, there were still many similarities in the reviewed cases (e.g. the motives of FDI, alternative development behavior and methods used by investment appraising) [cf. *ibid.*, p. 53].

There was also some research done concerning FDI decision-making in emerging markets. E.g. Kukovetz analyzed decision-making processes by entering the emerging market of China [see 23].

As can be seen in Figure 3, research on FDI, in particular for the Russian market, is a small fraction within the topic of emerging markets. The work at hand focuses on exactly this area. Although, there is already some research done in this field, this paper aims, first, to sum-



marize the “state of the art” in this area, and, secondly, to find out the implications for decision-makers faced with dynamic environment of Russian market in crisis and post-crisis time.

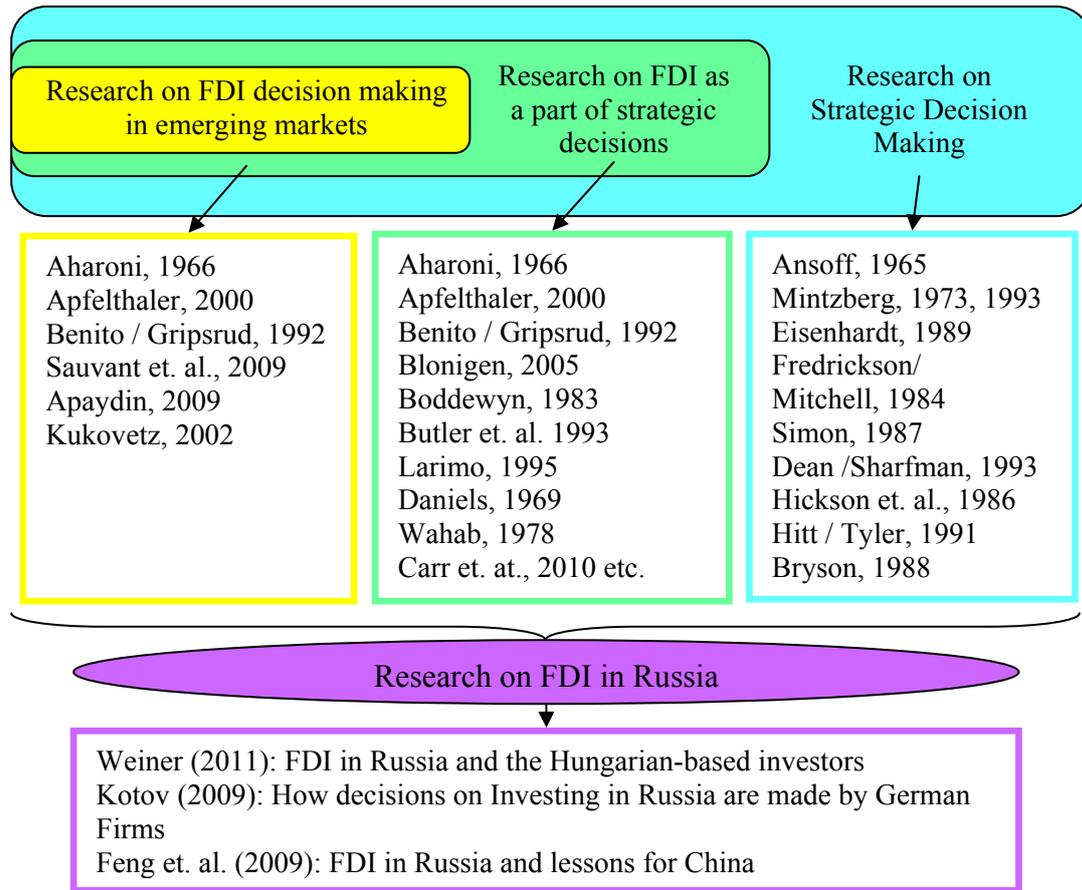


Figure 3. “State of the art” in the field of research topic (own illustration)

The main research method used in the studies on FDI decisions, as a part of strategic management of the firm, was interviewing participants in the decision processes. Much less were surveys or documents analysis used. It was no easy task as many researchers have shown and as “strategic decision processes are immensely complex and dynamic” [24, p. 274]. Based on the literature in this field, the decision making process itself can be divided into the following steps (simplified designing):

- Goals and Motivation for Decision Making (Step 1);
- Data Collecting and Analysis (Step 2);
- Analysis of Alternatives and Decision Making (Step 3);
- Control and Monitoring (Step 4).



These four steps are the basis for further research which purpose it is to identify the main changes which decision makers are faced with due to the dynamic environment of emerging markets in crisis times. The next paragraph is devoted to this issue, and, finally, summary and managerial implications will be concluded.

3. FDI Decision-Making process in Emerging Market of Russia: The Influence of Crisis

In order to analyze this influence in-depth, some statements concerning especially changes in investment decision-making processes will be examined. These statements are the outputs from the non-standardized part of expert interviews with consultants from famous international consultancy companies conducted in 2010 in Moscow. Research design and further information can be found in the previous publication of author [see 3, p. 5 ff.]. It is important to note, that in accordance to experts, in crisis time predominantly Step 2 and 3 (see decision making process above) are the crucial phases in the decision making process in Russia.

Statement 1. Economic crisis and worsening the situation in the Russian market lead to increase of uncertainty and risks, and, therefore, to decrease in FDI (predominantly Step 3 of DM process).

This economic crisis is not the first in the world history. Of course, some research was already done in order to find out, whether a crisis impacts investment flows. E.g. Lipsey studies US FDI into three regions as during three financial currency crises (Latin America in 1982, Mexico in 1994, and East Asia in 1997) and discovers that especially FDI flows are much more stable during these crises than other flows of capital [cf. 25]. But as mentioned in the introduction, the amount of FDI in Russia was decreasing during the years 2008-2009. However, this decline was not so essential in comparison to other countries [cf. 26]. Nevertheless, in spite of a slowly “recovering” of world economy and slow economic growth (see Figure 1), many experts argue that there will be new waves of crisis, as its causes were not smoothed over. For this reason, mistakes by strategic decision making concerning emerging markets could cost too much. However, on the other side, especially in the Russian market the crisis could also open new opportunities, as a crisis is always connected with changes. In 2009 Vladimir Putin pointed out that “Improving the business climate and the active involvement of investment, especially direct, remains a key concern of the Russian government” [27]. According to the Prime Minister, the crisis claimed non-trivial approaches and innovative solutions. However, the decrease in investments contributes to the deterioration of the investment climate in the country, evidenced by the results of a number of different ratings. One of the main indicators of a good investment climate is a favorable environment for business development. And for this indicator, Russia obviously degrades. In 2007 the country took the 90th place, but now it is at the 120th place (out of 183 countries participating in this rating). According to such indicator as “ease of entrance to foreign trade” – 162th place, level of corruption – 146th place [cf. 28]. In spite of high opportunities of the Russian market even in crisis times, investors do not hurry to make positive investment decisions. Many experts agree on the high potential for FDI in SME sector in Russia, which is not used, as FDI in Russia comes mainly from big companies. Summing up all the above, it can be concluded that the higher level of uncertainty in crisis time do play an important



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role by investment decision making [cf. 29, p. 19]. In overall, the experts agree on an increase in especially economic, market and consumer uncertainties in Russia during the crisis, and their negative influence on FDI decisions as various projects were cancelled [cf. 3, p. 10]. Nevertheless, investments are coming in the Russian market because of its strategic importance.

Summing up all the above, the following managerial implication can be concluded: In order to manage uncertainty and risks, more attention should be paid to the “analytical” part of the decision-making process. In this case, the usage of comprehensive business analytical methods for predicting and planning market changes, and a proper action in time is very important.

Statement 2. Rapidly increasing complexity and information overload lead to a decrease of the time available for making decisions in the Russian market (predominantly Step 2 and 3 of DM process).

As mentioned above, many experts agree on the fact of increasing complexity and turbulence of Russian market. E.g. May et.al. see “the challenges of the highly turbulent environment” in Russia as a result from market reforms [30, p. 404]. This leads to the fact that managers have to cope with environmental discontinuity, complexity, and concomitant uncertainty that increased in crisis time [cf. *ibid.*].

These continuing environmental changes should stimulate more extensive search for environmental information by making investment decisions.

Whereas many authors argue that there is a lack of information concerning emerging markets, and that this fact makes investment decisions more difficult [cf. 31], there is more than enough data regarding the Russian market. The core problem is the quality of the data and various information sources. In addition to this, due to the importance of networking and relationships in the Russian market investment decisions are more complex in comparison to other countries, where this “feature” is not so distinctive and dominant.

Overloading with insufficient information and lack of time for a situation analysis sometimes leads to decisions that have high-risk implications [cf. 19, p. 11]. At the same time lack of high-quality adequate information and precise objective data leads to the “necessity” of making decisions based on intuition and good feeling.

Concludingly, the following managerial implication can be highlighted: The use of an adaptive approach by decision-making, deliberate information search, and data analysis support investment decision-making. The opportunity of outsourcing this part of decision making is recommended especially in “bad” times, as each mistake could cost too much. Therefore, as the market in a crisis becomes more unstable, more uncertain and more disordered, better analytical tools for decision-making are required.

Statement 3. “Analytical” component of decision-making process becomes to be more important in “bad” times (predominantly Step 2 and 3 of DM process).

According to findings from the empirical study conducted in 2010 in Moscow, the majority of experts stressed the fact that in measuring political and economic risks and uncertainties the investors often rely on the ‘emotional’ evaluation rather than on indicators developed by international institutions [cf. 3, p. 10].

This issue becomes especially important in crisis time. Investment decision-making in emerging markets needs “a quick-response analysis of the situation that some, how captures the decision-maker’s intuition, judgement and experience” [19, p. 11]. This can then be combined



with detailed quantitative analysis based on the qualitative information (e.g. scenario analysis, process measurements, balanced scorecards, business intelligence, data accumulation and information generation techniques). Such “combination” or “mixture”, whereas “analytical share” should be on the majority, will lead to successful sustainable development of organization.

Also the methods of decision making theory can be used. Nadler argues that executives are required “to use every possible tool at their disposal to create and maintain organizational effectiveness” [32, p. 1].

Summing up, the following managerial implication can be pointed out: The application of business analytics in investment decision making as a “support” function should not be underestimated, even by the higher importance of “networking” and relationship management in the Russian market.

Summary and Conclusions

The paper shed light on the different aspects of investment decision making in changing environments of emerging markets (the Russian market as an example). Especially in crisis and post-crisis times this “relation” becomes to be important as FDI decreases. E.g. after an “investment boom” in the pre-crisis period the decrease of FDI in Russia was approximately by 50%. In order to achieve the main research goal of the paper, first, different features of emerging markets were summarized. Basically, all these features can be categorized in one of two groups: change and uncertainty. The influence of uncertainty on investment decision making was, amongst others, empirically proved in the previous work of the author [see 3]. Consequently, this paper was focused on the second aspect – changes.

In regard to this, the notion of strategic decisions was described in the second paragraph of the work. According to various definitions of strategic processes not all investment decisions can be concerned as strategic. However, FDI in emerging markets can be seen as strategic process. For summing up the “state of the art” in the field of the topic, the paper at hand presented an overview of the main researchers that significantly contributed to the different areas within research topic. The main research method used in the studies on FDI decisions as a part of strategic management of the firm was interviewing participants involved in the decision processes.

Furthermore, some statements concerning especially changes in investment decision-making processes were examined in the third part of the underlying work. These statements were the outputs of the non-standardized part of expert interviews conducted by the author in 2010 in Moscow.

As investment decisions have long-term implications and strategic orientation, a deeper understanding of possible future situations and also a certain “balance” between various controllable and uncontrollable parameters is required. However, the time available to decision-makers is decreasing.

In order to manage uncertainty and risks, more attention should be paid for the “analytical” part of the decision-making process. In this case, the usage of comprehensive business analytical methods for predicting and planning market changes and proper action in time is very



important. Implementation and use of adaptive approach by decision-making, deliberate information search, and data analysis support investment decision-making in crisis times.

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TRADE UNION LEADERS' ASSESSMENT OF LATVIAN TRADE UNIONS' STRATEGIC MANAGEMENT ISSUES

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Keywords: trade unions, strategic management, mission, objectives.

Abstract

The article introduces trade union leaders' views on strategic management problems in Latvian trade unions. The aim of the paper is to find out the trade union leaders' views on the strategic management problems within Latvian trade unions. The author analyses the development practices of Latvian trade unions' mission and vision and establishes Latvian trade union objectives and principles of their development. Leaders' opinions of the following have been found: the necessity of union's internal and external environmental analysis, analytical methods and the process of strategy implementation.

Method of data acquisition: a survey in the form of a structured interview. It has been concluded that Latvian trade union leaders have not paid sufficient attention to strategic management issues in these non-governmental organizations up to now.

Introduction

The present situation in Latvia can be characterised by recession, a high unemployment level, economic emigration, stress at the workplace and individualisation of society. Every factor taken separately, as well as all of them together, impact on the reduction of the number of trade union members, which is a serious challenge for every trade union, because it requires a careful analysis of the present situation, planning of further activities and the ability to work more intensively and flexibly. Several trade unions in Latvia regularly try to provide an effective social dialogue at both enterprise and national level. The history of Latvian trade unions also contains information about organising several strikes and rather regular pickets. Previous attempts of Latvian trade unions to improve their operation and gain society's trust have not been successful, trade unions find it difficult to understand what and how should be done to improve the situation. The goal of the research is to find out the trade union leaders' opinion about strategic management issues in Latvian trade unions. To achieve the research goal, the following objectives were set: to characterise the practice of the development of the mission statement and the vision in Latvian trade unions, to clarify the goals of Latvian trade unions and the goal development principles, to find out the vision of Latvian trade union leaders about the need for internal and external environment analysis, methods of analysis and the course of strategy implementation.



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Methods applied in the research:

- theoretical research method: analysis of scientific literature,
- empirical research method: surveying Latvian trade union leaders with the help of structured interviews. 12 trade union leaders from the member organisations of the Free Trade Union Confederation of Latvia (LBAS), as well as leaders of industry and professional trade unions outside LBAS participated in the survey. The survey was carried out in May 2011.

Demographic characterization of respondents.

Out of the total of 12 respondents the breakdown was made up of 50% women and 50% men. No respondent was under the age of 30, 33% were 31 to 40 years, 17% were 41 to 50 years, 25% were 51 to 60 years and 25% were over 60 years old. The data confirms that half of the respondents were over 51 years old. The respondents' activity in union management: 25% have held an office in a union's management for 1 to 5 years, 17% for 6 to 10 years and 17% for 11 to 15 years. Only 8% have worked in union management for 16 to 20 years, whilst 33% have been doing it now for over 20 years.

Strategic management in trade unions has not been widely studied so far. J. Weil, K. Devine, T. Hannigan, J. Dunlop, M. Salamon, L. Gray have researched it.

In literature sources about the management of trade unions researchers have expressed the opinion that over the last years several trade unions have started to integrate strategic management approaches and techniques known in business in their operation. Applying these approaches, trade unions have revealed that they help to adjust to the changing demands of the macroenvironment. In 2003 P. Clark and L. Gray admitted that since 1990, the number of international trade unions that implement strategic management in their operation has grown [5].

D. Weil considers that trade unions need a specific strategic planning approach, different from the private sector organizations, stating that taking into consideration the ideological, political and economic "roots" of trade unions, it is more complicated to define the goals of trade unions. According to him, the "political character" of trade unions limits the ability of these organisations to involve in strategic management; however, trade unions should not use it as an excuse for not doing it [6].

Trade union researcher T. Hannigan has emphasised that in effective trade unions all stakeholders are involved in the strategic management process. His approach includes the following stages of strategic management:

1. The mission statement is developed. It comprises the wish to serve others, to represent members' interests at the workplace, to provide a common goal, as well as to change the members' life positively.

2. The main goals are established. The main goals of effective trade unions are:

- to be more effective representatives of their members at the workplace;
- to be more effective representatives of employee interests in society;
- to be more effective organisers of trade union activities;
- to implement changes, based on the basic functions of nine trade unions (signing a collective agreement, organisation, legal defence of members, administration,



- management, carrying out political activities, performing public activities, improving the operation of trade unions, international cooperation);
- to increase usefulness of trade union resources to achieve the main goals.
3. Based on the analysis of strengths and weaknesses of trade unions, the ability of trade unions to attain the main goals is assessed.
 4. Strategies are identified. The main goal attainment strategies for effective trade unions are:
 - to adjust and adapt management concepts, principles and methods;
 - to develop strong, autonomous, democratic, value-oriented, mission-driven local level trade unions;
 - to improve trade union democracy at all structural levels of trade unions;
 - to create trust and reliability;
 - to improve and individualise the process of signing a collective agreement;
 - to prepare employee representatives as equal negotiation partners with employers;
 - to increase the involvement of union members and recognise members as personalities;
 - to enhance implementation of changes;
 - to facilitate intensive use of technologies;
 - to involve and develop trade union members to be promoted to the positions of trade union leaders and specialists;
 - to decentralise decision making;
 - to emphasise excellence in quality, service provision and in operation;
 - to increase trade union solidarity.
 5. Strategies for implementing permanent and one-time plans are developed.
 6. Risks and the probability of their appearance are identified.
 7. Plans are implemented [4].

Whereas, D. Weil, when analysing strategic management in trade unions, has named three strategic management stages: strategy formulation, strategy implementation and evaluation [6].

Strategic management stages in trade unions

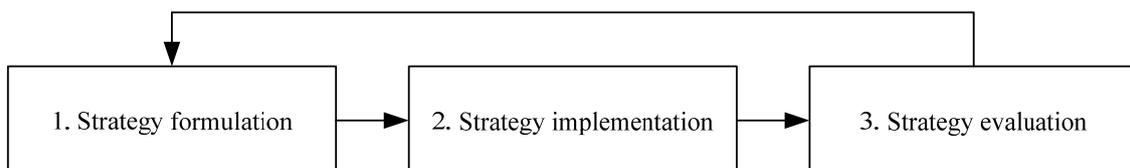


Figure 1. Strategic management stages in trade unions

Source: Weil, 1994

Leaders of Latvian trade unions reveal what their experience applying strategic management is. One of the significant strategic management stages is defining the strategy, which starts with defining the mission and the vision.



Practice of Latvian Trade Unions in Defining Their Mission Statements and Visions

During the interviews trade union leaders have mentioned such examples of trade union missions as “basic employee rights and social protection”, “to sign as many collective agreements as possible in different enterprises”, social equality”, “to represent the rights and interests of staff, the employed and employees”. At the interviews the leaders admit that a trade union vision is, for example, “a strong, many member trade union that is capable of attaining its goals”, “a trade union that comprises 80% of all employees”, “so that all employees are satisfied with their work, that they can choose a job that they are ready to do, they are satisfied with the working conditions, mutual relationships, the employer, and, of course, the remuneration”, “the vision of a trade union is to influence processes significant for itself, so that trade unions can lobby its members’ interests and the desirable changes in legislation”.

T. Hannigan emphasises that mission differentiates an organisation from other organisations of the same type. The way in which a trade union defines its mission statement, significantly impacts on its success. Missions provide general guidelines of strategic planning, give a special direction to define the strategy of the programme and the policy, and the mission serves as the driving force of an organisation. A useful mission statement requires some common features, e.g. services, technology or needs of the trade union members. The development of a mission statement is a challenge and a potential source of constructive conflicts. There is also an opinion that a mission statement that cannot be justifiably argued, is not a successful one. The basic task of the mission statement is to identify with the goals and issues of the trade union, to differentiate the trade union from other organisations, to be related to all the stakeholders, to be attainable and measurable, thrilling, encouraging and challenging. Every trade union, irrespective of the number of its members, should possess a mission statement corresponding to the contemporary environment [4].

The essence of the mission of the organisation can be understood and explained in its broad or narrow meaning. In its narrow meaning, the mission reflects how the organisation operates and what its goals are. The mission of an organisation is a precisely defined justification of the existence of the organisation, which in most cases is formulated in an abstract way and general, specific operations are not mentioned, but the overall motivation and direction of the organisation is expressed [1]. The author highlights that the mission statements and visions of Latvian trade unions do not correspond to the desirable theoretical statements. In general, the mission statements given in the interviews do not answer the question: “why does the trade union exist?”. Several respondents could not define the mission but talked about goals and their attainment. If trade unions have not defined and published their mission statements, their members and society in general do not understand what the organisations are doing and why anyone should trust them. There are several trade unions that have no vision. The fact that in most trade unions the mission and vision are not available in a written form also indicates to a serious lack of strategic management. The majority of the trade unions leaders admit that the members are informed about the mission and the vision in a spoken form. Some leaders state that the information is published on the webpage. Whatever the mission statement and the vision is, they should be accepted as a result of collective discussions. The information obtained in the interviews approved that there had not been serious discussions about this topic. In the author’s opinion, a written formulation and publication of the vision would encourage society’s comprehension of unions’ work.



The Goals of Latvian Trade Unions and Their Development Principles

A modern organisation cannot be imagined without goals. It is exactly the goals that allow the manager to make the right decisions. The goals serve as a benchmark for evaluating work effectiveness. The strategic goals of Latvian trade unions have been formulated by work groups, boards and commissions. In two trade unions they have been formulated by the leaders, but made more precise by the board or a team. The strategic goals mentioned at the interviews are different: increasing the number of members, training, obtaining political positions for trade union members, increasing the capacity, developing of an independent trade union centre. Most of the respondents consider that the goals are precise and measurable, realistic to be attained although the formulation of not all the goals approves it. Some examples of how the goals are formulated are: “to maintain stability”, “to maintain the trade union as an organisation”, “to unite all industry trade unions into one trade union and to increase the capacity of the trade union”. In total, the goal formulations are dominated by protection of members’ labour rights, payment for work, social security, signing a collective agreement, improvement of the work environment. About one half of the respondents considers that trade union members understand these goals, the other half thinks that they do not understand the goals. The explanation why the members do not understand the goals is, e.g. “people are very scared”, “...their only goal is to receive their salary on a certain date, they do not find interesting the rest”. The majority of the respondents consider that not all trade union members know the information about what the goals of the trade union are and, to their mind, members of the trade union are not interested in it, hence highlighting members’ low level of commitment to the union. Leaders find it difficult to say whether information about the set goals is known to all the members of the trade union, which demonstrates the lack of effective communication between the union’s leaders and its members. Only five out of twelve trade unions have formulated the medium-term goals. They are: to maintain the existing guarantees, to achieve tax reduction, to educate members, also politically, to achieve changes in specific laws. Unfortunately, the goals do not have the deadlines for being attained, which is a significant fault in the author’s opinion. The other respondents emphasise that the trade unions they manage do not set medium-term goals. Leaders find it difficult to state whether these goals are ambitious, flexible, motivating, specific and measurable, which confirms their superficial attitude to goal formulation. One trade union leader considers that the goals are not measurable and the flexibility of the goals depends on each member themselves. Although the mentioned goals could be measured, two leaders consider that they are not measurable. All the respondents who could mention the medium-term goals consider that they are realistic to be attained.

In two trade unions the medium-term goals were set by a work group, in two – by the board. One trade union leader had formulated the goals himself but one trade union leader admitted that “this goal is included in the Regulations of the CM”, which approves that a norm of some draft regulations has been chosen as a goal. Union leaders’ provided information on medium-term goal formulation practice reveals their low level of comprehending the meaning of goals and the fact that union leaders do not have a good knowledge of goal formulation theoretical viewpoints.



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The interviews also clarified that only some trade unions had set the short-term goals. An opinion dominated among the leaders that it was not necessary to formulate the goals because due to the changing external environment the goals are changing and thus are not necessary. Those trade union leaders who admitted that short-term goals exist in their trade unions, mentioned increasing the number of members and signing a collective agreement as such goals. Short-term goals are set by the boards, trade union leaders inform the members about the short-term goals either communicating to them directly or with the help of the local trade union representatives. Most of the respondents consider that not all the members know the information about the short-term goals, which repeatedly shows the lack of communication between union leaders and members.

Theoreticians set several requirements for goals. The goals should be:

- Specific and measurable, the responsibilities and deadlines should be set;
- Attainable, ambitious but realistic to motivate employees to attain them;
- Flexible – there is a possibility that due to the impact of the organisational environment there will be a need to correct or change the goals [1]. The author of the paper admits that up to now unjustifiably too little attention has been paid to formulating the goals in Latvian trade unions. Potentially, this is due to the fact that Latvian union leaders so far have not realised the necessity of goal formulation, significance, and the desirable theoretical approach to this formulation.

Leaders' Vision about the Need for the External and Internal Environment Analysis and the Methods of Analysis

Strategy formulation should be considered one of the most significant stages of the strategic management process. In business the strategy formulation starts with the analysis of the factors of the external and the internal environment. This process is devoted a lot of time, and different approaches and methods are used. All respondents admit that the analysis of the external environment is necessary for all the organisations, including trade unions. In Latvian industry and professional trade unions the analysis of the factors of the external and the internal environment does not happen according to a schedule and no special methods are used. In industry trade unions the impact of the external environment is discussed at the board and council meetings, only in one trade union a specialist deals with these issues which is a significantly low indicator. Several trade union leaders admit that the organisation lacks resources to analyse the external environment – there are no experts, not enough staff, capacity, etc. Thus, the leaders consider that they themselves and the existing staff are not knowledgeable enough to do it. There are mentioned several factors of the external environment that seem significant to each trade union and that are discussed at the board and council meetings or on everyday basis, e.g. the impact of technology on the members' work environment, the negative attitude of journalists, cooperation with industry ministries, the political environment, the unemployment level in the profession or industry. Reduction of the number of members due to economic emigration and interruption of the social dialogue in enterprises are mentioned as significant threats of the external environment. In addition, worsening of the quality of the social dialogue, instability of the government, members' "transfer from one trade union to another" (thus, a competition among trade unions), impact of shadow economics are mentioned. One



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trade union leader alone analyses the environment and “teaches members, tells them why the external environment is exactly what it is”. This practice, however, highlights signs of the autocratic leadership style. All the respondents admit that the external environment is changing and that this factor makes an effective operation of trade unions more difficult. Irrespective of that, threats of the external environment are analysed in most of the trade unions only once in five years, in the pre-congress period. Some respondents admit that the analysis happens when needed but they do not give any exact examples. It is revealed that most of the trade unions do not perform a systematic analysis of the threats of the external environment. Regarding this issue, one trade union pays attention to the impact of the recession because it reduces the number of the members. In another trade union the threats of the external environment are not analysed because its leader considers that “there will be no new threats”. In still another trade union the threats of the external environment are not analysed because “they do not change for a long period of time”, which the author interprets as a deficiency of knowledge and understanding of the external environmental threats’ influence on organisations. Even though almost all the leaders see the influence that the threats of the external environment have on trade unions, they do not recognise the need of a systematic analysis of the external environment threats, which once again shows their lack of knowledge of strategic formulation matters.

The analysis of the opportunities of the external environment also takes place either when preparing for the congress or irregularly. Industry trade union leaders repeatedly admit that trade unions lack resources for the analysis of the opportunities of the external environment or they state that, to their mind, there is no use for trade unions to do it. Several uses of the opportunities of the external environment are discussed at the board meetings. There is no regular, methodical analysis of the opportunities of the external environment, which, in the author’s viewpoint, significantly decreases unions’ chances of using the possibilities of external environment and reducing the threats. The respondents admit that at present the opportunities of the external environment are to re-elect the Saeima of the Republic of Latvia and to use the employer motivation to improve the work conditions for the staff.

Internal environment of trade unions. The information obtained at the interviews approves that Latvian trade unions do not perform a regular and methodical analysis of the internal environment. Preference is given to the statistical analysis of the number of members. In some trade unions the opportunities of the internal environment are analysed during seminars, in other – at the board or council meetings or in a form of negotiations, but the analysis is not followed by any action. Trade union leaders do not see themselves as initiators of this process because they do not recognise the benefits offered by knowing the strengths and weaknesses. Experience and representation at the National Tripartite Cooperation Council, the ability to defend legally members’ interests, being organised, existence of collective agreements are mentioned as strengths. Inability to “attract” new members, to ensure youth and all society’s interest in trade unions are mentioned as significant weaknesses. Employees’ fear to be active in trade unions, legislation drawbacks, “poor” social dialogue, low activity of trade union leaders in enterprises, reduction of the number of members, as well as problems with ensuring publicity are also mentioned as weaknesses. Overall the information gained on the practice of the union’s internal environment analysis testifies that union leaders do not regard this question as important enough to pay attention to it on a regular basis.

Trade union leaders have no interest about applying the theories and methods of management science to strategy formulation, which the author sees as one of the main Latvian trade union



strategic managing issues. Three trade unions have applied SWOT analysis twice. One trade union has learned to apply it but has not used it practically. PEST analysis has not been applied in any organisation, but, in principle, the leaders admit that factors of the external environment should be analysed and the SWOT analysis method would be appropriate for it. Trade union leaders find it difficult to describe the process in which the strategy is developed. It can be considered that a regular, methodical strategy development does not take place, which the author believes is a significant flaw and decreases the possibility for Latvian trade unions to work effectively.

According to the author of the present paper, the SWOT analysis method can be successfully applied to studying the internal and the external environment of the trade unions, analysing the opportunities and threats in the external environment of the trade union and analysing strengths and weaknesses in the internal environment. Although SWOT analysis is rather subjective, at the same time it is a method tested in business practice and its use would allow trade unions to evaluate both the internal and the external environment. Applying the SWOT matrix, it is possible to determine what strategy the trade union should choose.

	Strengths	Weaknesses
Opportunities	S-O strategy	W-O strategy
Threats	S-T strategy	W-T strategy

Figure 2. SWOT matrix

Source: Kalve, 2005

The most successful strategy is the one that, based on the strengths of the trade union, uses the opportunities of the external environment (S-O strategy). A strategy that helps not to lose the trust of the trade union members is the strategy when the opportunities created by the external environment are on the basis of overcoming the weaknesses in the internal environment (W-O strategy). A less successful strategy is the strategy where the strengths of the internal environment are used to avoid the threats created by the external environment (S-T strategy). A survival strategy is the strategy that requires to minimise the weaknesses of the internal environment and to avoid the threats of the external environment (W-T strategy) [2].

Trade Union Leaders' Opinion about the Course of Strategy Implementation in Their Trade Unions

The trade union leaders find it difficult to describe the process through which the strategy is implemented which repeatedly highlight their superficial attitude to this issue. Respondents' answers indicate that there are no special activities related to strategy implementation. In the pre-congress period it is reconsidered which goals have been attained and which not.

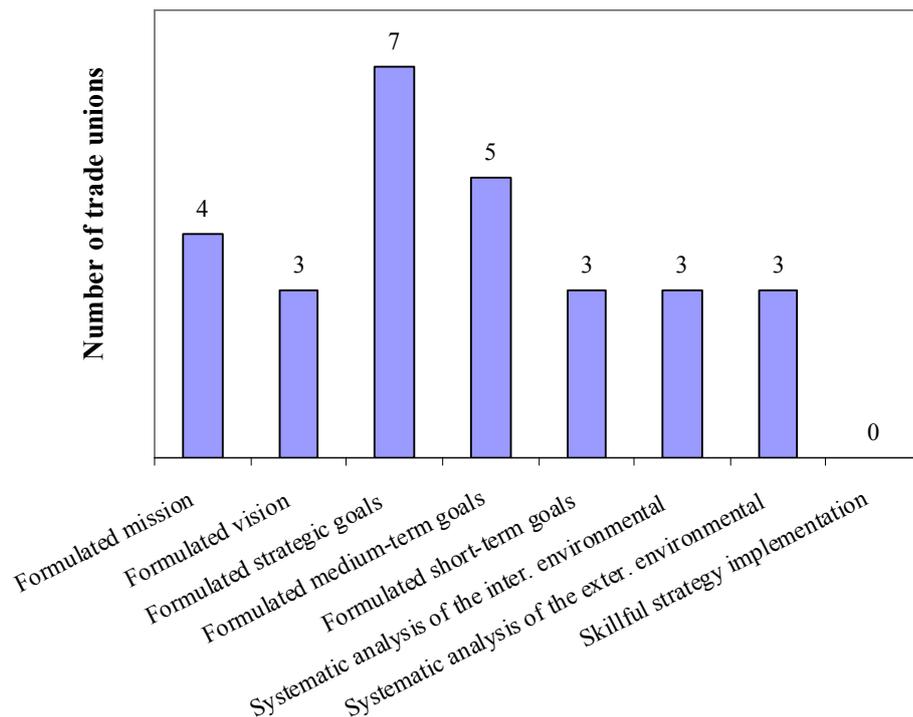
Theoreticians emphasise that for the defined strategy to be implemented, the following should be ensured:

- Development of the required organisational structures – determining tasks, responsibilities and decision making authority;



- Development and implementation of the strategy maintaining policy and procedures – including the development of an employee and outcome control system;
- Allocation of financial, human and material resources according to the strategy;
- Development of information, communication, operational and electronic systems to help the staff to implement the strategy;
- Ensuring the linkage of the external motivation system with the strategy implementation – employees that work persistently to attain the strategic goals are regularly rewarded and praised;
- Introduction of such an organisational culture that would foster the strategy implementation;
- Maintaining such leadership that would enhance the strategy implementation [1].

The information obtained at the interviews approves that even if the strategy is formulated in the trade union, sufficient financial, human and material resources are not provided for its implementation. Introduction of an organisational culture also still seems a complicated task for the trade union leaders.



Activities for developing a strategy

Figure 3. Practice of strategic management in Latvian trade unions

Source: Results of a survey carried out by the author in May, 2011



As can be seen in the 3d image, seven out of twelve trade unions have formulated their strategic goals, but only five have formulated medium-term goals. Formulation of the mission and the vision, as well as the analysis of the internal and external environments has only taken place in a small number of the studied unions, but skillful strategy implementation has not taken place in any of these unions. The author finds it is a negative result and believes that much more attention should be paid to strategic management questions in Latvian trade unions.

The author is planning to use the results of this research for future studies to find out the link between Latvian trade union work effectiveness and the practice of strategic management in these organisations.

Conclusions and Recommendations

1. The information obtained at the interviews approved that the mission and the vision are not defined in several Latvian trade unions. Mission statements and visions are not agreed upon during collective discussions.
2. The strategic goals of Latvian trade unions are most frequently formulated by boards, commissions or work groups in the pre-congress period. Protection of members' labour rights, payment for work, social security, signing a collective agreement and improvement of the work environment dominate in the goals.
3. Medium-term and short-term goals are not formulated in many Latvian trade unions. Short-term goals are set in the boards, trade union leaders inform the members about the short-term goals either communicating directly with the members or with the help of the local trade union representatives.
4. The formulated goals are not measurable because they do not have deadlines and units of measurement. Not all the trade union members know the information about the goals.
5. Analysis of the external and internal environmental factors does not take place according to a schedule and no special methods are used for that.
6. In Latvian trade unions there is not a skilful strategy implementation.
7. Latvian trade union leaders are recommended:
 - to pay more attention to strategic management issues in these non-governmental organisations,
 - to reconsider the implecation possibilities of management science theories and methods at formulating trade union strategies.

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BUSINESS MODELS AND MANAGEMENT OF CONTEMPORARY INTERNATIONAL TOURISM ENTERPRISES

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Abstract

International tourism is experiencing complex changes, involving emergence of new market players, changing travelers, immense technological development and modifications of business models and their organizational structures. International tourism has experienced rapid growth during past decades since global market liberalization and continuous change of external business environment determinates need to analyze these ongoing changes. Classical models of tourism organization with clear tourism operator, travel agencies relations are shaped hardly by technological development and development of e-commerce, emergence of global wholesalers and formation of hospitality groups encompassing classical and modern business models. These new business forms do not illustrate completely all possible models how an international tourism enterprise can be managed. Disappearance of strict boundaries sets free space for new models of businesses, confirming innovative character of international tourism. Formation of new business models are very often related to internationalization of businesses where there can be identified several aspects that require further attention. Among first to mention are financial perspective and intercultural communication. For enterprises, operating in global markets, intercultural communication skills and competences play an increasing role. This increase is related to changing structure of international tourism business environment, emergence of new markets and changes related to profile change of international travelers. Intercultural communication develops into an important aspect both for international relations of an enterprise, as well for an organizational structure of an enterprise with multiple operational offices in different countries, representing different cultures in management style. More often operational activities are run within different communication contexts and cultural groups. Aim of this article is a critical literature review on contemporary business organization models of international tourism organization, focusing on theoretical approaches of structures and operation. Based on literature review it is expected to identify the role of intercultural communication in current studies of management forms of international tourism enterprises.



Uncertain Importance of Tour Operators

International tourism business environment within past decades has been experiencing various modifications and challenges. All these latest developments can be categorized in two groups – there are challenges shaping structure of international tourism business environment, such as global financial situation, growth of global population and numbers of international travelers etc., on one hand, and challenges related to structural changes of business itself. Structural changes, originating from industry itself, even are related to external causes, have remarkable influence on international tourism business environment. With these changes are understood forms how international tourism business is organized and relations between different suppliers coordinated. Structural changes are mainly related to comprehensive ongoing technological development and increasing share of so called emerging markets (primary adopting countries like Brazil, Russia, India and China, but in wider context also other South American countries and South-East Asia as a complex market) in the statistics of international tourism arrivals. Various, tourism business environment related technological developments [1] and new markets are issues analyzed very often and indicating market trends of contemporary tourism [2]. Increasing importance of online travel booking has been possible due to several factors, such as low cost carriers, selling services directly to end customers and via internet; airline companies operating own booking sites and online travel agents as such as a new form of entrepreneurship [3].

Majority of current research of international tourism trends primary concentrates on general tendencies towards business environment as integrated subject, meanwhile comparably less attention is paid to various elements, specific for particular market units, such as transport suppliers, hotels, tourism operators or other service suppliers. International tourism business environment, primary, is analyzed evaluating industry interaction to other political, economical or socio-cultural aspects of contemporary situation [4]. Most of attention is dedicated to analyze, how international tourism interacts to ongoing international market changes, political and economical trends of global societies. Alternatively, various authors indicated on tourism interaction to sustainable development and importance of various involved actors in it. Tourism operators, being among important stakeholders are being more involved in various activities, directed towards support of sustainable tourism development, thus acting not only in their business interests, but also supporting tourism development in a destination [5, 6].

Of course these approaches and arguments are important when analyzing functions and position on a market of contemporary tourism operators, but at the same time, remarkable transformations can be noted also within industry and specific aspects forming international tourism business environment. It is impossible to speak about international tourism business environment without looking on all core suppliers forming it, such as accommodation suppliers, transport and ferry companies, airlines, that are crucial part of international tourism and often has been considered as core elements of international tourism and also tourism operators and travel agencies. Taking into account general character of international tourism, tourism operators have been playing important role in setting up structure of contemporary international tourism and structuring business relations of the markets. At the same time, with ongoing global changes transforming external environment of international tours and, in particular, technological development, emergence of new outbound markets and destinations and social



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responsibility as a conceptual part of business operation [7] the role of tour operator is moving away from classical concept of being producer of package holiday, further sold to travel agency which sells it to end customer. Structures and operation of contemporary tourism operators, requires deeper understanding of this business model, role of tourism operator and possible organizational forms and business relations of tourism operators. In spite of eventual critics of tourism operators as a form of tourism business organization, market trends shows that importance of tourism operators will not disappear that soon. Nevertheless, tourism operators are expected to change business and operational models to be able to operate in a changing international tourism business environment.

For all that, subject of tour operators in the future is not limited only to need to overlook approaches how to organize tourism business. Tourism operators, which still remain important components of international tourism business environment, recently, are experiencing certain further challenges, bounded both to internal and external business environment. Further in this paper, both internal and external business environment are considered, with a purpose to identify position of a contemporary tourism operator and to identify successful operational conditions of a contemporary tourism operator.

Tourism operators, as a form of tourism enterprise defined as creators of touristic enterprise, motivated by monetary and non-monetary reasons with, a believer of owing certain professional and organizational skills [8], which has been an important market player for past decades, currently are experiencing remarkable transformations, as a response to market changes. If main task of classical tourism operator has been to produce holiday packages to be distributed to travel agencies and contract suppliers before composing a holiday package, in contrary contemporary tourism operator often has moved away from this classical business model – wholesales operators and on-line travel agencies as sales channels of tourism operator products are just very first examples to describe current situation. Looking on classical definition of a tour operators, as a businesses that combine two or more travel services (e.g., transport, accommodation, meals, entertainment, sightseeing) and sell them through travel agencies or directly to final consumers as a single product (called a package tour) for a global price. [9, 10], question may arise about future potential of such business model, considering increasing importance of e-commerce and on-line bookings. In spite of these threatening perspectives of classical tour operator, presence of tour operators on the market and their importance in the market is remarkable and absolute. Clue of the situation is described in need of business organization, knowledge tour operators operate with and information systems they operate [11].

External Environment

Forces of globalization forces have transformed remarkably international tourism and importance of various forms of business organization. For organizations of tourism business situation is not exceptional: external environment plays increasing role in strategic planning and business development [12]. Business strategies are modified by various current processes, just mentioning few of them it is increasing number of international travelers, increasing number of transactions made on-line and differentiation of international tourism business environment



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itself, moving away from classical tourism as a product of western societies. In these changing conditions of external environment, tourism is among sectors affected most.

External environment is affected by growing importance of low-cost airlines, internet based travel companies and independent travel as a trend, where a response in developing sustainable products is becoming an important task [13]. Companies, responding to these changes are required to adjust their business strategies, which might be a sophisticated task, bearing in mind impressive number of unknown variables. At least two of them deserve special attention, as they can be important in long term business planning: risks of **strategic drift** and lack of **intercultural communication** competences. From various aspects, they are important in formulating internal environment of tour operators and other tourism organization.

International tourism businesses are among industries most subjected to strategic drift, considering external environment changes and inability to answer these changes properly [14]. Often organizations still accept conditions of uncertainty of rapidly changing external environment and struggling with various organizational risks [15]. Existence of clear strategy, considering ongoing changes of external environment affects tour operators probably more than any other of tourism sectors, as a must for tour operators is to evaluate existing business organization strategies, marketing strategy and customer relations. Strategic drift, aiming to formulate proper strategy is among core risks of a tour operator.

To avoid strategic drift, it is important to think over importance of customers being most important driver of new product and service development [15]. Customer relations and understanding of customers needs recently is becoming challenging, when looking on changing market structure. In this change, intercultural competences tend to play an increasing role as understanding of different cultures may stimulate successful business development. These are named cultural variables which should be considered and play important role in business negotiation which is a part of intercultural communication of contemporary business environment. Among most important cultural variables are greetings, negotiating styles, attitudes to time, and meanings of numbers, gift-giving customs and significance of gestures are defined as elements of cross-cultural communication aspects of business negotiations [16]. Recalling number of these variables, playing an important role in the process of negotiation, it is self-evident, that knowledge in general plays an important role in cross-cultural communication. By different aspects to be considered, negotiators, aware of cultural differences can signify an important role in business success. Business negotiations are among key elements where culture plays an important role, as when people from two or more different cultural groups negotiate, each brings to the table his or her way of thinking about the issues [17]. Looking on the subject from perspective of travel agents and tour operators, they are expected to guarantee sufficient knowledge to their employees and their ability to share this knowledge regarding such subjects as market situation, products and services [18]. Increasing scope of information regarding market specifics which is playing increasing role in customer relations leads to internal environment of tourism enterprises and factors to be considered respecting external environment.

Generalizing, analysis of external perspective, certainly, globalization as a factor, affecting operation of any tourism organization cannot be ignored. From perspective of globalization discourses, technological development is first to be mentioned, while also political, economical and socio-cultural aspects cannot be ignored.



A major challenge for tourism managers is to understand external environment in which their organization operates [15]. Understanding of external environment is crucial when dealing with internal environment and changing structures of business organization forms. Business organization and forms how it is organized is directly linked to external environment and unknown variables.

Internal Environment

Tour operators, being central organizational elements of international tourism business environment, are affected by uncertainty and changes of external environment have impact also to internal environment perspectives. Based on overall evaluation of various market trends, there can be identified at least three major organizational forms illustrating a modern tourism organization – travel or hospitality groups, wholesales operators, e-commerce organization. In this development partnership as a trend and clustering as a form of entrepreneurship cannot be ignored, as they primary reduce the individual costs of each company and stimulates emergence of joint products [19]. Partnerships and business models based on partnership as a strategy is an issue deserving deeper analysis, but axiomatic partnership as a strategy is closely related to internal environment and organizational structures of international tourism enterprises and tour operator business organization models.

Internal transformations of tourism operators (and other hospitality organizations) are linked to customer profile changes which are able to operate with unlimited volume of information, share experiences and gather knowledge from others. They are becoming generally knowledgeable and sophisticated [20]. Customer changes are closely linked to changing marketing strategies and concepts, which, however, being another issue is requiring deepened analysis. There are various general trends which illustrate current transformation of organizational forms of tour operators,

Primary, formation of **travel or hospitality groups** should be named as a trend. If taking just few examples of contemporary market leaders of international tourism, organizations like TUI [21] or Thomas Cook [22] who uses a word of group to describe their business structure. Evaluating these two organizations, as examples of contemporary tourism, a structure of organization consisting of tour operator, wholesales and involved service providers (travel agencies, airlines, hotels and eventually other forms) are not rare any longer. Imprescriptibly, part of these organizations are own on-line sales channels, available on the front page of company web sites. Formation of such all service segment covering organizations are received of fear in various destinations [23]. Business model, where tour operator is only a part of larger travel group is not only the case of world leading companies, like mentioned, but also of a medium size, like in case of Domina Travel [24]. Formation of travel or hospitality groups, sometimes named also travel service alliances, is entering into market as a response to customer expectations towards service price and service exposure [25]. Often, forms of collaboration have lead to development of internet based businesses. Under condition of multiple enterprises forming alliances or travel-hospitality groups, customer relations and customer service is gaining its importance. Being responsible about service of other enterprise, strengthening enterprise internally cannot be ignored. Tasks to complete may vary from customer service



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personalization to employee enrichment, networking or improving culture of learning as relationship with clients, employees and community where business is based [26].

Secondly, transformation from classical forms of business into **internet based businesses**, where tour operators are not ceasing its operation, but transforming into completely new business models or establishing alternative companies. Future of tourism seems to belong entirely to the internet and tourism will practically become the biggest industry on the internet. Also European markets, which originally have been more conservative have quickly adapted to new trends [27]. It is often reported how various service providers have managed to switched to on-line business, like airlines have done and cruise companies are switching recently. It is argued that these operational changes have not been destructive for tour operator, but have just encouraged developing innovative products and operating with more innovative approaches [28].

Importance of technology oriented business organization and organization's operational structure development into technology oriented might be crucial for organization's existence in longer perspective. Many businesses will face a multitude of difficulties in achieving efficient and effective integration without the cooperation of business partners or participants of the market [29] It means that classical tour operator organizational structure should be adaptable to those forms of business partners organization holds, and inability to satisfy these expectations may result in decrease of tour operator business volume. Adaptation can be done in at least two different directions – either concentrating primary on technology or products, appropriate for e-commerce.

Finally, international tourism, in the context of increasing product portfolios of tour operators and destinations offered to clients, are contiguous with increasing volumes of information. This information needs certain management and technology as such offers unique possibilities to operate with it. On the other hand, international tourism is considered to be industry which is sensitive to the variables of personal preferences [30] even there is also evidence and research indicating on convenience as main reason why customers prefer online travel agencies and bookings instead of classical ones [3]

Thirdly, **specialization** as a response to increasing competition from global wholesales operators and travel groups needs to be mentioned. Specialized or niche tour operators, which emerge as a response to ongoing pressure of global wholesales operator operation. Formation of niche tour operators is developing into two directions – either by developing niche products or targeting niche markets [31]. Niche product as well requires certain adjustment of products and organization of regular operation. For European destinations and companies operating in Europe short break and week-end trips play increasing role [32]. Specialization is often considered as a unique opportunity for tour operators to avoid from cruel competition with interned based companies and instead to demonstrate ability in developing innovative products and offering unique experiences. Additionally, this offers existing enterprises to look for customers who consider classical travel agencies offering unfair prices [3]. Besides, development of niche tourism or specialization enterprises is also considered as a response to increasing hyper consumerism, describing modern consumer and client for tourism enterprises [33].

For all different business models there is growing need to look for new approaches to work with new markets, represented by different cultures. This process is complicated, as any society or group of people is always approaching different culture or society with different



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stumbling blocks, including language differences as the simplest up to assumption of similarities or stereotypes [34]. If this is important for those companies working with incoming business and wholesalers, then for outgoing companies it is important to be present at new emerging markets by opening their **representations** or establishing joint ventures with existing local companies. These activities require financial investments, as well as new knowledge and general understanding of core principles of culture. Looking on selected, larger European operators there can be found plenty of examples. Just few to mention – Thomas Cook intention to establish joint venture in China [35], merger of TUI with Indian enterprise LPTI in 2006 [21] or subsidiary of German FTI in Asia – FTI Asia [36] are most visible recent examples. These examples illustrate how leading tour operators are establishing new businesses in emerging markets to secure themselves with guaranteed businesses from new emerging markets. Besides, developing subsidiaries in these areas, they demonstrate ability to deal with one of challenges proposed by changing market structure – intercultural communication competences.

International tourism business environment in basic principles has become completely intercultural, as international enterprises more often have to deal not only with intercultural business, but also intercultural character of organization itself, as it is in case with TUI or FTI. Is complicated to estimate number of such enterprises, but it is obvious already now, that conversation of intercultural communication and interaction with international tourism business environment will keep its topicality according to recent date and general trends and expectations of further development of international tourism business environment [4].

Summarizing Issues

At the same time available literature, analyzing position of contemporary tourism operator, defines further areas and issues, which are closely related both to external and internal aspects of tourism operator analysis. There are several aspects that emerge from changing external environment and following organization structure changes.

Tour operators, in spite of primary purpose of existence – being present on the market, more often are considered to be partners with local authorities and state, considering their importance in attracting international tourists to a destination. A case study of public-private partnership projects, where tour operators get more involved into activities, non-directly related to commercial affairs. Besides, respecting importance of tour operators, certain area management agencies will need to adopt more holistic and strategic approach to relationship management with its tourism stakeholders [4]

To understand this, intercultural communication is expected to play an increasing role in the operation of international tourism operator. Not knowing and respecting cultural specifics, it is not easy to complete ethics of tourism. Rapid growth of international visitors, revenues generated by this growth sets an issue about ethics of those, who primary benefits – these are various organizations, among tour operators as important market players. This perspective of ethics can be viewed from perspective of sustainable tourism, encompassing aspects of long term support on the ecological level, fairness on the social and human level and viability on the economical level [37]. These tasks are binding for tour operators and require tour operators to take certain responsibility of issues not directly related to business. They involve also need to



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raise awareness of travelers, where tour operators can invest required resources. In general, it can be named even certain social responsibility of tour operator and ethics of tourism, also sustainable development where tour operators are expected to give their contribution. Often, exactly tourism operators are expected to take bigger responsibility of businesses ethics, relations to local communities and local entrepreneurs in various destinations.

Finally, in the period of structural transformations, when clear business responsibility issues are disappearing in the sense, that a tour operator is not acting only as a tour operator, but often re-selling products of other travel group enterprises, an issue about business ethics should be considered and respected.

Conclusions

International tourism always has been considered a sensitive industry to external environment, while tour operators have been market players affected most by contemporary market changes that involve overall transformation of international tourism business environment. Changes of external business environment, influenced by forces of globalization and following practical examples of it in a form of development of e-commerce and increasing number of emerging markets, remarkably affect tour operators.

As a response to these changes, tour operators instead of ceasing operation are getting more and more involved as stakeholders of international tourism business environment and becoming responsible for tourism development as such. At the same time, tourism operators are entering into another level of development, where primary concentration is moving towards deepened understanding of client, customer service. Often, to satisfy increasing demand of customers, tourism operators are undergoing major transformations and implement innovative approaches in business organization and product production aiming to stabilize market position. Classical division of responsibilities between tour operators and travel agencies are not obvious any longer and they are more shaped by contemporary situation and tour operator ability to restructures internal organization.

For contemporary tour operators, a potential direction for adjusting their operation is within deepened understanding of their clients, through communication and improved customer relations. Responding to increasing competitiveness of business environment, tourism operators must keep operation according to strategic principles of the organization avoiding strategic drift and respecting external environment of tourism business. Additionally, tourism operators are among those stakeholders of international tourism business environment to participate in further development of tourism business environment and eventually taking more responsibility of own activities.

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ONLINE MILIEU STUDIES AN APPROACH FOR REVIEWING SOCIAL NETWORKS WITH THE MILEU APPROACH FROM PIERRE BOURDIEU

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Abstract

In this article the approach to research milieus in online social networks is determined. For the milieu research the approach of the French social scientist Pierre Bourdieu, how enhanced the milieu definitions of Emile Durkheim, was selected. The research had itself as target to provide a sustainable and approvable description of a further research process which relies on the selected theoretic.

With this approach, the research of milieus in online social networks will result in a way which satisfied the requirements of the statistical research about milieus. To enhance the approach and to provide a more valuable result, a trial questionnaire was preceded on the Internet conference Re:Publica10 in Berlin. That questionnaire had his roots in mentioned theoretical approaches and was used to determine necessary enhancement for a following statistical research in online social networks.

The determination of milieus in online social networks is required to receive more valuable information about the usage of customer groups on those networks and to understand their requirements and motivation for interaction within social networks. Those valuable information are usable for social media marketing campaigns and the development of online services and products. By using information about online milieus the requirements of the selected customer groups can be satisfy with a higher efficiency.

Introduction

Since the introduction of displaying network based content in the World Wide Web on 6th August 1991 [1] the Internet has realized a tremendously capture in the personal area of time spending and media consumption. With this change of the media consumption in the society, the Internet has become a main medium for purchasing decisions. It has become a place where people spend their spare time, where they get experiences through interaction and where people exchange themselves with friends and interact with other persons. In personal usage and time



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spending the World Wide Web has mostly replaced the medium TV as the mass medium in consumption for people below 29 years in Germany [2]. With this the Internet had become the cutting edge and marvelous playground for marketing activities in the last years.

In the Internet several places exist where users can interact with other users and spend time by the usage of this mass medium. The usage in the Internet medium can be differentiated between the ability to consume media like in a newspaper or at TV in a way in which the user triggers the sector of information for which he would like to receive information or, on the opposite, through interaction with other people and by become part of social interaction in social networks. Those are mostly oriented on the as social webpage pages defined environments [3].

This division in the Internet market portfolio had since the introduction of GeoCities in 1995 [4] several markets leaders and increased since those beginning times their market share in the online environment to a leader position for spending time in the Internet. The success of social network pages like Friendster, MySpace and Facebook was based on the approach that the user has the chance to provide information from him selves and to interact and exchange him selves with friends or other peoples in the network or the World Wide Web it selves. Within the exchange approach from those networks personal information, pictures, movies or other information like preferences can be shared. From this social network approach but also focusing on the area of weblogs, the micro blog service Twitter was invented and published to the World Wide Web audience in 2006 [5]. Like other social networks Twitter receives his place in the domain of the web 2.0 and has become a market leader in this niche market. It has got a name as a network for early adopters and high technical oriented users as also for persons which feel themselves as digital natives. The network itself is used for the abstract communication, based on the character limitation in messages and for personal information from the user.

Relevance for Marketing and Product Development

As a social network page Twitter has become a pillar network in the online environment and with this in the marketing business. With their growing user base, the network was very soon in state to be usable for companies in social media strategy [6] and related to this, also to spend marketing budget. At the beginning those was done without dedicated information about the user base itself and preferences and ended up in the result that the results were not as expected.

In social media the difference to normal marketing communication exist that the customer is able in his interaction with the company to response and with this the customer can react negative concerning the company and their activities. For social media it is with this highly recommended for companies to get aware of this by developing the social media strategy and to be able to communicate with users from the network in the way as the users deserve it. Like in the case of Twitter, this is currently done without information about the users itself. The network itself provides information about the received information during the subscription process. During this process a login, which is also used as username, an email address and the preferred language for the interface are requested. With this, only about basic information are available and no information about the personality of the customers. For marketing companies



this results in the issue to receive relevant information about users and with these possible customers. During this, the network itself is getting more and more relevance for customer's service or direct interaction with the customers in product and service discussions like for the German railway company Deutsche Bahn which provides customer service by Twitter to users.

If the milieu theory can be successfully transferred onto social networks pages, it would be possible to target customers more precise in the online environment. And this not only based on figures, but also based on quantitative information and group building. By following the milieu approach it can be expected that users interact with their preferred kind of human beings. In our situation a small test survey was preceded on users from the Twitter network to understand the methodology behind milieu questionnaires and to receive additional information how to enhance the quality from the questionnaire.

Twitter – a Micro Blogging Approach

In the sector of social network pages the micro blogging service Twitter was introduced in 2006 to the public under the name Twtr. The service provides a platform which allows users to interact with friends and interested people with a restriction of 140 characters per message. Those messages can be shared into the Internet or only related to followers [7].

At the beginning of 2011 the network had more as 200 million registered [8]. Twitter as a service has the approach to provide the ability to a user to send short status updates to friends and interested people. The service itself provides the function of searching in the network for text messages and users. In the ability to insert messages as status report or message to the world a strict limitation on 140 characters is set. This restriction also belongs to direct messages between users. In the function to follow other users no restriction exists on the amount of followed users. Everyone can have an unlimited amount of followers and can also follow an unlimited amount of people. This unrestricted restriction is an advantage of Twitter in comparison with other social network pages like Facebook or the VZNetwork in Germany. From the functional point of view, the following function allows the user to follow other users. If the user has not enabled his private setting to do not display the personal message in the World Wide Web the personal messages can be automatically read. In this context it must be known that user use this approach to interact with other people and to get in touch with new followers. Like a normal online chat with a group function like ICQ, MSN or Skype, but in a public and non-grouped way.

The personal timeline and with this the visibility of personal information in the Internet is the additional advantage of Twitter for the aggregation of information and to exchange with other people. This happened always on the approach that the users want to share information in the network and behind the barriers from the network. Twitter as service aggregates all the information from the other timelines into one main time line which is sorted by the date of interaction in the aim of writing information or retweeting information. The mentioned timelines can be merge by the user into own a dedicated groups, the so called "lists". This allows to group users and to differentiated groups of friends with a filter. For the open direct communication Twitter allows public direct messages by using the "@" character and following the name of the user who should receive the message. By using this function Twitter provides



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an internal search function which let that message be displayed in the personal timeline by the user which is addressed in the message. The usage of this function and with this, the mention from a user is called a “mention”. In the graphical front end of Twitter the search for mentions is integrated as an additional tab. Mentions appears in the timeline in addition as link to the timeline from the mentioned user. This allows users which has not followed the conversation to catch up on the story or discussion. Beside trending topics, which are aggregated out of tagging of keyword via a hash tag and which displays the trending hash tags over the world or dedicated areas, Twitter allows subscribed users to search in the network for keywords, phrases or to follow the mentioned trending topics. By visiting trending topics, trough clicking on a hash tag, the visitor of the social network page Twitter receives a timeline with all mentions from the trending topic.

This feature is in addition used by linking each written hash tag with a timeline. This timeline displays the current mentions of the clicked hash tag. On this way, the interaction on topic and keywords, if enabled with a hash tag, allows the fast aggregation of information in the network. People which has set their privacy setting on the status that the do not want to have their information displayed public will not appear in the timeline, also if they use a hash tag. In the case of such privacy setting a request to follow the person is required to receive the personal messages. The following and back following of a person allows in addition the sending of direct messages. Those messages are completely private and do not appears in the time line. The back following of another person is in this case manual necessary, because a person who is followed by a new person does not have to automatically follow back. This is an additional approach of Twitter if a user does not want to interact with other people and only focus on the approach to share information.

For the German Twitter market information about key performance indicators in the sector of tweets (messages) and active users are available. The amount of tweets in the German language in March 2011 was around 16.7 million, provide by around 480.000 active users with the setting of German as their main language. In this case an active user is understood as a user how has send out a message during the time period of a month. The reading of lines is in this case not understood as an active user [9]. Regarding the usage of the system itself it should be noticed that 25% of the current active accounts are new created accounts or the several account get only reactivated to special time of interaction. This can mean that the usage of Twitter change based on events in time. Those events can be TV shows, sport events, culture or natural disasters. In those times, normally a high need for interaction and exchange, and with this for communication, exists. Beside the activeness of a user, also the amount of followers is an often used as indicator for active or important usage. With followers it can be expected that the content which is insert by the user is valuable and that the person interacts with the networks and provides active content to the network.

Only 75% of the users have more as 40 followers, 50% of the users have more as 108 followers. In the usage this results partly in the passive consumption of information by reading without providing [10]. For this is must be displayed that it can be an organizational barrier for the user to receive followers and to find interaction which decreases the user satisfaction with the network.

From the demographical point of view in the network 45% of the users are between 18-34 years [11] which displays a mainly younger user base. In the gender separation the



general trend shows that the system has more male as female users. This trend is also supported for the German market with a separation of 78% male and 22% female users in 2009 [12]. Based on this information, it is a highly interesting network for research to understand a smaller market segment of social network pages with a focus on younger people.

Twitter itself is high used by companies from all areas and sections to inform possible customers about products, news or actual developments. In general it is a highly recommended network in the social media portfolio of a company with a focus on the mentioned target group. For those companies the need of a milieu studies in such a network exists to motivate users to follow their company Twitter accounts. This situation is the main issue and the reason for the usage of market differentiation in social network pages. The personality of the users and their dedicated preferences is not known, beside the general information about the male and age.

For marketing activities of a company which wants to operate in their social media activities in social networks it would be interested which customer groups the network contains. This also includes the ability to understand the perspective from a customer how to reach him by interactions and to establish discussions about the company.

Market Segmentation in Milieus

In the scientific sector of marketing and business administration several approaches for market segmentation exist. The term of market segmentation describes the process of defining and subdividing a large homogenous market into clearly identifiable segments, where each segment has similar needs, wants or detailed demand characteristics. The market segmentation target is to design a market that precisely matches the expectations of customers. In the sector of market differentiation four main differences for market strategies are set: behavioral, demographic, psychographic and geographic. Those difference strategies are used to differentiate the available market for goods and services into groups of people with similar needs.

Market differentiation is done to increase the ability that a customer group response to planned marketing activities, sales approaches or behavior influencing. From these approaches the pure acceptance of only one variable is the easiest way to determine a customer group and with this a market segment, like only the use of a geographic area. In marketing communication this is i.e. done by steering a marketing campaign by sending newsletters to specific customer groups or by displaying advertisements only to selected local areas.

To make this more targeted a combination from the mentioned approaches is needed to receive a higher level of customer satisfaction and responsiveness. The approach to combine the different differentiators exists in the sector of social science. In the sector of social science and with this also in the sector of business science, several approaches exist to group customers on their behavior, demographic, geographic and psychographic data. This is done to receive the ability to provide more efficient marketing or product development activities to customers and prospects.

The milieu approach is an already used approach to differentiate markets into dedicated customer groups. For the Germany market companies like Sigma [13] and Sinus [14] have developed special milieus for the German market, called Sigma milieus and Sinus milieus, which defines customer group by their preferences and behavior.



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In sociology the term of milieus was first used in 1895 by the French sociology scientist David Émile Durkheim in his research “Les règles de la méthode sociologique”. In his research Durkheim defines the criteria which are needed for social interaction in the society and with this the grounding for social milieus. Durkheim [15] pointed out the fact that social behavior has a different basement as pure psychology based acting. Group acting and acting in the society itself is based on the personal level on psychology, but the consciousness of a collective reacts different, based on the situation that a group of human being interacts. He focused on the approach that groups have their own rules of interaction and reasons for appearance and out of this, groups are developed. For the research of groups, he did not use in this situation the term milieus. During his research he pointed out in addition to remember that the distant view on a research or a social interaction is necessary for science, but cannot be preceded always, based on the normal influences which happen through the interaction, based on personal feelings. With those feeling the determination of variables which influence a group will be selected under preconditions. For this he recommended to avoid the possibility to provide too much information about a situation and to work on an aspect oriented point of view with the awareness that influences will always interact during a research. For the preferences of a group, which were defined later as milieus, he introduced that social conventions in a group exists. Examples for those contentions could be to wear the right clothes in a group, to get introduced in a group with the necessary personal distance or with a more open interaction. This includes the right behavior as in addition the right speech. He tied this together on a specific way to act, thing and feel to be successful or integrated in a group. In this context it is pointed out that a behavior is a group behavior in general if a dedicated amount of members of the society follows on such a special behavior.

To understand a research area at first the area itself needs to be located and defined to avoid an overlapping with other research areas. This must be done to be aware of the mentioned possibility for a subjective point of view and the mentioned existing influences during a research. For this, he recommends to review the used method and to increase the used method in the direction of the approach as needed to create a higher level of verification for the results. For the settings and basements of a group the following three factors were defined:

1. A social phenomenon is normal for a group member during a dedicated period of development, if the average from the group face this kind of phenomenon during their development.
2. The result of a phenomenon should be verified by prove that the phenomenon results out of a social requirement from the society, and by the understanding that the behavior is influenced by the collective itself.
3. The verification of a finding is necessary, if the fact belongs to a social phenomenon which development is not completed until now.

With his approach Durkheim introduced sub systems in the social interaction. Those systems influence human behavior from outside by the interaction with other human beings and experiences. In this approach he took into consideration the personal internal behavior in system with fixed personality based on the external experiences. Within this approach, the fundamental basics for a milieu definition were set. Instead of social classes, the milieu definition also contains the behavior of a person and his environment and not only his available economical



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available capital also the available cultural, social/networking and cultural capital is taken into consideration. All this variables influence the personal status of a human being in the society. In this also the speech, including the use of grammar and spelling is influencing the participation in a milieu.

Out of this approach Norbert Elias developed the habitus definition. The habitus defines the appearance of a person, including the life style, articulation and pronunciation, personal taste and preference like in music, movies, culture and clothes. To understand the importance from the term habitus, this term must be reflected in the context of society itself. With a habitus a person interact in the field of social interaction in the society. A field of social interaction is described in the literature as functional differentiation by organizing the society based on labor, by including in the term of labor, also nonprofit work or interaction with an output as itself. Bourdieu extends this understanding and defines the field as a force field where all participants focusses, direct and indirect, on power. All participants try to establish their positions and representation in the field and also in the society. It is to be understood more or less some kind of a game. A game regulated by his participants. Each social field contains his own typical functions and principles which defines it. The highest fulfillment, a person can provide to a social field, is to start working in this field and with this, the person starts to focus his life on the special focused field [16]. Those approaches were enhanced by Pierre Bourdieu, how established the approach to distinguish between different milieus. For this the influence of capital, understand as money value, knowledge and titles were added. In this context Bourdieu differences between self-established and inherited capital which influenced based on the source the status and behavior of a person itself. The mentioned approach from Durkheim, that groups act based on the expectation from the group members, which directly influences the behavior of the members itself, was displayed by Bourdieu in different sectors like art and music preferences, purchasing and drinking behavior or preferences in the understanding of beauty and ugliness or the preferences in place of living or interior design. During his research a distinguished was established between available capital and additional cultural capital. Out of his approach Bourdieu i.e. developed a map which displayed an overview which music titles are preferences of which part from the society and enhanced of the time to an overview, where he was able to target occupation groups on this map and out of this, the personal preferences could be understand. In the milieu context, a milieu can contain several social fields. And a job or profession can also be part of several milieus, but is mostly related to one specific milieu, based on the deeply integration from the habitus. To understand this in detail it must be mentioned that the habitus of a person can be mobile during his life. It means that it is not always common that a person stays during his whole live with his habitus in one milieu. With a changing environment, changing friends and different kinds of challenges during work or studies, the habitus and with this the milieu does change, especially during the time period from a person when he is young.

Regarding the definition of milieus it must be mentioned that they can be in general only ideal type based. This means that a person can be targeted into a milieu but a certainty of in secureness is still given. The basement for all those information and aggregations were built on a questionnaire which was preceded by Bourdieu included over 26 sections of questions to cover the personal history of the family of the researched person and the personal preferences in the sectors as mentioned before [17]. For the case of milieus in social networks this information



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will be used as basement for further investigations. To determine the current environment and milieu of a person as also to understand the interaction pattern and behavior which belongs to a milieu is the target of the research. For this, the existing questionnaire from Pierre Bourdieu was used for Twitter users to test if this approach can be used to segment online social networks.

Milieu Research in Social Networks

With the approach from Pierre Bourdieu a basement for milieu research exists. To understand how this approach works and if the available approach is still usable in his format in our current time, a test run was proceeded at the Internet conference “Re:Publica10” in Berlin. The Re:Publica is the mostly visited conference for Bloggers, Twitter users and Internet communication in German with more as 2.500 participants in 2010 [18]. At this conference the current market trends in the German Internet business are presented from and for the Blogosphere in the German speaking area. This includes session based communication about social media trends, abilities to increase profit earnings from online work and trends in user and customer behavior.

During the conference the participants for the test of the questionnaire were selected randomly and requested for their Twitter usage. The randomly selected participants were informed that the interview is preceded as a pre study for a social science research.

Their usage of Twitter could be taken as a set variable, because the most interaction for the conference as also during the conference was processed on Twitter by live messaging from the difference panels which were displayed on Twitter walls. Those walls displayed automatically chosen hash tag from the conference and supported with this, the parallel discussion approach during the conference by discussing topic parallel to the ongoing panel discussion. In the survey the motivation for the online usage, personal background, place of living, preferences for transportation, family situation, personal professional background, professional background from their parents were researched. The response concerning the survey was mostly a positive reaction, also for personal questions and questions where the participants did not see the direct relation to a survey. For this, the hiding from the target of the research was a good technique which allows a higher and open response as the pre information that the survey belongs to a milieu research itself. It was shown in the personal interaction that the ability to not answer a question is a necessary way in response to allow the user the situation of uncertainty and to do not force him which results in an influence by question the survey itself.

To focuses on the social network Twitter additional questions regarding the motivation for the Twitter usage and the amount of followers were preceded. Within this question the response displayed that the participants distinguish between their Twitter usage in private and business approaches or use different accounts. In this context the additional usage of Facebook and Blogs as general communication medium was mentioned. For the section of blogs it was demanded that this medium is the perfect way to discuss topic in a dedicated way and that Twitter was more used to inform about new content in a Blog and to respond in a fast and abstract way on feedback.



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During the conversation it was outlined that the triggers for interaction could be distinguished between private or business reasons. For the private sector it can be differentiated between communications which happened on reaction to other content or to receive awareness. For this it should be researched what are those triggers in detail, because during the survey it was mentioned that it happened for some participants to spend time and for other participants to increase awareness and with this recognition.

During the survey the response shows that it can be necessary to support the participant during the survey with additional information on a question to support him in a better understanding and help him during the participation of the survey. Questions like “Your favorite drink” or “Where do you purchase your furniture” were partly recognize as questions were the participant had issues to provide an answer. The provided selection from Bourdieu offered for the furniture question suggestions which needed to be explained to the participant to make him sure that the understanding is right for the question by answering with the response which the participant has first in mind and that no dependency exist.

An additional point of view, which was supported from the participants on the topic, is the discussion about privacy in the Internet and the handling of personal information in the Internet. It seems too exist a difference in which networks which kind of information is shared. In this context the feedback on the amount of friends or follower becomes important which displays the need to request information in decencies to the network which is used and for which purpose it is used. For a marketing approach it must be distinguished between those interests. Interaction can happen for business or private purpose. The interaction for business purpose can be also distinguished between communications in general to receive and provide information or to receive awareness in the community. For this perspective it was interesting that some participants mentioned that they really focus on some of their followers and friends to receive special interaction with them. With the interaction they expected to receive a higher reach. For this participants pointed out that they do not always provide information that is from interest for themselves, but for their followers. Some mentioned, that they provide also dedicated information about special topics, partly political driven, to create awareness in this sector. For this the usage of Blogs was mentioned during the research as that tool were active topics could be found and drivers in the section of discussion topics would be discussed. In the motivation for the usage from Twitter a distinguish exists between those users and users which told me that their motivation is only private driven and that they only want to share and exchange with friends.

Overall the survey shows that the survey itself is still accepted by the participants, but need some additional extension to be successful proceeded in social networks and to understand the different preferences of each user and with this the personal preferences of a possible customer.

Solution and Suggestions for an Additional Research in Social Networks

Out for test from the milieu questionnaire it could be displayed that a participant on such a research needs additional space for personal feedback and additional information about the preferences about interaction in the Internet. Keeping this in mind, an enhanced questionnaire



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will be processed in a more open way and with additional questions and sections. This questionnaire will take care on the current development in society and the focus why a person actively use a product or service. In this combination additional services will be taken into consideration to research their acceptance from the users and to understand the expectations on such services, always focusing on the approach to increase the ability to tailor solutions more into the direction of dedicated user groups.

Regarding the current time, with an increasing amount of data, more communication in more channels as before in history, for this it would be interesting to research the personal motivation behind the interaction in networks more in detail. With the sharing of information, also the importance for the term privacy increases. With this in mind it can become necessary to request a definition of the term privacy and to understand the importance of privacy for the participant during a milieu study. In this context it should be also research if the user differences between private or business usage from a network and how the interaction happen in a dedicated private or business used network. In this context it would be an added value if a differentiation between the usages from those approaches can be researched and displayed.

For the providing of information, sharing of content or interaction it should be researched if it is important for a person that communication happens with people outside of his normal friends and that interaction can happen with other people and with this, with new connections. In the sector of education the request for the actual status and the planned status of education should be requested, to display the personal development approaches of the individuals.

From the questions regarding the personal background of the participants the basics, which were mentioned in the theoretical description of the survey by Pierre Bourdieu, should be taken into consideration. In addition to this, the area of living can be requested to understand the personal living and time spending situation in detail. For this the participant can be requested to provide information if the person lives more in a city, suburbia or rural area and what the size of his area of living (house, apartment, flat, flat share, room) is. In addition it should be requested if GPS supported networks or similar features are used and for this, what in detail the personal motivation for the participant is. Furthermore it belongs to this section to understand if this sector in online business is that growing market as expected in the current time. By researching this personal usage for mobile Internet usage must be included in the research. This can be done on the levels that, if mobile Internet is used, the networks are requested which are used.

Those new questions for additional information will be pretested in a small target group of 30 users to determine problems in the understanding of the new questions. The process itself will be done online. To receive a higher quality of response, the providing of additional information, if an uncertainty regarding a question appears, needs to be implemented. This can be done by providing example information to the user.

The survey should be extended during this try on the section which networks are used online mostly. For this a screening question with the networks with the highest reach will be provided, including the ability to add additional networks by the user himself. Like defined before, the survey should include the request to determine if a network is used for personal, business or an approach of both. To understand the self-positioning in the network, it will be requested what kinds of leader the participants see for the sector of business and private, to work on this in correlation with their personal preferences. For the context of user interaction in the Internet the consumption behavior will be requested in the sector of preferred



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communication tools and the preferences in media consumption. Regarding the online media consumption a differentiation which media sources in general and only in the Internet will be developed and integrated. In this context a free text question will be provided to request which news sources are used and how reliable the user thinks the source is. The main interesting point, the motivation for interaction, which is the background of each group building behavior, should be requested in addition. The questionnaire will also include an additional request for the amount of online friends and if the users groups friends into communication channels. This is done to understand how the user interact and extended in the way to request how many of his friends a user would describe as friends in the real world.

By following the defined approach and proceeding the enhanced survey it can be expected that a valid research result can be expected after an additional test run in which the additional questions could be pretested. For the aggregation of additional information of the planned free text answers an aggregation tool should be used, which is available from a prior research for the personality recognition from social networks. With this tool it is possible to separate and aggregate used words to highlight often user phrases or word in correlation with the asked question. Out of this information, the possible selective answers for a question will be provided.

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COMPARATIVE ANALYSIS OF TERRITORIAL DEVELOPMENT EVALUATION INDICES IN LATVIA

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Abstract

The aim of the article is to generalise and compare the methods, which have been used for the last 15 years in calculating the territorial development indices in Latvia, in order to build a systematic framework for further work in this particular direction by identifying the strengths and weaknesses of indices used hitherto. Some scientists and researchers of Latvia, as well as the State Regional Development Agency (SRDA) are working on the alternative methodology of development evaluation and index calculation. The author proposes to use various indices in parallel, in order to evaluate the territorial development in Latvia – similar to the way *The Global Competitiveness Report* does it. This practice allows to evaluate the development of the territory and to compare its dynamic trends, observing the development of the territory from various points of view.

Introduction: Research Guidelines

In Latvia, territorial development indices were first used in 1990s. In practice, territorial development index is applied elaborating the state support programmes of regional development, differentiating support within the co-financed measures of European Union (EU) funds, as well as evaluating the economic efficiency and influence of EU, state support and other financial tools on the territorial development. Similarly, the territorial development index can be used to identify the intensity of support related to regional development as well as to compare, evaluate, and forecast the territory development of municipalities and planning regions, and to use it in other ways analysing the territorial development. Territorial development index reflects the current situation of a particular territory and provides a national picture of the socio-economic development, more than that, with the help of index indicators it is possible to qualitatively assess the overall standings of the national territory as well as to plan territorial development possibilities in a more qualitative way [10].

The aim of this article is to provide a brief resumptive overview on the types of territory development indices, which were/are used for the territorial development analysis in Latvia and



to put forward possible alternatives in the application of territorial development index. In order to achieve the aim of the article, the following research tasks were put forward: to prepare a brief description of each known territorial development index, developing so-called “index passports”, to identify key challenges applying indices and draw conclusions as well as to put forward proposals for further use of the territorial development index in Latvia.

In this particular research, the territorial development indices are analysed according to the following criteria:

1. Goals and objectives of indices;
2. Territorial coverage, which can be analysed using the index;
3. The indicator composition in indices;
4. Index indicators and their significance coefficients.

The indices used for the evaluation of territorial development of Latvia are summarised in the first part of the research, as well as their main characteristics are provided.

Alternative indices for the evaluation of territorial development of Latvia are considered in the second part of the research, their main characteristics are also provided there.

The third part of the research offers possible alternatives of the use of the territorial development index.

1. Indices Applied for Evaluation of Territorial Development of Latvia and Their Development History

Methodology for calculating the territorial development level since 1997.

The Statistical Institute of Latvia developed the first methodology for calculating the territorial development index in 1997 under the guidance of Professor E. Vanags, discussing its implementation with the Ministry of Economics and representatives of local governments and other interested organizations before its extensive use. It was applied to determine candidates to acquire the status of specially supported territories.

According to this methodology, specially supported territories were determined in group of separate districts and cities (applying nine statistical indicators); group of parishes and district towns (applying six statistical indicators).

If *districts or cities* form specially supported regions then the determination was based on the following statistical indicators (in brackets their importance weight is indicated):

- Unemployment rate (2.0);
- Personal income tax per capita (2.0);
- Industrial production output per capita (1.0);
- Non-financial investment per capita (1.0);
- Retail trade turnover per capita (including the market turnover) (1.0);
- Demographic load rate per 1000 inhabitants (1.0);
- Monthly average gross wage (1.0);
- Number of operating enterprises per 1000 inhabitants (1.0);
- Number of persons with higher and secondary education per 1000 inhabitants at the age of 18 and older (1.0) [1; 6; 8].



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If *parishes and district towns or both of them* form specially supported regions, then the following statistical indicators are applied to determine them:

- Unemployment rate (2.0);
- Personal income tax per capita (2.0);
- Demographic load (1.0);
- Population density (1.0);
- Specific weight of areas used for industrial needs as well as areas occupied with objects of production and social infrastructure (1.0);
- Persons with higher and secondary education per 1000 inhabitants at the age of 18 and older (1.0) [1; 6; 8].

The methodology was simple, visible and easily understood by the user and with the help of this methodology it was possible to compare different municipalities. However, it did not reflect real differences by values of indicators. Ranks were not metrically compatible. Municipality grouping was not homogeneous, because cities regarding the socio-economic development are much stronger than districts. Similarly, in the group of parishes and towns, parishes in the socio-economic development lag behind the towns.

There was an objective need to improve the methodology, because it was necessary to review the status of specially supported territories and prepare proposals for the decision-making of the Cabinet [14].

Methodology for calculating the development index since 2000.

In 2000 the Statistical Institute of Latvia developed new methodology approved by the Cabinet; it continued implementing the objective of the previous methodology to determine specially supported regions, and it envisaged transition to three groups of specially supported territories: districts, cities and parishes. These three groups are more homogenous in comparison to the previously used grouping. In the city group there were included cities as well as district towns and local municipalities, where the center is the city. If only municipality was formed by parishes, it was included into the parish group. These three groups are much more homogeneous compared to the previously used groups. At the same time a system of indicators was improved, so the level of socio-economic development of the district was determined by summarising eight indicators, regarding parishes using six indicators, but regarding the the cities – four. Each indicator was attributed a specific weight according to the experts' evaluation, to make the total sum of all indicator to be 1 (see table 1) [12].

Comparing to the previously used composition of indicators, some indicators were excluded and some of them were included again.

It was of great importance to stop using outdated indicators that were no longer statistically listed. As new ones in *the district group*, the following indicators were introduced:

- Gross Domestic Product (GDP) per capita;
- Population density – persons per 1 sq km, which the EU experts recommend using.

A new indicator was included into *the parish group* “Average land cadastral value”.

A new indicator “Changes in the number of resident population” was included into *all three territory groups*, to some extend it reflects the territory attractiveness to investors and



quality of life of inhabitants. The indicator reflects the changes of the number of inhabitants in the last five years.

Since 2000 there is calculated a general or synthetic territorial evaluation criterion – **territorial development index** (TDI, territory development *year index*), in order to perform its calculation a particular methodology was developed [14].

Table 1

Indicators applied to determine specially supported regions (supported territories) and their weight (2000 – April 22, 2009) [2]

Indicators	Districts		Parishes		Cities	
	+ or - ¹	weight	+ or -	weight	+ or -	weight
Gross Domestic Product per capita	+	0.3	-	-	-	-
Unemployment rate	+	0.15	+	0.25	+	0.3
Personal income tax per capita	+	0.1	+	0.25	+	0.3
Non-financial investment per capita	+	0.1	-	-	-	-
Demographic load rate	+	0.1	+	0.15	+	0.2
Number of economically active enterprises per 1000 inhabitants	+	0.1	-	-	-	-
Population density per 1 sq km	+	0.05	+	0.1	-	-
Average cadastral value of land	-	-	+	0.1	-	-
Changes of the number of residents	+	0.1	+	0.15	+	0.2
Weight sum	-	1.0	-	1.0	-	1.0

¹ “+” means that the indicator is applied, “-” – not applied.

Methodology for calculating the development index from April 22, 2009 to June 04, 2010.

In order to determine TDI for administrative territories after the implementation of the administrative-territorial reform on April 7, 2009 the Cabinet adopted the Regulations No.319 “Regulations on Territorial Development Index Calculation Procedure and Its Values” according to the new administrative-territorial division.

TDI calculation includes indicators describing the socio-economic development of the territory:

- four indicators in the municipalities and cities group;
- six indicators in the parish group;
- four indicators in the towns group;
- eight indicators in the districts and planning regions group.



The significance of each indicator is evaluated by specific weight of significance. The sum of indicators significance in each territorial group is 1 (see Table 2) [3].

Table 2

**Indicators needed for TDI calculation and weight of their significance
from April 22, 2009 to June 04, 2010 [3]**

Indicators	Districts or planning regions		Municipalities or towns		Parishes		Towns	
	+ or - ¹	weight	+ or -	weight	+ or -	weight	+ or -	weight
Gross domestic product per capita	+	0.3	-	-	-	-	-	-
Unemployment rate	+	0.15	+	0.3	+	0.25	+	0.3
Personal income tax per capita	+	0.1	+	0.3	+	0.25	+	0.3
Non-financial investment per capita	+	0.1	-	-	-	-	-	-
Demographic load rate	+	0.1	+	0.2	+	0.15	+	0.2
Number of individual businessmen and companies per 1000 inhabitants	+	0.1	-	-	-	-	-	-
Population density per 1km ²	+	0.05	-	-	+	0.1	-	-
Average cadastral value of land	-	-	-	-	+	0.1	-	-
Changes of the number of residents during last five years	+	0.1	+	0.2	+	0.15	+	0.2
Weight sum	-	1.0	-	1.0	-	1.0	-	1.0

¹ “+” means that the indicator is applied, “-” – not applied.

TDI calculation methodology since June 4, 2010.

On May 25, 2010 the Cabinet adopted new Regulations No. 482 “Regulations on Territorial Development Index Calculation Procedure and Its Values” for the forthcoming period. According to these regulations in Latvia there are calculated two indices describing territorial development: **index of territorial development level** (previously – TDI) aimed at characterizing the level of development in the respective year showing the territory having higher or lower development, comparing with the average development level in the country, and **index of territorial development level changes** (*chain index* of territorial development) aimed at describing the development level changes in comparison with the previous year, thus indicating the territory having lagging or heading development comparing with the average development level in the country.

After the administrative-territorial reform the values of **the territorial development level index** have been calculated within three groups – planning regions (5 territories), cities (9) and municipalities (109, in 2011 – 110). As regards planning regions the calculation of the index has not changed – the same eight indicators with previous weights of significance are used, but both groups of municipal entities use only four indicators (previously used in the towns group) and their weights (see Table 3) [4].



Table 3

**Indicators needed for TDI calculation and weight of their significance
since June 4, 2010 [4]**

Indicators	Planning regions		Municipalities or towns	
	+ or - ¹	weight	+ or -	weight
Gross domestic product per capita	+	0.3	–	–
Unemployment rate	+	0.15	+	0.3
Personal income tax per capita	+	0.1	+	0.3
Non-financial investment per capita	+	0.1	–	–
Demographic load rate	+	0.1	+	0.2
Number of individual businessmen and companies per 1000 inhabitants	+	0.1	–	–
Population density per 1km ²	+	0.05	–	–
Changes of the number of residents during last five years	+	0.1	+	0.2
Weight sum	-	1.0	-	1.0

¹ “+” means that the indicator is applied, “-” – not applied.

The values of the territorial development level index do not describe the rate of development; as a result, regardless the increase or decrease of the development rate each year approximately equal number of territories has a positive and a negative index.

Thus, there was introduced the index of territorial development level changes – **chain index** demonstrating lagging or heading development in comparison with the average state socio-economic development level in the *previous year* [7]. The information about the existence of this index and its calculation procedure was found in various issues of LR Central Statistical Bureau and SRDA, for example, the book of year 2009 of LR CSB “Diversity in Latvia in Numbers and Visions”, annual report of the SRDA “Regional Development in Latvia in 2008”, collections of scientific articles of LR CSB “Results of Scientific Researches in Statistics” in 2007 and 2008. The methodology for calculating the development chain index is the same as for the territorial development level index, only the indicators of the previous year shall be used instead of the indicators of the current year. It shall be noted that along with the development chain index there is used and calculated a **development base index**; it is calculated by using the data of current or previous year, but the average values and standard deviations of some earlier year [9].

2. Alternative Indices for Evaluating Territorial Development in Latvia

Along with the officially adopted territorial development calculation methodologies, Latvian scientists and researchers, as well as SRDA are working on alternative development



evaluation methodologies and calculation of indices. Active work in this field indicates the reconsideration of the essence and stimulus of territorial development in modern socio-economic reality.

“Konsorts” Ltd. experts’ opinion regarding regional development evaluation index improvement.

Under the provisions of the agreement, which was signed on 10 November 2008 between the SRDA and “Konsorts” Ltd., a research “Regional Policy and Methodological Solutions for Territorial Development Evaluation” was carried out [15].

The researchers “Konsorts” Ltd. put forward the following proposals for the improvement of territorial development index calculation methodology:

- the index is calculated taking into account three capitals: social, economic and environmental capital;
- the proportion of each capital is determined within the index, which is constant for all territorial units.

Recommended indicators for calculating *social capital*: unemployment rate, number of inhabitants per one square kilometre, change in the number of residents, %; proportion of children among the population, retirement age population, average level of education (the proportion of significance for all regional units – 40%).

Recommended indicators for calculating *economic capital*: GDP per capita, LVL; average amount of individual income tax per capita, LVL; companies annual turnover per capita; distance to Riga, km; distance to the nearest functional urban area in the region (district), km (the proportion of significance for all regional units – 50%).

Recommended indicators for calculating *environmental capital*: proportion of territories with protected nature; proportion of agricultural land; proportion of forests; intensity of water bodies; proportion of people involved in centralized collection of waste water; proportion of people involved in centralized collection and recycling of waste (the proportion of significance for all regional units – 10%).

“Konsorts” Ltd. experts offer to use a new common territory development index:

- to a large extent – for characterization of the general situation, but not for making decisions on the use of regional development support instruments;
- for decision-making on regional development support instruments it would be advisable to base on its actual capital ratios, which most closely fit the proposed activity;
- for making decisions on regional development support instruments [15].

The author of the research believes that this methodology for calculating territory development level is more comprehensive, since each of the three types of the capital consists of several subtypes; the overall figures are higher than in the traditional territory development index calculation methodology. The proportion of three capitals is the issue to be discussed; it is necessary to analyze a number of expert opinions and professionals, so that it would be optimal.



Alternative territorial development index for planning regions proposed by a doctoral student of Latvia University of Agriculture V. Vesperis (2010). [11]

The author of this alternative index believes that with the lapse of time, especially due to the events of the few last years (economic crisis, administrative-territorial reform), there is a reasonable need for improvement of the territory development index used in Latvia so far in order to better and more reasonably determine the development level of planning regions in Latvia.

The list of indicators for alternative calculation of the index includes four territorial development levels/changes in the level of the index indicators; they are: unemployment rate, average amount of personal income tax per capita, number of individual businessmen and companies per 1,000 inhabitants, and the fluctuations of inhabitants over the last five years. In addition to these indicators alternative index calculation includes three new indicators – employment rate, birth rate per 1,000 inhabitants, and proportion of inhabitants in the age group from 15 to 30 years.

In order to determine the significance of this indicator in the overall index, 17 experts from the University of Latvia, the Ministry of Regional Development and Local Government (MRDLG), associations of the local and regional municipalities of Latvia were surveyed. The calculated indicators' significance weights are shown in Figure 1.

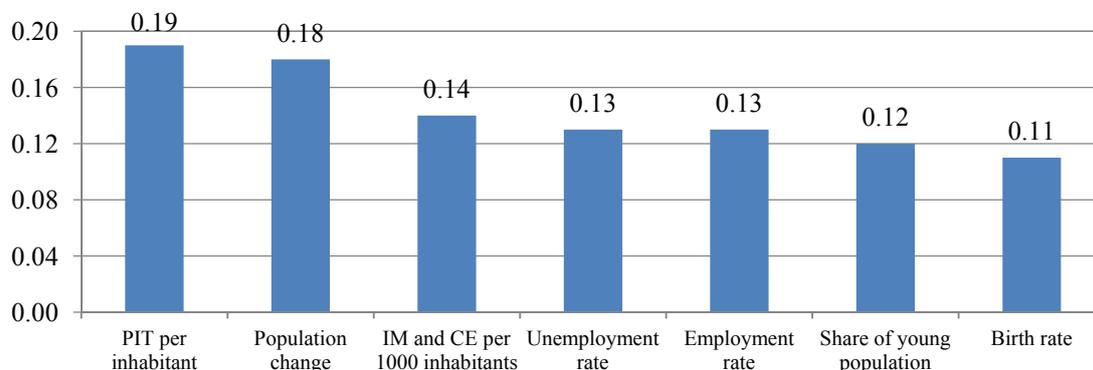


Figure 1. Significance weights for selected development indicators [11]

Figure 1 demonstrates that experts have chosen the average amount of personal income tax (PIT) per capita as the most important indicator as well as the changes in the number of population in the last five years, which can be explained by the fact that a high level of income is always considered as a major condition showing welfare. But as for the changes in the number of inhabitants, the importance of this indicator is based on the fact that now in Latvia there is a great number of emigrated persons and a low birth rate, which negatively affect the population density figures for the territory of 1 km² compared with the average figures of the population density in the EU [11].

The author of the research believes that the positive momentum of this alternative territory development index calculation methodology for the planning regions is that the author



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of the index stresses the significance ratio in choosing indicators of experts' choice and determination of their proportion. A debatable issue is that most of the index figures are set out in the economic and social capital subtypes. The index calculation methodology does not include the environmental capital; neither it includes other relevant indicators, such as inhabitants' subjective satisfaction with the life in the territory.

Latvia's cities development level-rate matrix of A.Vitola (RTU scientific assistant, senior expert of MRDLG) and Z.Hermansons (MRDLG senior assistant) (2010). [5]

The authors of this Latvia's cities development level-rate matrix propose new methodology for calculating the territorial development level, so that it could assess the socio-economic development level and trends in the major cities in Latvia (having more than 10,000 inhabitants).

In order to create a development level-rate matrix for evaluating the socio-economic development of Latvia cities, it was proposed to use three key indicators characterizing cities development expressed in relative terms: personal income tax per capita (LVL); unemployment rate (%) and population density per 1 km². A 10-year period was chosen as the basis (1999-2008), which was determined by the available statistical data limitations; due to the territorial administrative reform since 2009 the statistical data regarding towns within the municipalities are no longer available [5].

The proposed alternative method for assessing socio-economic development of Latvia towns combines two cumulative indices – the level of development and evolution indices – and consists of two steps:

- 1) normalization of indicators and development of indices:
 - the following development level indices are calculated – income level index, unemployment level index and population density index,
 - as well as these development rate indices are calculated – income growth index, unemployment decrease index and population density growth index,
 - combining the indices of the level and rate resumptive indices – development level index and development rate index.
- 2) creation of development level-rate matrix:
 - development level and development rate indices are combined in the development level-rate matrix, where the point of intersection marks the average potential (accordingly a minimum-maximum normalization method – 0.5) development level and development rate index values (see Figure 2) [5].

According to the belonging of a city to a particular quadrant, the city is described as one of the leaders, promising, lagging, or stepping back. The cities belonging to the leaders' group have simultaneously a high development level as well as a high development rate. Chances of these cities in the future are assessed the most optimistically. Promising cities have a low development level, but a high development rate creating opportunities for them to improve their positions. In the cities, which step back, there is a high level of development, but a low rate of development – the cities are losing their positions. The lagging cities have both a low level of development and a low rate of development that makes being prudent regarding the development opportunities in these cities. In order to graphically describe the weight of each



city's overall economic development, the circle is drawn around the point of intersection of the corresponding indices of the city within the matrix, which provides comparable information on the number of inhabitants in the city [5].

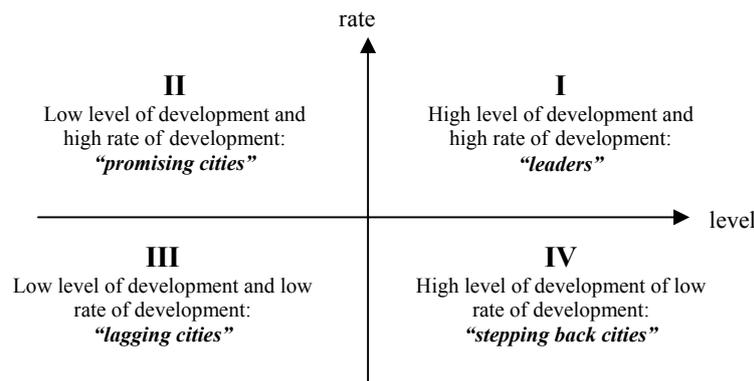


Figure 2. Development level-rate matrix [5]

The author of the research believes that the authors of this matrix offer a very progressive and innovative regional development level calculation methodology, since it can assess the region's level of development, as well as the rate of development at the same time. As well, this methodology can be applied not only for cities but also for comparable in any way territories of any kind, such as countries, regions or any local government, respectively applying evaluation indicators characteristic for the territory.

3. Differentiation of the Aims and Tasks of Territorial Development Indices

The first task to be solved by working out the territorial development index was determination of the specially supported territories. Thus, the objective long-term development level shall be characterized [14]:

- to work out regional development state support programmes,
- to substantiate the establishment of development and growth centres,
- to substantiate the necessity for the administrative territorial reform,
- to evaluate the impact of the EU and state support instruments and their economic effectiveness,
- to analyse and forecast the socio-economic development of territories.

However, the users of index indicators have mentioned that greater attention is paid to the economic development, but insufficient – to other spheres in regions, for example, the social sphere. The author of the article offers to use parallelly various indices to evaluate territorial development in Latvia – similarly as it was previously done in the *The Global Competitiveness*



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Report of the World Economic Forum to 2007-2008, where each year there were calculated three indices simultaneously for all countries to be analyzed:

- Global Competitiveness Index, GCI,
- Growth Competitiveness Index, GCI,
- Business Competitiveness Index, BCI [16].

Such practice lets evaluate the territorial development and compare the tendencies of its dynamics considering territorial development from various sides.

Borrowing worldwide practice ideas, Latvia could also develop similar indices for various purposes and objectives. For example, in order to attract investors to Latgale region, which is on the last places according to all applied indices, the use of the new “business environment index” could highlight and demonstrate the most attractive sides of the region such as its geographical location and proximity of strategic neighbouring countries, existence of state regional universities and colleges having competitive professional education programmes, experienced human resources with professional skills, development of agriculture and industry, membership of the European Community, well-developed road and transportation infrastructure, optimism and life satisfaction of population in comparison with the inhabitants of Riga. Such approach could facilitate regional development not only through redistribution of state and European financial support instruments, but also really attract investors both from more developed regions of Latvia and abroad. Latgale region has objective advantages, which can be used to develop several spheres of business and increase activities as well as it would be a strong push for the development of national economy and regions.

Using the index “Good news spotlight” also would help observe one of the conditions for the development of any region – Latgale region should popularize the existing advantages and opportunities for businessmen, investors to launch business activities in the territory regardless their insignificance in the contemporary situation. The information expressed or to be expressed creates the general impression of the territory and hearing only negative information potential investors or businessmen even do not consider business opportunities in the territory. Thus, a corresponding territorial development index shall be invented to create a positive view on the region, the advantages of business opportunities shall be explained not only to investors and businessmen, but also to young, educated and professional individuals [13].

Conclusions and Suggestions

1. The Statistical Institute of Latvia developed the first methodology for calculating the territorial development index in 1997, and it was applied to determine candidates to acquire the status of specially supported territories. This methodology lets compare various municipalities, but it did not reflect real differences by values of indicators because ranks were not metrically comparable and regional grouping was not homogenous.
2. In 2000 the Statistical Institute of Latvia developed new methodology approved by the Cabinet; it continued implementing the objective of the previous methodology to determine specially supported regions, and it envisaged transition to three groups of specially supported territories: districts, cities and parishes. These three groups are more homogenous in comparison to the previously used grouping. At the same time there



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was created a system of indicators, where each indicator was attributed a specific weight according to the experts' evaluation to make the total sum of all indicators to be 1. Since 2000 there is calculated a general or synthetic territorial evaluation criterion – **territorial development index (TDI)**.

3. In the transition period after the implementation of the administrative territorial reform till June 30, 2009 there was applied territorial development index calculation methodology in groups of municipalities and cities, parishes as well as towns. Since July 1, 2009 the territorial development index calculation methodology was applied to planning regions, municipalities and cities.
4. Since June 4, 2010 according to the new Regulations No. 482 of the Cabinet passed on May 25, 2010 “Regulations on Territorial Development Index Calculation Procedure and Its Values” in Latvia there are calculated the following indices: **index of the territorial development level** aimed at describing the level of development in the corresponding year and **index of the territorial development level changes** (*chain index*) aimed at describing the changes in the development level in comparison with the previous year. These indices are calculated within three groups – planning regions, cities and municipalities. Along with the development chain index there is calculated a **development base index** basing on the average value of the basic indicators of some previous year and standard deviation.
5. Along with the officially approved territorial development calculation methodologies, the scientists and researchers of Latvia as well as the SRDA work on the alternative methodologies for evaluating development and calculating indices.
6. In compliance with the agreement concluded between SRDA and Ltd. “Konsorts” on 10 November 2008, there was conducted a research “Methodological Solutions for Evaluation of Regional Policy and Territorial Development”. This alternative index was calculated taking into consideration three capitals: social, economic and environment, respectively the specific weight of each capital was 40%, 50% and 10%. The author of the research believes that this methodology for calculating the territorial development level is the broadest one because each of three types of capital includes several subtypes; overall the number of indicators is greater than in the traditional methodology for calculating the territorial development index. The issue to be discussed is the proportion of three capitals; it is needed to analyze the opinions of several experts and field specialists to make it more optimal.
7. The alternative territorial development index for planning regions proposed by V. Vesperis, doctoral student of Latvia University of Agriculture includes three new indicators – employment rate, birth rate per 1000 inhabitants and the proportion of population in the age group 15-30 years. In order to determine the scale of the significance of the index indicators there was provided a questionnaire to 17 experts. The author of the research considers that this alternative methodology for calculating the territorial development index for planning regions has a positive aspect – the author of the research emphasizes the significance of expert opinion in the choice of indicators and determination of their specific weight. The issue to be discussed is that the subtypes of economic and social capital are predominant for the indicators of this index. The index calculation methodology does not include environment capital indicators, as well as other significant indicators, for example, a subjective factor of population.



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8. Applying the level-rate matrix of city development in Latvia created by A.Vitola and Z.Hermansons it is possible to evaluate the socio-economic development level and tendencies in the largest cities of Latvia (having over 10000 inhabitants). The indicators included into the matrix are the personal income tax per capita (lats), unemployment rate (%) and population density per 1 km²; combining the indices of these indicators level and rate there are created resumptive indices – a development level index and a development rate index. The author of the research believes that the authors of this matrix offer very progressive and innovative methodology for calculating the regional development level because it helps evaluate both the regional development level and rate. This methodology can be applied not only to cities, but also to any comparative regions, for example, municipalities, using evaluation indicators to be the most characteristic for each region.
9. The suggestion of the author of the article for the Latvian institutions, SRDA and the MRDLG being in charge for the regional development control and the implementation, elaboration and calculation of development indices, not to be afraid of the diversity of territorial development indices because such diversity and options help better understand and determine the situation in the region and in the country in general. It is not need to strive for uniting indices because even recently practice shows that till 2007-2008 *The Global Competitiveness Report* of the World Economic Forum included annual calculations of three indices for all world countries to be analyzed at the same time: *Global Competitiveness Index, GICI, Growth Competitiveness Index, GCI, Business Competitiveness Index, BCI*. Such practice lets evaluate territorial development and compare its dynamic tendencies viewing territorial development from various perspectives. Borrowing world practice Latvia could also develop similar indices for various purposes and objectives.
10. In order to let users better orient in the diversity of territorial development indices, the author offers to develop so-called "**index passports**" including such information as a name of the index, author, territorial coverage, composition of indicators and coefficients of their significance, calculation methodology, field of application and information sources needed for index calculation.
11. In order to attract investments to regions more effectively, the author offers regional municipalities to invent special indices, which could highlight and demonstrate the most attractive sides of the region. Using the index "Good news spotlight" also would help observe one of the conditions for the development of any region – Latgale region should popularize the existing advantages and opportunities for businessmen, investors to launch business activities in the territory regardless their insignificance in the contemporary situation. Thus, a corresponding territorial development index shall be invented to create a positive view on the region, the advantages of business opportunities shall be explained not only to investors and businessmen, but also to young, educated and professional individuals.

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BUSINESS REORGANIZATION EFFICIENCY EVALUATION METHODS

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Keywords: reorganization, method, analysis, financial statements.

Abstract

The efficiency of the company may use financial statement data for the calculation of the various absolute and relative performance, comparing them combining and interpreting. One of the simplest financial analysis techniques to financial stability is a horizontal method of analysis – the company's financial statements (balance sheet, profit and loss statement, cash flow statement) the absolute indicator of changes in research. Main financial statements items index changes have a significant impact on the company's financial stability. Using the horizontal method of analysis can assess the company's financial stability of the positive or negative trends.

Scientific work indicates that the company can be used for determining the efficiency of financial reporting data, calculated from the various absolute and relative indicators, respectively, compared to combining and interpreting. One of the simplest financial analysis methods for assessing financial stability analysis method of horizontal-company financial statements (balance sheet, profit and loss statement, cash flow statements) to absolute indicators of the study. Large major financial statement item index change has a significant impact on the company's financial stability.

Using horizontal analysis method to evaluate the company's financial stability, positive or negative trends. The most important items in the financial statements of the indicators analysed in the context of profit and equity changes. Financial ratio analysis techniques, it is recommended that you use the liquidity, cash flow and profitability, solvency, exploring patterns and trends. Factor for the evaluation of the appropriate use of comparative analysis. You can apply for the classification of financial ratios and solvency assessment under the ball, as well as to create a matrix that describes the company's solvency and profitability of interrelationships. Profitability, liquidity and solvency ratio are important indicators as prevailed. [2]

Business performance measurement methodology, emphasis is placed on a separate signals for the operation of the plant. Relationship analysis specified in this way, it is susceptible to errors of interpretation, and the potential for deception. For example, a company



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with poor profitability and solvency and/or potential may be considered ineffective. However, due to its liquidity ratio, the view is changed.

To create a methodology after thorough analysis, was chosen as a statistical analysis of the discriminant method. Analysis of discriminant first described by Fisher in 1936. In practice, the problem occurs:

- The signs, which fully determines the object's ownership of it, or another set of observation is not possible or requires too much time or money on consumption;
- Information about some of the features are lost and need to be renewed;
- How well the prediction by using existing data.

Discriminant analysis method is a multi-dimensional statistical analysis that serves for the quantitative expression of existing information and processing in accordance with the criteria selected in the optimal solution.

In the 20th century discriminant analysis was mainly used in the biological and behavioral sciences. In recent years, this technique has become increasingly popular for practical business world. For example, the ability to have a very important indicator of the company's activities. Forecast data can be displayed in the company's likely future development. Considering that discriminant analysis is analytical method, whose task is to find, in this case, the function, which allows us to predict with high probability a solvency (efficiency) for a particular company, the calculations are widely used in mathematics and statistics. Discriminant rationale (credibility) is insufficient or weak correlation (relationship) between formations that are seemingly in a different way.

Discriminant analysis is a statistical technique used to classify an observation in one of several groupings depending on the individual characteristics of the observation. It is used primarily to classify problems, if the dependent variable appearing in a qualitative way, for example, male or female, to be effective or not effective, and make predictions. So the first step is to establish a clear classification of groups. The number of the original group, there may be two or more. After you create a group object in the data are collected for groups; discriminant analysis of the most basic way an attempt to obtain a linear combination of these characteristics. If a particular object, for example, a company's characteristics (financial indicators), which can be calculated in respect of all undertakings analysed discriminant analysis determines the range of discriminant factors. Discriminant analysis techniques have the advantage of having all the characteristics that are specific to the undertakings concerned, as well as the interactions between these properties. Discriminant analysis is a statistical method used to understand the relationship between the dependent variable and one or more independent variables. The dependent variable, which is trying to explain or predict using the independent variable values.

This analysis is linked to the two groups, consisting of an efficient and inefficient companies. Therefore, the analysis is transformed in its simplest form: a single dimension. Discriminant function of the form $R = V_1X_1 + V_2X_2... + V_nX_n$ transforms the individual variables in the discriminant value or the value of R , which is then used to classify the object which

$$V_1, V_2, \dots, V_n = \text{discriminant factor and} \\ X_1, X_2, \dots, X_n = \text{independent variables.}$$



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Discriminant analysis is usually motivated by caring sensitive variable (factor). They are also taking advantage of the potential to create a model with a relatively small number of selected measurements that is great information. This information may very well be differentiated between groups, but regardless of whether this is relevant and significant trim, there are many important aspects of the analysis. Perhaps the main advantage of discriminant analysis in classification problem – solving potential, while analyzing the whole variable profile objects, instead of sequentially considering the individual characteristics. Research results model is a linear analysis of six factors that are objectively assessed and should be combined to give the total score, which then becomes the basis for society.

Due to the large number of variables, the survey was used in the financial performance of the list of 22 potential variables, coefficients. For comparison, an analysis was 15 with a reorganization process and 23 non-trading companies and the various financial ratios, based on the results of the study, it was concluded that a number of financial ratios indicate the company's operation efficiency. As a result of the choice of indicators will depend on the determination of the model results, so the pointer to the correct choice will allow you to create accurate working model. The analysis was chosen by various financial ratios. All the factors were divided into four groups according to their meaning:

1. liquidity
2. profitability
3. solvency
4. activity.

Corporate reorganisations in the determination of the effectiveness of the model was based on the principle of from each factor group selected at least one factor of importance who showed the greatest difference between the reorganisation process tied and unrelated companies. To arrive at the equation variables, use the following procedures:

1. the statistical significance of observations in various alternative functions, including each independent variable;
2. evaluation of the correlation between the variables.
3. monitoring the accuracy of projections between different profiles;
4. the author of the study.

The study aims to find out what factors affect how large is the company's gross profit and how it would be possible to classify the enterprises with high and low for this pointer as a function of the discriminant.

Consequently, the tasks to be performed to achieve this objective are:

- Create a discriminant function,
- Check the plausibility of these functions and the ability to predict the gross profit by different companies.

Analysis on data more than 10 companies. The work uses data on relevant indicators: gross profit, the current liquidity and turnover, EBITDA/equity/assets/liabilities, revenues and return on equity, debt or the company operates successfully. Data are from 2000 to 2010.

To create a discriminant function, originally calculated average gross profit. Companies that this level was higher is discriminant functions created marked with a "2", but the company,



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which is below with "1". Give data on the average gross profit is 0.15371, which was calculated by Excel.

Legend:

- VAR00001 gross profit,
- VAR00002 the current liquidity,
- VAR00003 EBITDA/sales,
- VAR00004 equity/liability,
- VAR00005 turnover/assets,
- VAR00006 equity returns.

All data calculated using SPSS software.

Table 1 shows the averages and standard deviations for the two groups, both where gross profit level is high and low.

Table 1

Group Statistics

SADAL		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
1.00	VAR00001	7.65E-02	4.699E-02	55	55.000
	VAR00002	0.7278	0.2669	55	55.000
	VAR00003	2.058E-02	3.514E-02	55	55.000
	VAR00004	0.3455	0.2474	55	55.000
	VAR00005	3.5816	1.3561	55	55.000
	VAR00006	-0.9481	8.7310	55	55.000
2.00	VAR00001	0.2332	7.525E-02	53	53.000
	VAR00002	0.8890	0.6351	53	53.000
	VAR00003	5.746E-02	4.492E-02	53	53.000
	VAR00004	0.8255	0.8699	53	53.000
	VAR00005	3.1151	1.0748	53	53.000
	VAR00006	0.1673	0.9065	53	53.000
Total	VAR00001	0.1535	0.1003	108	108.000
	VAR00002	0.8069	0.4884	108	108.000
	VAR00003	3.868E-02	4.412E-02	108	108.000
	VAR00004	0.5811	0.6758	108	108.000
	VAR00005	3.3527	1.2428	108	108.000
	VAR00006	-0.4007	6.2597	108	108.000

Second table shows that with a confidence level of 95% can be assumed that the conditions for covariance matrix equation is valid. Test the importance that the group-size is large or when the normality assumption is violated. Since sig = 0.005, then you can perform further analysis.



Table 2

Box's Test of Equality of Covariance Matrices

Tests Results

Box's M		13.335
F	Approx.	4.354
	df1	3
	df2	2116993.104
	Sig.	0.005
Tests null hypothesis of equal population covariance matrices.		

Test as an indicator of the average results displayed in the third table.

Table 3

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
VAR00001	0.384	169.719	1	106	0.000
VAR00002	0.973	2.997	1	106	0.086
VAR00003	0.824	22.688	1	106	0.000
VAR00004	0.873	15.451	1	106	0.000
VAR00005	0.964	3.905	1	106	0.051
VAR00006	0.992	0.856	1	106	0.357

Following Wilk's Lambda values can be seen that the average of the differences between the groups have little except in the case of gross profit. Moreover, assuming that the significance level is 0.15, the significant differences are only average figures on gross profit and EBITDA/sales. The rest of the variables does not meet the selection criteria. It can be seen in the table below, which is displayed in the discriminant function of the building steps with SPSS.

Table 4

Variables Not in the Analysis

Step		Tolerance	Min. Tolerance	Sig. of F to Enter	Wilks' Lambda
0	VAR00001	1.000	1.000	0.000	0.384
	VAR00002	1.000	1.000	0.086	0.973
	VAR00003	1.000	1.000	0.000	0.824
	VAR00004	1.000	1.000	0.000	0.873
	VAR00005	1.000	1.000	0.051	0.964
	VAR00006	1.000	1.000	0.357	0.992



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Step		Tolerance	Min. Tolerance	Sig. of F to Enter	Wilks' Lambda
1	VAR00002	0.998	0.998	0.468	0.383
	VAR00003	0.633	0.633	0.017	0.364
	VAR00004	0.838	0.838	0.378	0.382
	VAR00005	0.880	0.880	0.098	0.375
	VAR00006	0.999	0.999	0.416	0.382
2	VAR00002	0.993	0.629	0.381	0.361
	VAR00004	0.820	0.529	0.229	0.359
	VAR00005	0.874	0.566	0.073	0.353
	VAR00006	0.524	0.522	0.053	0.531

Similar information is provided in the table that represents the lambda is Wilk's statistics. Displays the number of variables that are included in each step. Lambda coefficient indicates that the company's financial performance is significantly different average, similar to the significance level of the sig indicates that the following differences between the averages are significant at a 0.05 probability level you choose.

Table 5

Wilks' Lambda

Step	Number of Variables	Lambda	df1	df2	df3	Exact F			
						Statistic	df1	df2	Sig.
1	1	0.384	1	1	106	169.719	1	106.000	7.599E-19
2	2	0.364	2	1	106	91.731	2	106.000	0.000

Next table shows also that the nature of the financial centroid. You can see the average financial performance differences.

Table 6

Functions at Group Centroids*

	Function
SADAL	1
1.00	-1.286
2.00	1.334

* Unstandardized canonical discriminant functions evaluated at group means

The discriminant function, we can see its value and significance of their own functions the following two tables (seven and eight). Table 7 shows that the first canonical in discriminant



function was used in the analysis. Canonical correlation coefficient 0,797 shows that there is a strong correlation between the discriminant score and financial indicators.

Table 7

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.747 (a)	100.0	100.0	0.797

(a) First 1 canonical discriminant functions were used in the analysis.

While the table 8 shows that the feature is important for a significance level of 0.05.

Table 8

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	0.364	106.113	2	0.000

In addition to that, let's look at the structure of the matrix (table 9). It provides additional information about each variable's contribution and importance of discriminant analysis. It displays the variables that were not included in the discriminant function. It is built on the basis of a standardized discriminant function.

Table 9

Structure Matrix*

	Function
	1
VAR0001	0.957
VAR0004(a)	0.424
VAR0005(a)	-0.353
VAR0003	0.350
VAR0006(a)	-0.150
VAR0002(a)	0.019

* Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function

(a) This variable not used in the analysis

In table 10 is shown the discriminant function and its coefficients. The following table displays the canonical function of standardised coefficients discriminant. These factors are used to calculate the variable value in the canonical (scor) in each case.



Table 10

Standartized Canonical Discriminant Function Coefficients

	Function
	1
VAR00001	1.178
VAR00003	-0.364

As a result of the reorganization was established for the determination of the effectiveness of the model-R features:

$$R = 1,178 * X_1 - 0,364 * X_2$$

where X_1 – gross profit
 X_2 – EBITDA/sales

One indicator of a positive impact on the size, the other being negative. The data shows that in 55 cases (of all businesses in all) companies judged negatively because investigational levels are lower than the average. Initially, 53 cases studied, the level was higher than average, but the classification results of one of these companies in any of the years were incorrectly added to the first group. Overall, the results of the discriminant function is relatively good because 97.2% of all sightings were classified correctly.

Table 11

Classification Results (b,c)

			Predicted Group Membership		Total
			1.00	2.00	
Original	Count	1.00	53	2	55
		2.00	1	52	53
	%	1.00	96.4	3.6	100.0
		2.00	1.9	98.1	100.0
Cross-validated(a)	Count	1.00	53	2	55
		2.00	1	52	53
	%	1.00	96.4	3.6	100.0
		2.00	1.9	98.1	100.0

- (a) Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
- (b) 97.2% of original grouped cases correctly classified.
- (c) 97.2% of cross-validated grouped cases correctly classified.

So this created in the discriminant function, although only two variables, however, gives a pretty accurate to characterize and categorize the company after being in the (gross profit).



Table 12

R model includes a description of the financial ratios

Financial ratio	Description
Gross profit, profitability	Gross profit profitability reflects the company's pricing policies and production efficiency. If the gross profit rose as a result of price increases, then the company may become incapable of competition may reduce its turnover. Therefore, it may appear that the company is better to lower the price of their products and hence the turnover could increase as much, although the gross margin increased. Gross profit, profitability will enable you to calculate a net change in the extent to which the change affects the gross profit. So the average is 15%.
EBITDA/sales	This indicator shows how profitable is the total economic activity, without taking into account the depreciation of fixed assets, as well as interest and taxes. It shows the true profitability of the company's productivity, abstracting from any duties or obligations. This analysis is based on the creditors and investors can be gleaned about the company's ability to generate cash resources.

The effectiveness of the model help an investor will be able to evaluate and select the companies that it would be desirable to make an investment. Those companies who R index was slightly higher than the critical value of the company's performance has been assessed at a higher level, but those who R index was lower than the critical value, had financial problems and the need for financial support of shareholders.

Trading company efficiency evaluation model is a "feasibility model", which is used to collect data and average values, so in some cases estimated R index may not correspond to other businesses.

On the basis of further research results by developing business models for the assessment of the effectiveness of scale (table 13).

Table 13

R index-performance evaluation of a scale model

R index	Business efficiency	Comments
Till 0.20	Low	Need to make significant changes to improve the organization's financial situation, may need to attract additional funding from shareholders, as well as from credit institutions; to assess the possible merger with one of the market participants. The company's management and the owners should be looking for ways to increase organizational efficiency.
0.20	Medium	The company must resolve financial problems. Both prospective and existing credit employers and partners need to be careful in its relations with the company.
0.21-0.30	High	The company's financial performance has reached a stable results, the company's management must continue to seek opportunities to enhance business performance.
Above 0.30	Very high	The company has no need to performance too much detail for an analysis of the financial situation of the company to operate efficiently.



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The author recommends investors to calculate the recommended financial factors, compare them to industry averages.

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FIRM VULNERABILITY DURING DIFFERENT LIFE CYCLE STAGES

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Keywords: life cycle approach; organizational development; organizational change; organizational disease; firm crisis; firm demographics.

Abstract

According to life cycle theory firm development is explained as sequence of stages which follows (probalistic) natural, logical or institutional rules. This sequence is bounded by the firm's birth and death. Lifespan and growth of the firm are variable. As demographics show, the population comprises many small and few large as well as many young and few old firms. Less than 1% of firms in EU and USA employ more than 250 people; the average life expectancy is about 12.5 years (40 years for international corporations).

Firms in general are vulnerable, any time and for various reasons. They die if they cannot prevent or cure their diseases (avoid crisis / recover from crisis). Although panaceas for firm diseases do not exist, knowing the vulnerable spots and possible infections could facilitate prevention and cure.

More than 100 life cycle models have been published during the last 50 years. Some point to vulnerable spots typical for certain life cycle stages. This paper aims to outline a map of these vulnerable spots. The map does consider the demographic variety of the firm population.

1. Introduction

Firms, understood as an institutional subset of organizations, are created by humans and exist through humans. Analogous to human beings firms are born, they develop and they finally die. According to life cycle theory firm development is explained as a sequence of stages which follows (probalistic) natural, logical or institutional patterns. [1] More than 100 life cycle models have been published during the last 50 years. [2] Consequently life cycle models claim to know where firms are vulnerable and precautions should be taken by management to avoid failure. Firms will die if they cannot prevent or cure their diseases (avoid crisis / recover from crisis). Although panaceas for firm diseases do not exist, knowing the vulnerable spots and possible infections could facilitate prevention and cure. [3] [4] [5]



Looking closer at numerous model configurations [6] [7] [2] they tend to be rather specific than universal. Models differ for instance with respect to

- *foundation / reasoning*: conceptual and/or empirical (cross sectional; longitudinal)
- *number and notion of stages*: 3-11 stages differently defined
- *scope*: whole life cycle (all stages) or selected stages (sequences of sub-stages)
- *focus*: performance, management behaviour, competitiveness of products
- *sample selection*: high-tech firms, small and medium sized enterprises (SMEs), etc.

Model configurations determine which vulnerable spots can be identified which not: e.g. young fast growing technology start-ups, mature firms about to decline or firms in a phase of diversification. Not surprisingly results depending on different configurations may differ or contradict. This paper aims to compile exemplary insights of specific models in one universal map which covers the total life cycle of firms of all ages and sizes. Intended is the conceptualization of an aid for proactive crisis management.

Chapters 2 to 5 will tighten the understanding how firm life cycles are shaped by stages, age and size, and how shape impacts the selection of typical vulnerable spots. After that, chapter 6 conceptualizes the map with essential spot. The paper ends with a conclusion (chapter 7).

2. On Stages

As mentioned, life cycle models understand firm development as a process of stages (phases, periods) between birth and death. Although these models have much in common, stages are defined and named differently; their number may vary as well as their sequence. Looking for a common ground, *figure 1* is an attempt to depict the essence.

Life cycle approaches in general have an s-curve shape (sigmoid curve, logistic function). [8] Firms need sufficient resources for growing. If resources become scarce firms either have to enter a new growth curve with new resources or they will decline and finally die. Intuitively the s-curve metaphor attracts many scholars and practitioners. [9] The face validity of life cycle models seems to be high. Most managers are able to identify the stage their company is in. [10] Scholars advocate life cycle models because their dynamic and holistic approaches rather suit changing environments.

Fig. 1 presents a conception phase before birth where the firm founders decide about the business model and the initial resources. A weak basis increases the probability of failure. The actual life cycle consists of 5 stages:

- *Inception (start-up, infancy)*: Learn to turn the business model into success. The more substantial the resources (people, ideas, financials) the more resilient the firm is. Mainly firms have to accept a dip during this stage because the initial outflows (cash) are higher than the inflows.
- *Expansion (growth)*: When sales turn breakeven firms may start growing. In theory growth is not constrained. Firms can expand in a sequence of sub-stages (volume, regional, international, diversification and the like).
- *Consolidation (maturity, formalization, prime)*: Firm may reach a level of stability which they try to keep. Even if they do not grow anymore, potential growth power is necessary to prevent from decline. Well managed firms can keep this stage for a long time.



- *Decline*: Growth rates turn negative or the consolidation level cannot be kept longer. Firms are in a crisis and about to perish. How long this phase will last depends on the firms' reserves (resources, cash).
- *Revival (revitalisation, restructuring, turnaround)*: Firms facing shrinking growth rates or even negative growth (decline) have the chance to enter a new growth curve while still expanding (restructuring) or turn a declining business around. The later a revival starts the tighter are resources and the scope for manoeuvres.

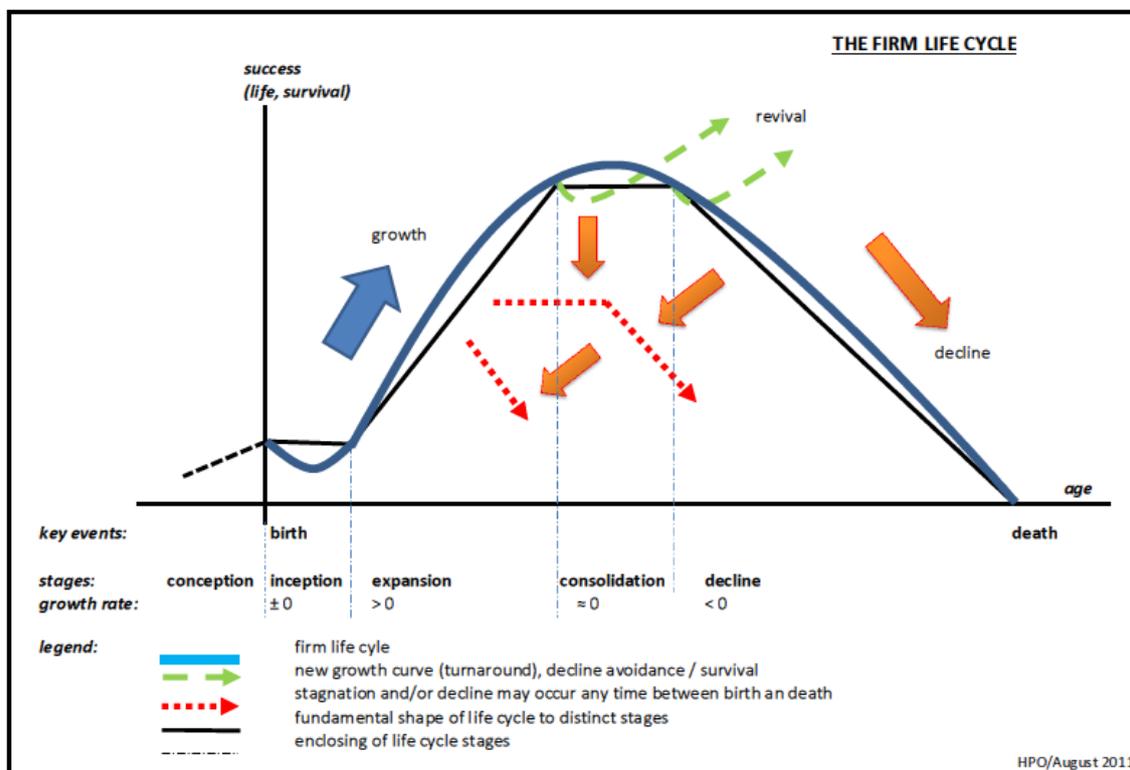


Figure 1. Common ground of firm life cycle approaches (own design)

Decline can start any time (see red arrows and dotted lines), even during inception. An early death inhibits firms from entering the following stage. Hence inception and decline are the only stages any born firm has to run through. Prerequisite for success (survival) is the ability to enter the stages expansion and/or consolidation and remain there. Revivals (see green dotted lines) always offer the chance to turn even decline into survival. The black line aids to separate the different stages (except revival which may start any time): During inception it is not clear whether there will be growth; expansion requires positive growth rates; zero growth during consolidation turn negative in the decline stage.



3. Size and Age Distribution

Firm size and growth is a traditional research topic; corresponding statistics for many countries are easily assessable. [9] Research and statistics on firm age distribution are relatively rare. According EU surveys about 51% of new born firms die during the first five years of their lives. [11] According to de Geus [12] multinational corporations (Fortune 500) can expect to live 40 to 50 years. One third of the firms listed in the 1970 Fortune 500 had vanished 1983. The average life expectancy of European and Japanese firms of all sizes is 12.5 years, but some exist for centuries. Scholars and practitioners are still searching for formulas of longevity (enduring success, cures for organizational diseases).

Recent empirical research posits that the survival rates of firms can be approximated by exponential functions (constant rates for a long period after start-up years); firm size follows a Pareto distribution (small number of large firms, large number of small firms). [13] [14] Older firms tend to be larger and more resilient than young ones, due to cumulated knowledge, capital and networks. [15]

OECD statistics [16] show (Figure 2) that more than 99% out of 29 million firms are SMEs with less than 250 people employed. Only 107 thousand firms (0.4%) are labeled as large. Probably only 20 thousand of those have more than 1000 employees; giant firms – although dominating public attention – are very rare (relatively).

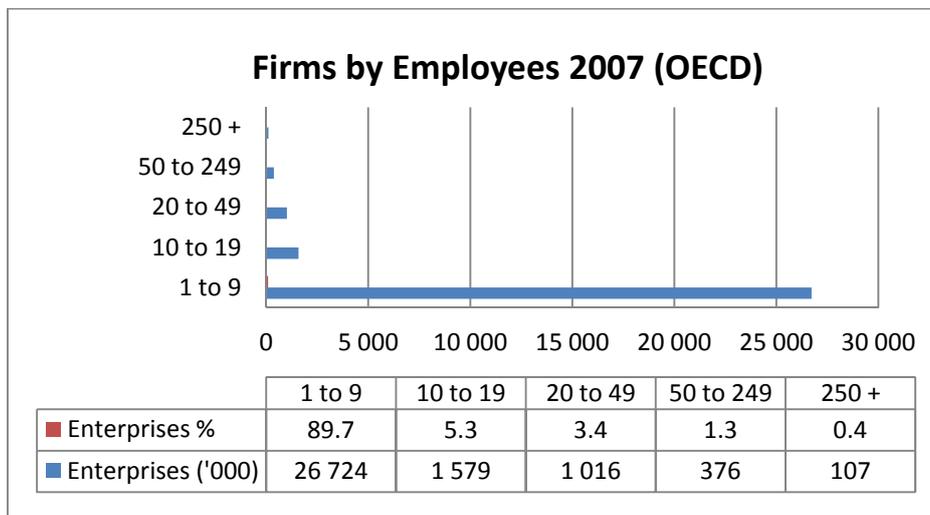


Figure 2. Firm size distribution OECD countries (Source: OECD 2011)

Lacking official statistics, this paper's age distribution is based on an own calculation:

- Survival rates are approximated by an exponential function
 - $y = \frac{1}{1.142^x}$; $x \in \{1, 2, \dots, n\}$; $0 < y \leq 1$
 - y = survivors at the end of year x ;
 - 14.2% of existing firms (all set-ups at $x = 0$; survivors at $x = n$) die yearly (this is aligned to the approximate 51% of new born EU firms which survive the first 5 years of their existence).



- The deduced age distribution and average life expectancy (*figure 4*) is based on an assumed stable firm population.
 - Population is created by a constant and equal number of yearly births and deaths over 100 years.
 - The survival rates (analogous *figure 3*) are symbolized by the red line (example: survivors begin of year 5 = 51.5%).
 - The average life expectancy (green line) increases with the years of survival (example: average life expectancy at birth = 7 years; a firm which survived 20 years can expect to live 47.0 years in total).

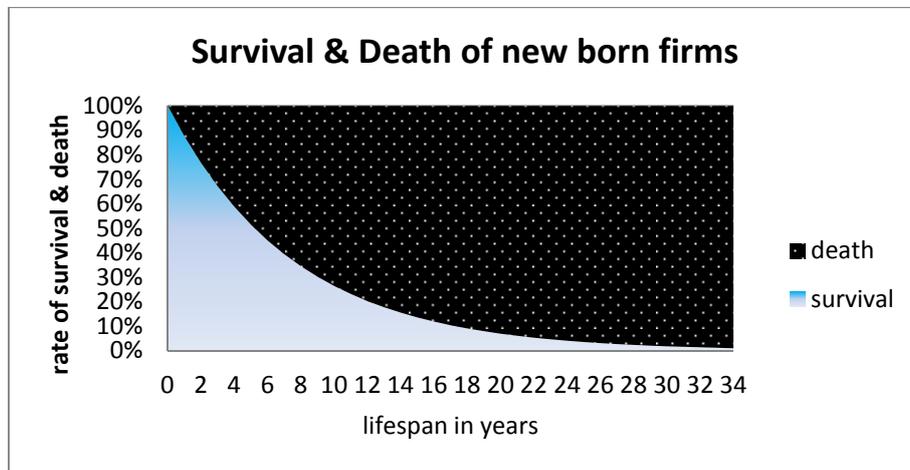


Figure 3. Survival and death of new born firms (own calculation)

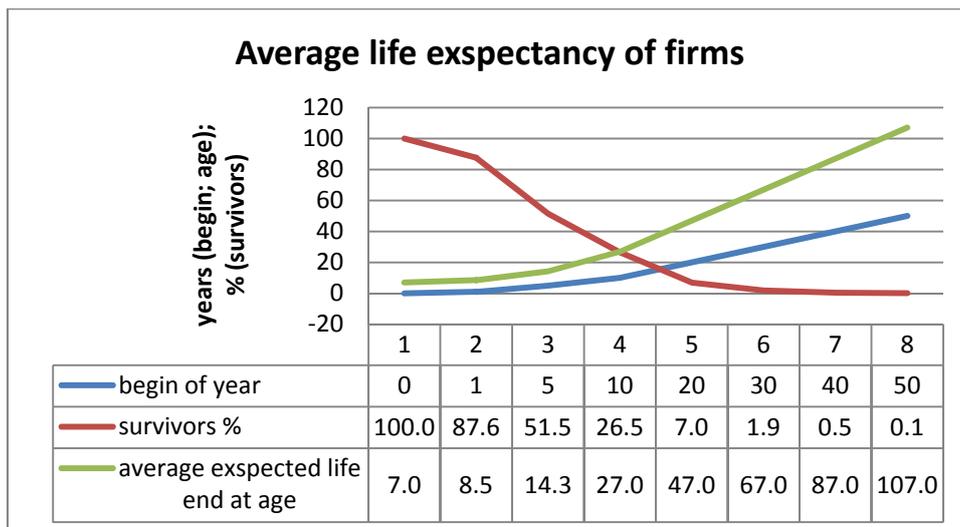


Figure 4. Average life expectancy and survivors (own calculation)



4. Shapes of Firm Life Cycles

Firms do not necessarily run through all life cycle stages. Most of those which do not survive inception directly turn into decline; vulnerabilities of other stages cannot evolve. 95% of firms have less than 20 employees; they hardly face organizational challenges which may be typical for growing, large, diversified corporations.

Life cycles are variable in size and age. Most firms are small (employees <20; turnover <2m €) and the average firm perishes between an age of 10 – 20 years. Many problems (vulnerabilities) life cycle models care about have no chance to develop in the majority of firms. Nevertheless large firms (0.4% of population) are economically important: they employ roughly 1/3 of the working population and their failures raises enormous public attention because of its impact on the whole economy.

Figure 5 offers a synopsis of these shaping factors. Age shapes the length of life cycles, size its height. Large firms tend to be older, mortality of smaller firms tend to be higher.

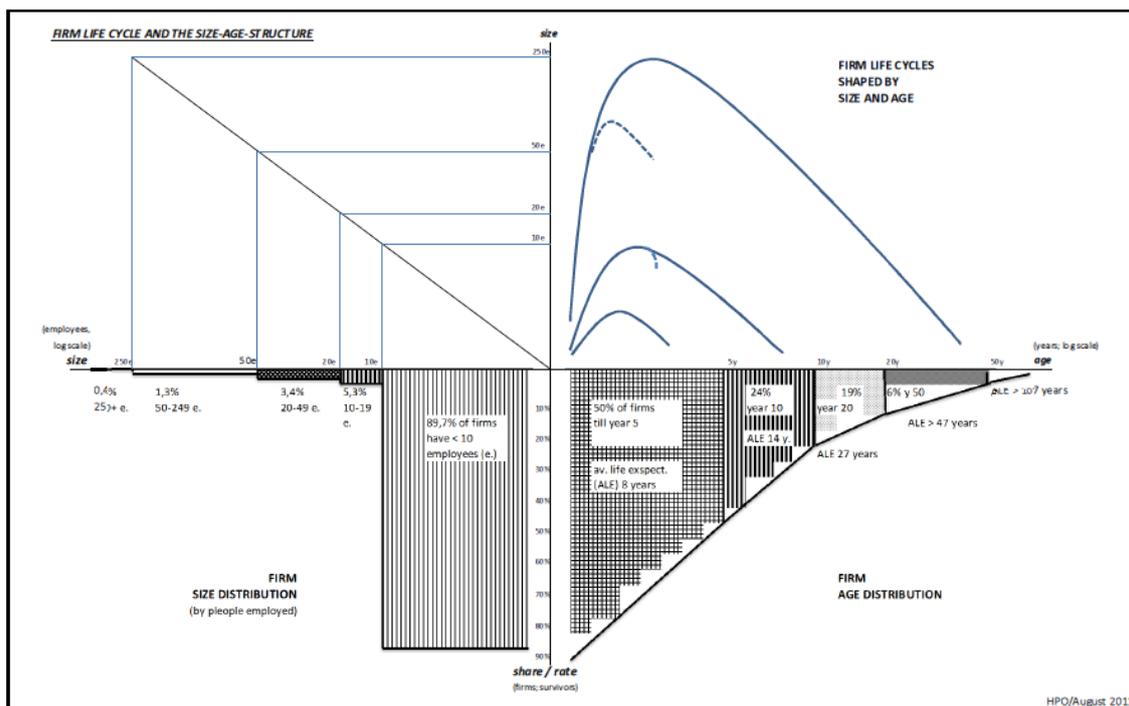


Figure 5. Impact on the shape of firm life cycles (own design)

5. Vulnerability and Life Cycle Stages

Whatever the purpose and the goals of a firm and their stakeholders are, without firm survival they cannot be realized. Hence survival seems to be the ultimate success measure. But the older and larger (expansion) firms get the more sophisticated the means to ensure survival tends to be.



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According to Maslow [17] individuals, passing through the stages of their lives, are driven (motivated) by multiple needs which are hierarchically ordered. Basic needs (e.g. physiological, safety) have to be met (constantly) before needs for personal growth can be aimed. Analogous to Maslow I posit a three layer hierarchy of firm needs (*figure 6*). Firms, passing through the stages of their life cycle, hardly will reach a higher level of development if they cannot meet their basic needs. This approach is in conformity with EU insolvency law (firms unable to pay their bills will cease to exist) [18] and failure research (the more developed a firm the more varied failure reasons tend to be) [19]:

- (1) *Existential needs* apply to any stage; firms which do not meet these needs will perish shortly without question.
- (2) *Security needs* have to be satisfied additionally by firms which aim growth (expansion) or stability (consolidation); both require cushions (capital, slack, health) to absorb setbacks and attacks. Even succession planning is necessary to prevent turbulences (e.g. dead or retirement of founder or dominant manager).
- (3) *Growth and reputation needs* are typically aimed by expanding firms. These firms as well have to be able to manage revival, even in a decline stage (crisis management). Execution requires professional management and staff as well as resources to satisfy existential and security needs. In general such a culture needs many years to develop. These firms have to be flexibly and open for new opportunities. Internal and external communication is important. Here we find mainly mature firms with a high degree of complexity.

Firms become vulnerable where they cannot satisfy these needs. Layers one and two fight against (potential) deficits; layer three strives to gain qualitative and quantitative success in competition with other firms.

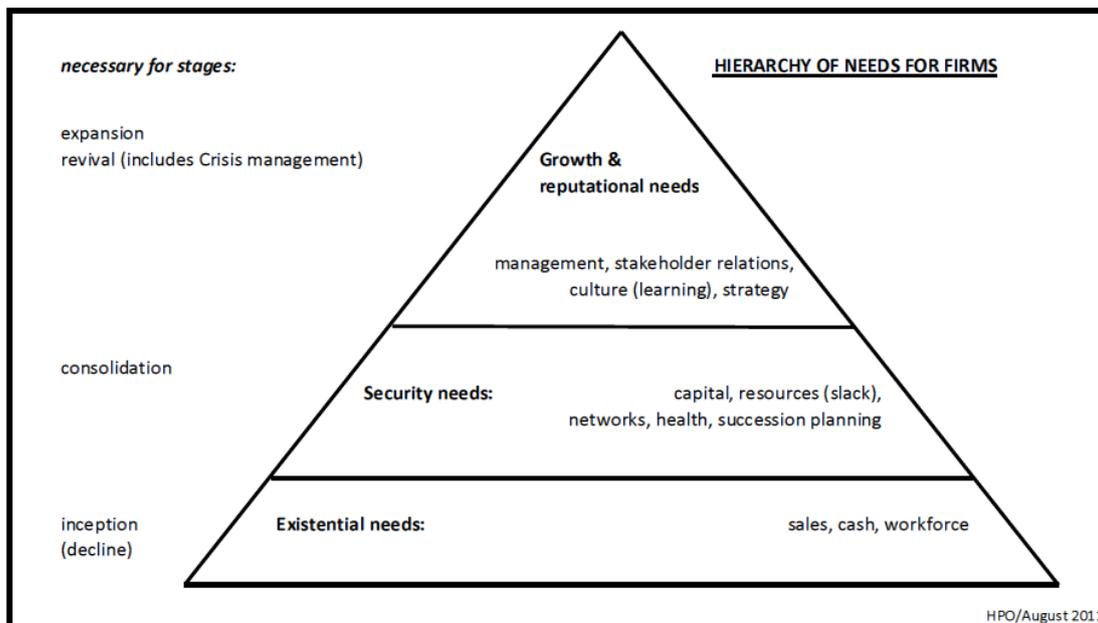


Figure 6. Hierarchy of needs for firms (own design)



The hierarchy of firm needs provide an indication of what is necessary for survival and aiming further development. Life cycle models, focusing on certain stages or (sequences of) sub-stages, aid to locate vulnerable spots:

- *Inception*: In combination with the conception stage part of entrepreneurship research. Start-ups are considered as essential drivers of economic growth and value creation. Crucial are business models and financing which have to ensure the transition to the expansion stage.
- *Expansion*: Development during growth is broadly discussed. Crucial are strategic and organizational (structure, process, communication) challenges (“growth pains”) [20] caused by necessary transitions: e.g. pioneer firm with managing owner changes to professional management; from one product/location to diversification and internationalization.
- *Consolidation*: Can be considered negatively as (ambiguous) end of expansion or begin of (latent) decline, as well as positively as period of stability. Crucial is to keep equilibrium (potential growing power has to equal potential decline forces) in a changing environment and products with ending life cycles.
- *Revival*: Restructuring during growth or consolidation is demanding because management has to initiate change in a phase where the firm is in good shape and profitable (resistance to change). [21] Turnarounds (crisis management) during decline are challenging because of time pressure and because resources and the scope for manoeuvres are shrinking. Revival requires special knowledge or external advice; smaller firm in general only have limited access (too costly) or they tend to be resistant to advice. [22]
- *Decline*: If a revival is not intended or not possible management has to meet the demands of the relevant stakeholders in the best possible way. Bankruptcy rates tend to be high during inception (e.g. Austria: average 1.8% of firm population per year; peak 6% in year 1 and 2; below average after year 8; below 1% after year 12). [23] Successful turnarounds in early years are rare.

6. Locating Vulnerable Spots

Firm life cycles are shaped by firm size and age; stages are defined by growth rates (ambiguous or zero, positive, negative). *Figure 7* presents an attempt to locate vulnerable spots. The idea is that life cycle stages are more or less related to firm configurations (shaped by age and size). I assume that even the firm needs, depict in chapter 5, are related to these configurations. Further research and improvement has to be done.

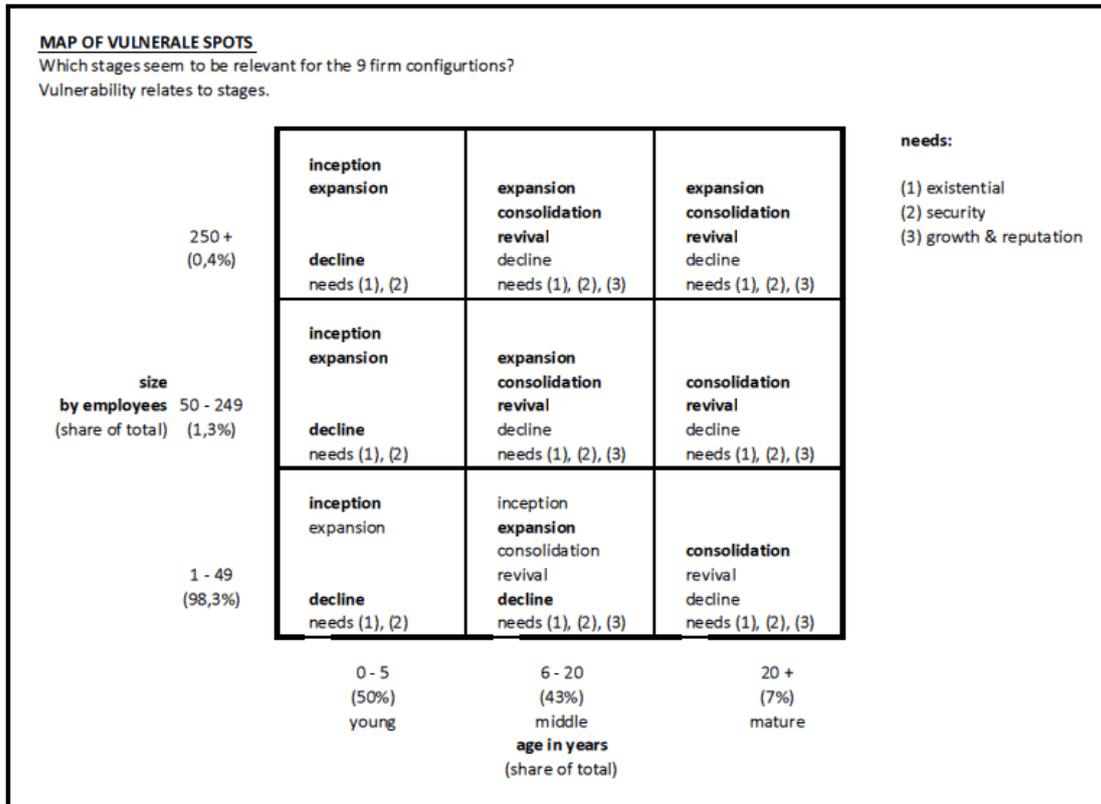


Figure 7. Map for locating vulnerable spots in firm life cycles (own design)

The main assertions are:

- Young firms, regardless size, facing an above average risk of failure (decline). Their chance to survive is related to their ability to grow (expansion).
- The failure risk for middle aged and mature firms (except small/middle aged) is below average.
- Large firms (middle aged and mature) had enough time and resources to develop needs (1) – (3). They should be able to manage expansion, consolidation and revival.
- Mature small and middle-sized firm are probably no longer interested in expansion. It is assumed that they go for stability in their niche.
- The situation for small and middle-sized middle-aged firms seem not secure enough for consolidation, survival demands expansion.

7. Conclusion

Firm lives are limited, failure rates are high. Average life expectancy at birth is below ten years; firms which manage to survive 10, 20 or more years increase their life expectancy significantly.



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Life cycle theory explains firm development as a sequence of stages which follows (probabilistic) natural, logical or institutional patterns. Consequently life cycle models claim to know where firms are vulnerable and precautions should be taken by management to avoid failure.

Our analysis of various life cycle models generated the following results:

- The majority of firms is small (90% employ less than 10 people, only 0.4% more than 250) and only 50% of new born firms survive the first 5 years. These firms have no chance to run through a defined sequence of stages; after inception they directly enter decline and perish.
- Conceptual as well as empirical life cycle models are based on specific configurations (sample, stages, industry etc.). Most models are focused on fast growing start-ups or medium-sized and large firms (2% of firm population). Insights from these approaches have been transferred to this paper's map of vulnerable spots.
- Any life cycle stage (inception, expansion, consolidation, revival, decline) is related to crucial spots and firm needs (existential, security, growth & reputation) which drive firms through their existence.
- The location of vulnerable spots can aid firm to avoid failure and/or improve proactive crisis management.

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LOCAL ENVIRONMENTAL GOVERNANCE AND PUBLIC PARTICIPATION: ENVIRONMENTAL ANGLE OF THE LEADER PROGRAMME IN LATVIA

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Keywords: bottom-up initiatives, collaboration, environmental governance, local actors, public participation.

Abstract

Participation in decision making processes and activities of community based organisations and non-governmental organisations (NGOs) at local level are to be seen as core elements in local environmental governance. Collaboration in problem solving and seeking for consensus among key target groups is seen here as one of modes of public participation. Leader programme is designed to support bottom-up initiatives in rural areas across the European Union. It has been chosen for the analysis as it comprises several key aspects – activities at local level and opportunities for environmental governance, NGO involvement in decision making and support for NGO projects, as well as it provides institutional framework for stakeholder involvement.

All in all the paper aims to assess whether Leader programme in Latvia supports incentives aimed at improvement of local environmental governance and helps facilitating stakeholder participation. Considering the fact that Leader programme utilises a pre-defined framework derived through European and national level programming processes and Cabinet regulations, one of the research questions is whether the top-down framing is not undermining the bottom-up approach in the context of environmental governance? Author also analyses how environmental governance aspects are integrated within Leader and whether vertical environmental integration trickles down to local level. The paper reflects the results of desk research and interviews done by the author with actors involved in implementation of local level activities supported through Leader.

With regard to public participation in environmental governance, author concludes that institutional structures have crucial role to sustain stakeholder participation. Whereas concerning integration of environmental aspects in implementation of Leader programme in Latvia, author makes conclusions that the Leader programme doesn't contribute to environmental governance in a systematic way. Contribution to local environmental governance



can be increased through skill-share trainings, toolkits and creating national level partnerships between rural NGO unions and environmental NGOs.

Local Environmental Governance and Public Participation

Governance systems are often categorized as either hierarchical, network or market modes [1], where there are different forms of interactions between actors. Governance as a concept describes the arrangement of power in a social system, often relating to the management of natural resources [2]. Further governance envisages making rules at multiple levels, engaging in political and scientific debate about the processes affecting resources, learning from past decisions, and making new policies. With regard to environmental governance, particular interest of researchers has been focused on network mode of governance pointing out to the fact that governments are increasingly dependent on the cooperation of various policy actors outside their hierarchy [3, 4]. Here both institutionalised forms of networking and informal networks play role.

In subsistence societies and communities that are heavily dependent on local natural resources, face-to-face interaction among members of the community and daily engagement with the critical aspects of the environment form a selective regime for institutional arrangements, including institutions for environmental governance [2]. Research on global and national environmental policy sometimes pays little attention to community-based governance and to traditional tools such as informal communication and sanctioning, but these tools have their place and can add significant value [5]. Dietz suggests that small scale, direct interaction with the environment and relative buffering from other social and environmental systems helps push institutional arrangements towards sustainability [2]. The challenge for local environmental governance is to find effective ways to respond to environmental challenges. Those responses should be placed-based or in other words “*bottom-up*” approaches should be applied.

Above mentioned review suggests that involvement and participation of all key actors across multiple levels is key to achieving efficient environmental governance. Dietz emphasizes several requisites to achieve that i.e. access to environmental information, dealing with conflicts, inducing rule compliance, and providing infrastructure. People need not only the motivation and authority to act, but also access to timely, high-quality information and institutional support for those actions. Dietz also highlights that social conflict is inherent in making environmental choices, and this is why one should speak of environmental governance, rather than environmental management. [2].

With participatory processes usually several types of stakeholder involvement processes are distinguished, such as public participation, collaborative decision-making, dispute resolution, consensus building processes, regulatory negotiations, community dialogue, building civic capacity. [6]. Based on review of number of academic and empirical studies, the author distinguishes between three types of modes of public participation i.e. traditional public participation including environmental advocacy, environmental activism and collaboration. However it has to be emphasized that those forms are interchangeable as well as complimentary to each other.



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In the light of it, participatory governance is crucial for contending with complex problems of managing for multiple values and outcomes to achieve ecological sustainability and economic development [5]. Often, the costs of environmental change do not come to the same groups or even the same areas as the benefits. Thus, environmental governance must include coordination between local communities and larger levels of governance, between local resource users and outsiders whose behavior affects the resource base, and between environmental institutions and other institutions. [5].

Sometimes local governance arrangements are referred to as co-management or collaboration between local stakeholders. True collaboration is intrinsically linked to decision making and increasing collaboration necessarily involves increased decision-making powers on the part of all the collaborators. [5, 7]. Collaboration is a process that is distinct from more adversarial forms of public participation in environmental decisions.

This relationship is demonstrated graphically (see Figure No.1) showing that higher levels of community and citizen participation in collaborative processes with government should result in greater decision-making powers for those communities, moving them from an advisory capacity to inclusive governance in a participatory and citizen empowered democracy. At the same time, as government increases its collaboration with the community and citizenry, its share of decision-making powers decreases through delegation of authority to the local level, moving from a prescriptive function in a representative and technocratic democracy to a facilitator and supporter of participatory democracy. [5].

Community-based collaboration usually involves individuals and representatives or affected groups, businesses or other agencies in addressing a specific or short-term problem in the local community. Often operating by consensus, this kind of collaborative group identifies goals and issues of concern, forms subgroups to investigate alternatives, and seeks support for specific solutions. These usually tend to focus on specific, local problems that involve a shorter time-frame. [7]

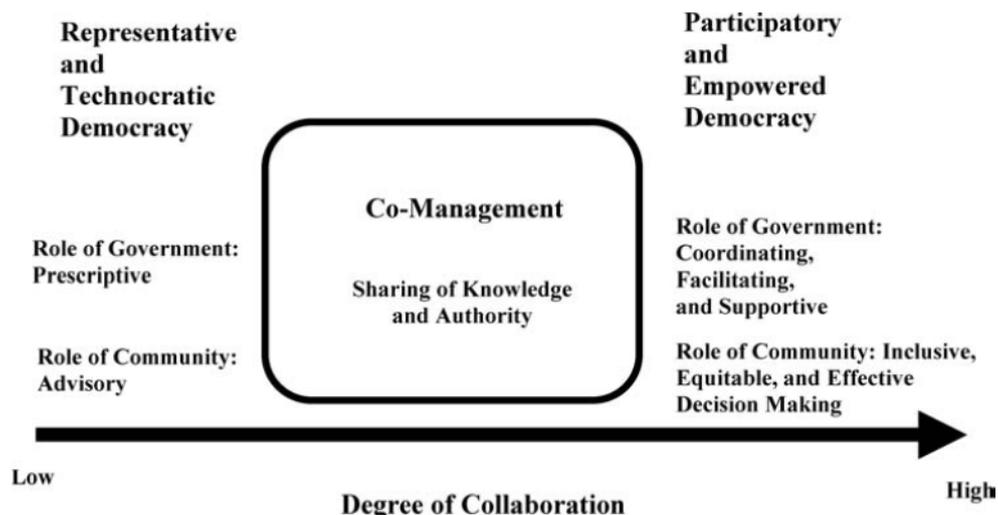


Figure 1. Relationship between collaboration, decision-making powers and governance [5].



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With regard to collaboration and attempts to seek consensus in environmental governance, there can be some drawbacks. Consensus tends to delegitimize conflict and advocacy. Place-based collaboration may encourage exceptionalism or a compromise of national standards when some groups are excluded from decision-making circle. [7] The desire to avoid disagreement is closely related to groupthink and may lead to a premature compromise in a collaborative setting, thus postponing the search for long-term solution. As a result some charge that the desire for consensus “*may serve to de-legitimize conflict and co-opt environmental advocates*” [8].

Considering above mentioned, Leader programme is a good example for empirical analysis as it brings together several target groups of environmental governance. Although collaboration is seen as a process of conflict management, the author makes comparison to Leader programme implementation. The author concludes that collaboration can't be enforced top-down; it should be based on trust and interest driven from all stakeholders. Furthermore from environmental governance point of view, Leader programme can also be seen as economic instrument to provide incentives to improve environmental quality.

Bottom-Up Approaches and Collaboration in Leader Programme

High quality natural environment is acknowledged as major asset of the EU's rural areas, and Leader programme is seen as crucial for the governance of this asset. Leader programme is based on an area-based and bottom-up approach, involving local communities and adding value to local resources. In the EU the Leader programme was first launched already back in 1991. Since then the share of the EU territory in which the Leader approach is being applied, the number of Leader groups and the level of funding allocated to Leader-type approaches have increased substantially. Prior the development of Leader programme, there were top-down approaches used for regional development that were decided at national or regional level. At present, member states of the EU and regions have stand-alone Leader programmes with separate financing set aside at EU level. Since 2007 the Leader programme had been integrated within overall EU rural development policy, and Leader has become one of the axis of rural development programmes supported by the EU. [9].

Leader is providing general framework, but doesn't indicate “what” needs to be done. It is thought to contribute to the capacity of rural areas to solve their own problems. Looking from governance perspective, author here sees strong similarities with approach of adaptive governance with stakeholder collaboration approach. “*The main concept behind the Leader approach is that, given the diversity of European rural areas, development strategies are more effective and efficient if decided and implemented at local level by actors, accompanied by clear and transparent procedures, the support of the relevant public administrations and the necessary technical assistance for the transfer of good practice.*” [9].

Bottom-up approach means that local actors participate in decision-making about the strategy and in the selection of the priorities to be pursued in their local area. The guidebook refers to experience in implementation and suggests that “*the bottom-up approach should not be considered as alternative or opposed to top-down approaches from national and/or regional authorities, but rather as combining and interacting with them, in order to achieve better*



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results". Stakeholder participation is seen as a core "*Participation should not be limited to the initial phase but should extend throughout the implementation process, contributing to the strategy, the accomplishment of the selected projects and is stocktaking and learning for the future*". [9]. Reaching consensus is constantly emphasised in with regard to Leader programme. This clearly reflects collaborative approach to governance.

Each LAG covers certain rural area, and the number of inhabitants lies between 5 000 and 65 000 people. From legal point of view LAGs are registered as NGOs as they need to manage and administer public funding. LAGs decide on the direction and content of the local rural development strategy, and make decisions on the different projects to be financed.

As for decision making body of LAGs the Council Regulation stipulates that "*At the decision-making level the economic and social partners, as well as other representatives of the civil society, such as farmers, rural women, young people and their associations, must make up at least 50 % of the local partnership*" [10] At national level this requirement is transposed into Cabinet Regulation No 515 (2009) stating that in decision-making body of LAG representatives of state and municipal institutions can't compose more than 50% and at least 50% must be economic and social partners that represent interests of farmers, rural women and young people (up to 25 years old) [11]. It has to be noted that in Latvia there are no environmental associations or NGOs mentioned whereas in the case of Scotland, environmental associations are mentioned as one of most active rural actors along with local residents' organisations, local political representatives, women's associations, and others. [9].

In 2009 there were 540 project applications received in the regional units of RSS though only part of them got funded as required funding in submitted applications exceeded available financing. The highest number of applications was submitted by NGOs (the legal status either "society" or "foundation") – in total 458 proposals and municipalities – 58 proposals. This can be explained by the fact that most of activities included in the local development strategies are targeted towards public good and also the fact that support intensity for projects submitted by NGOs are up to 90% whereas for municipalities it is 75%, but for businesses it can't exceed 50%. [12] The highest interest from applicants was for the measure to support so called public good activities – organising of trainings, developing local interest clubs, cultural, environmental protection, sports and other leisure time related activities [13].

Considering that Leader approach envisages (or even obliges) involvement of key target groups of environmental governance, such as local governments, NGOs un organised civil society, and businesses, the author holds a view that the Leader programme implementation experience provides good empirical data on how key target groups collaborate in decision making and on how public participation is facilitated at local level.

One of the research questions was also to assess whether availability of financing for rural development initiatives would cause more mobilisation at local level. Analysing notes from various working meetings, seminars, reviewing presentations and based on interviews the author concludes that in some situations local stakeholders feel that "*LEADER partly is a way to implement those activities that have failed to receive funding from other funds*" [14] Similarly the representatives of the Ministry of Agriculture have pointed out that in some cases NGOs are established only for formal reasons in order to receive higher support for their project i.e. there is evidence that sometimes NGOs are established only few days before the call for application and there are people from municipality involved in the board of that NGO.



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When summarising results from Leader implementation as of by the end of 2010, overall conclusions with regard to promotion of local participation and stakeholder involvement are good, in particular several aspects have been emphasized [15]:

- Partnership activities create added value to rural area and it helps solving number of issues through collaboration of key target groups;
- Decision taking at local level promotes citizen participation and increases accountability for results (here it refers to taking responsible decisions);
- Increased local capacity with regard to knowledge, motivation and experiences;
- LAGs get involved in implementation of national policies.

Thus author here concludes that impacts of Leader programme have to be assessed from multi-dimensional way, but with regard to research questions of this paper, benefits of citizen participation and collaboration between key target groups has to be highlighted.

Interconnections between Leader Programme and Environmental Governance

In order to assess the potential of the LEADER programme to support environment related activities in rural areas, there is a need to review national programming documents and other rules and regulations that regulate implementation of the LEADER programme in Latvia.

In Latvia general priorities for rural development are set in Latvian Rural Development Programme for 2007-2013 where “Local development strategies” (LEADER approach) is one of measures. More specific priorities for the use of funding from European Union (EU) are described in Latvian Rural Development National Strategy Plan 2007-2013 (hereinafter referred to as “Strategy Plan”). Both of these planning documents are elaborated by the Latvian Ministry of Agriculture (involving relevant stakeholders in the process) and reviewed and approved by the European Commission.

The Strategy Plan describes the situation in the countryside covering the aspects of competitiveness of agricultural sector, the state of natural resources and overall social and economic situation in rural areas. Further the plan defines Latvian strategy and priorities for rural development and the use of EU funding for the period of 2007-2013. State of environment and environmental challenges are analysed under general country profile along with description of overall social and economic situation in rural areas using various indicators [16]. However environment is looked at and described only from the point of view as a resource but not a precondition for a quality of life in rural areas i.e. seeing environment as a resource for producing agricultural products with higher added value only, but not considering environment as integral part of rural development.

National programming documents regulating Leader suggest that Leader approach is aimed at promotion of targeted and coordinated activities for rural development encouraging people to find new solutions for existing rural problems and rural development challenges. Overall priorities of the Leader are focused on increasing of competitiveness, diversification of rural economy and increasing quality of life in the LAG area [17]. Thus environment is not considered as a priority area of actions within national planning documents, but the focus is rather on income generating activities.



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Interesting that the Strategy Plan that contains a table with overview on how priorities under Latvian strategy correlate with Community rural development axes. As for priorities “sustainable management of rural natural resources” and “development of rural living environment” there is weak compliance and overlapping. [16] Following this, author concludes that national programming documents place higher emphasis of Leader to development of capacities at local level and generating income in rural territories instead of managing natural resources or enhancing environmental quality in rural areas. In other words environmental governance aspects are not mainstreamed under Leader. However from formal point of view promotion of environmental quality can be seen as part of quality of life concept thus Leader programme *per se* doesn't exclude (or include) activities aimed at environmental governance.

Reviewing the handbook for implementation of Leader projects that provides tips and advices for implementation of projects in different areas, the author concludes that there are no separate chapters devoted to environment related activities – this can be explained by the fact that environment is not among priorities and activities under Strategy Plan. However “*activities of environmental protection*” are mentioned as eligible for funding under measure “*Diversification of rural economy and improving of life quality*” along with activities of creating interest clubs, culture activities, sport, and other leisure activities.

Several interviewed people from LAGs pointed out to difficulties of addressing local development priorities, including tackling of environmental issues, through Local development strategies because the Cabinet regulations set a frame and limitations to activities (projects) that can be financed and limitations for implementation of soft initiatives. Interviewees pointed to the fact that not all activities that LAGs have initially proposed in draft local development strategies were eligible for financial support under LEADER. Thus some local level initiatives have been dropped and local development strategies adjusted in order to match the requirements of Cabinet regulations. [18] There is no information however whether among the activities that have been dropped were also some activities related to environmental protection.

There is general a lack of understanding how environmental issues can be brought into Local development strategies – this was an issue that was pointed out both by people from LAGs as well as from Latvian Rural Forum. This was one of the reasons why Latvian Rural Forum organised a separate capacity building seminar for LAGs on environmental issues that took place on September 9 in 2010 in Balvi when several environmental NGOs presented environmental issues, their campaigning work and working methods to LAGs [19]. Later on during working group discussions representatives from environmental NGOs together with representatives of LAGs examined ways on how to identify environmental issues and looking at opportunities how environmental issues can be integrated into local development strategies and translated into activities and projects.

In addition interviewed people also pointed out to the author that economic crisis that struck Latvia in 2009 brought some corrections to Leader implementation i.e. the issues of employment and local economic development were prevailing local development strategies and environment was seen as less of a priority.



Potential for Multi-Level Networking and Mainstreaming of Environmental Issues

At local level key players are LAGs that involve various local stakeholders – local development NGOs and initiative groups, local businesses, and municipalities. There has to be balanced representation of all these groups. LAGs are responsible for elaboration of Local development strategies outlining development priorities for respective area and this process requires coordination of interests and cooperation. Further as players at local level also local/regional units of Rural Support Service (RSS) need to be mentioned – they are actually assessing all those project proposals that LAGs have admitted as complying to local development strategies. The local divisions of the RSS would decide on the percentage of public funding the project is eligible.

Other players here are also national environmental NGOs and their international networks – they are often working to integrate environmental aspects in LEADER. One of examples here can be mentioned “*SF team – for sustainable future*” informal network that involves environmental NGOs from several countries in Central and Eastern Europe namely Hungary, Czech Republic, Slovakia, Romania, Bulgaria, and Latvia. In their publication “Green ways”, there are several examples provided on how local environmental governance activities can be supported. For example reconstruction of existing and building of new bicycle paths connecting two micro-regions (Konstantinolázeňsko and Stříbo) in Czech Republic. This activity enabled villagers from local community to commute in environmentally friendly way. Another example is from Poland, where environmental NGOs got involved in regional development planning issues in the area of Barycz river integrating nature conservation aspects into regional development involving also LAG of respective region. As a result the issues of sustainable development were included in local development strategy [20].

Moreover some projects from Scotland demonstrate strong connections to environmental protection or environmental communication. The Cairngorms LAG area is of particular interest as 39% of the area is designated for nature conservation and 25% of the area is designated as of European importance for nature conservation. In addition, the area is home to 25% of the UK’s rare and threatened species and has Two National Scenic Areas. Project “Eyes to the Skies” was launched in 2009 in response to the need to actively involve local Highland communities with conservation of red kites and the natural environment. The project was composed of four key elements - education programme, creation of Red Kite viewing centre, engagement of community and business and involvement of local volunteers. Through involvement of local school children and community, the project provided an important element of community ownership. Local volunteers have been crucial to the success of the project, with 20 currently active and well networked. [9].

Conclusions

The Leader approach and its institutional set-up specifically facilitate participation of key target groups. The availability of financing and top-down rules that need to be followed in LEADER programme is conditions that encourage cooperation. Apart from financial benefits and implementation of activities aimed at improving quality of life in rural areas, citizen involvement should be seen as one of key added values achieved through implementation of



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Leader programme. Furthermore it provides strong incentives for stakeholder collaboration and that can play crucial role in local environmental governance. Leader programme should be seen and used as an opportunity for involvement of various stakeholders in activities related to various aspects of environmental governance such as awareness raising about environmental issues, improving environmental performance, encouraging local initiatives, cooperation and networking between across various governance levels etc.

When it comes to integration of environmental aspects in implementation of Leader programme in Latvia, the author makes conclusions that the Leader programme doesn't contribute to environmental governance in a systematic way. On one hand the Leader programme provides windows of opportunities for implementation of activities aimed at environmental awareness raising and changing of lifestyle to more sustainable one such as improving small-scale environmental infrastructure, building bicycle paths and purchasing of bicycles for common use and acquiring of other type of equipment to promote sustainable lifestyles of communities.

The fact that so far there are little or hardly any projects that have environment focus have several explanations. First, in the times of economic crisis environment is often not seen as one of priorities, but quite a contrary – environment protection is considered as activity that can wait until major economic and social development issues have been resolved. Second, LAGs didn't have sufficient capacities in developing local development strategies – there was not much training provided and the plans were written based on their experience and knowledge. This also applies to personal interests, priorities and skills of respective LAG coordinator i.e. if person has environmental NGO background then it is very likely that environmental issues will be reflected in local development strategy and also in the projects supported through LEADER. Third, it depends on the area that is covered by LAG i.e. if environmental issues have been seen as problematic or challenging, it is very likely that these issues will be addressed also in local development strategy.

Based on empirical research, author holds a view that integration of environmental aspects in Leader programme can be achieved by thematic trainings for coordinators of LAGs, creation of national and regional level partnerships between LAG networks, Latvian Rural Forum and environmental NGOs this way exploring ideas and share experiences from other countries on how environmental angle can be integrated. This recommendation is based on the praxis used in other Central Eastern European countries such as Hungary, Poland and Czech Republic as well as by doing desk-research on Scotland. This way top-down framing of bottom-up initiatives can produce synergy and green the Leader programme.

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POVERTY AND MATERIAL DEPRIVATION IN DIFFERENT TYPES OF HOUSEHOLDS BY REGIONS OF LATVIA

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Keywords: poverty risk index, material deprivation, economic strain, inadequate lodging conditions, forced refusal of using nonexpendable goods.

Abstract

In this article the author analyses poverty and material provision by regions of Latvia, its various demographical types of household aspects in 2008 and 2009. Similar analyses of this issue in Latvian regions have been presented in “Poverty and Labor Market in Latvia” (Keune, Maarteen, 2000), different researches of household budgets (Central Statistical Bureau, from year 1998 to 2000), in “Living Conditions in Latvia in 1999” by Central Statistical Bureau, however the author believes that there is an urgent necessity for a more updated research that would reflect the real current situation regarding poverty and material deprivation in households of Latvia.

Introduction

The goal of this research is to appraise available data and publications on this issue. The objects of the research are different types of household in the regions of Latvia, the item – household material deprivation in 2008 and 2009. Methods used in the research are literature, statistical data research and analysis.

The novelty of this article is a research about household material deprivation in different demographic aspects in regions in 2008 and 2009.

General Information

Since the beginning of the 90’s of the previous century many researches of the household budget and results have carried out in Latvia. The results have been summarized in the data collection named “Household Budget” (in the appropriate year).

On 28th January, 1994, State Statistics Committee (today Central Statistical Bureau – CSB) signed a cooperation agreement with the Norwegian Institute for Applied Social Research – FAFO which outlined conducting of wide research of living conditions in Latvia. In accordance with this agreement a survey was carried out in September 1994. Results of the research were summarized in the data collection “Living Conditions Developments in Latvia”



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and others. Five years later, as a follow-up of this fruitful cooperation with FAFO, another research project took place in Latvia and results of this research were published in the data collection “Latvia, 1999 – Living Conditions Survey”.

In 2005 the Central Statistical Bureau launched another survey called “Community Statistics about Income and Living Conditions” (EU-SILC). Its main goal was to provide comparable and systematically summarizable Community statistics of living conditions in all the European Union – EU acceding countries, by using common methodology and definitions. During EU-SILC survey wide information about household and individual welfare effecting aspects has been acquired.

In 2008 EU-SILC a research and survey selection covered 7042 households. Completed inquiry forms were collected from 5196 households; individual interviews were carried out with 10910 people, aged 16 and older. Unacknowledged level in this survey went up to 26.2%. As stated before for the year of 2009, respectively – 7610, 5797, 12207 and 23.8%. [1]

Since the first research in 2005, every year CSB prepares data collections “Income and Living Conditions in Latvia” where the main EU-SILC survey questions, such as household structure and its members' social-economic descriptions, daycare, living conditions, household's material welfare aspects and social castaway risk, household income and household members health's self-appraisal are reflected.

In the previously mentioned data collection the Laken monetary poverty indicators are incorporated. One of them is the **poverty risk index** – specific weight percentile of inhabitants whose equivalent usable income is under 60% of national equivalent usable income median. Equivalent of the usable income is household's income divided by equivalent of the household size. In Laken indicator calculations equivalent household size is made by a modified OECD scale (1.0; 0.5; 0.3) – the first adult is considered as 1.0, every next household member aged 14 or more 0.5, but each child younger than 14 years 0.3. [2] According to “Community Statistics Research of Income and Living Conditions” (EU-SILCS) data it was 19.2% in 2004, 23.1% in 2005, 21.1% in 2006, 25.6% in 2007, 25.75 and 21.4% in 2009. [3] They are ones of the highest indicators in the European Union.

However, it is essential to understand, that an income that is just a little above the poverty risk does not always provide desirable life quality to citizens. Statistically less researched condition is **material deprivation** – a situation when there is the lack of economic resources, and access to material goods is denied, as well as unsatisfactory living conditions and forced abandonment (lack of money) from long-lasting goods are taking place. [4]

The main manifestations of material deprivation are:

- economic tension;
- forced abandonment form long-lasting goods use;
- unsatisfactory living conditions;
- inability to provide health care and purchase needed medicine;
- inability to provide children with education appropriate to their abilities;
- unsatisfactory palliative care in aging.

According to the EU-SILC methodology the material deprivation refers to the inability of individuals or households to afford these consumer goods and activities that are typical in a society at a given point in time, irrespective of people's preferences with respect to these items. It is considered that it is enough to understand household living conditions.



Economic tension is determined by asking several questions, in which respondents have to rate a household's ability to cover the following costs:

- *eat meat, fowl or fish every second day;*
- *go on holiday outside home for at least one week per year;*
- *afford to cover unexpected costs from own resources;*
- *financially afford to keep home warm;*
- *to cover utility expenses, rent and purchase goods on credit (to pay credits).*

Households answering at least 2 questions positively are considered being dependent of the economic tension. [5]

Currently the **unemployment** is considered as the main source of the high economic tension in Latvia and the depopulation is the result of this tension. As described in appendix Figure A.1, the number of the unemployed dramatically increased within all categories from 2007 to 2009. But in 2010 the number of the unemployed decreased. Are the statistics "improvers" the unemployed who have left Latvia to seek a job outside the country?

A large part of households have consistently **dissatisfactory living conditions**. Dissatisfactory living conditions are characterized by the following problems:

- leaky roof, wet walls, ceiling, floor or house base or rotten window frames, doors or floors;
- too dark, insufficient daylight;
- no bathroom or shower;
- no flush toilet.

It is considered that household is having unsatisfactory living conditions if one of the problems is current. [5]

In 2009 26% (more than a quarter) of households' problem was a leaky roof or wet walls, ceiling, floor or house basement or rot in window frames, doors or floors. 20% or a fifth did not have separate bathroom or shower. 17% of households do not have flush toilet, 12% households are too dark or have too little daylight. [5]

Welfare in different types of household has been researched by Inta Ciemina, and published by the University of Latvia.

Based on the European Parliament and Council Decision of 2008, the year of 2010 was announced the year of Europe, and in this year particular attention was paid to the reduction of poverty and social exclusion. [6]

Forced rejection of using long lasting goods may be seen in households that do not have a phone (including a mobile phone) for private needs, a color TV, a washing machine and a motorcar due to lack of money.

It is considered that a household has to decline using long-lasting goods if it cannot afford any one of the goods mentioned above due to lack of money. [5]

Up to now a long-lasting good was a computer as well.

Types of Households

EU-SILC surveys, starting from 2005, identify the following types of households: one person, including 0-64 (incl.) and 65 or more years, one adult with children, a couple



without children, a couple with children, including: one child, two children, three or more children.

Until now, the researched types of households did not match EU-SILC research which disallows to create index Dynamics lines incomparability. For example, in the research of the living conditions back in 1999 the following types of household were included: one person household – senior, one person household – working age, couple without children – pensioners (both), couple without children in working age (at least one of them in working age), one parent with one child, one parent with two or more children, a couple with one or two children, a couple with 2 or more children, two generation household where no one is under 18, a household of 3 generations, an engaged couple with children and grandparents, another type of household, for example, one containing grown-up brothers or sisters, persons, who are not kindred, etc.

In Different Types of Households and Regions

Term “**poverty**” is not defined in laws of Latvia. It is defined what is “indigent person” and “low-income person”. When speaking of poverty European Commission’s definitions are used. According to this, people are defined as penurious if their income and resources (economic, social and cultural) are lower than accepted in the society and they are forbidden or deprived of the basic rights. Therefore, poverty mainly contains lack of financial resources, which results in a person’s inability to afford the basic needs for living (food, home, health, education, culture etc.) [7]

One of the poverty descriptors is the poverty risk index.

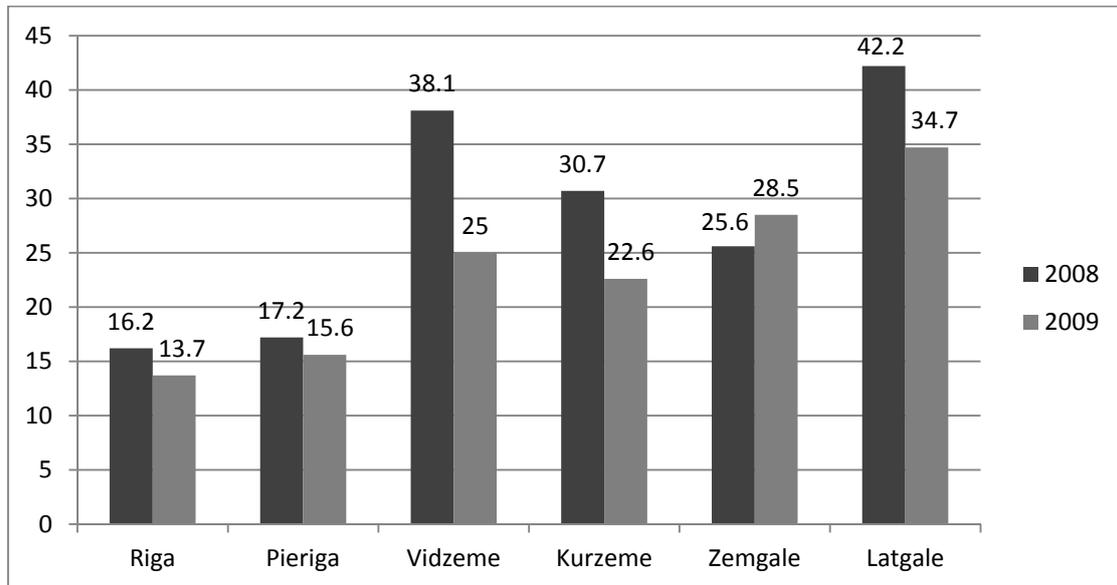


Figure 1. Poverty risk index in statistical regions of Latvia, % [8]

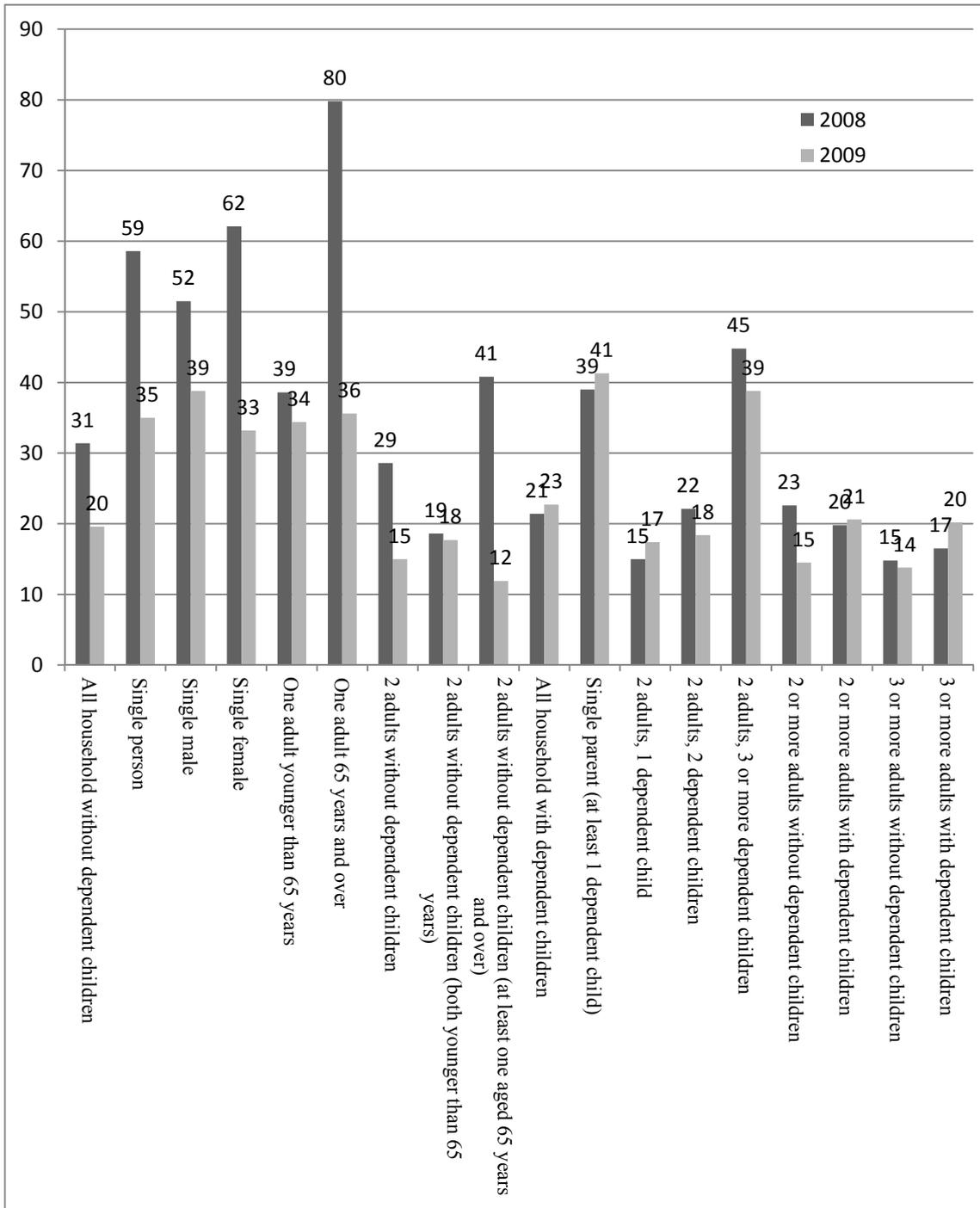


Figure 2. Poverty risk index by type of household, % [8]



The highest percentile specific weight of inhabitants whose equivalent usable income is under 60% from national equivalent usable income median, in both years is in Latgale Region – 42% and 35%. Latgale Region is just a little behind Vidzeme Region where poverty risk index was 38% in 2008 and 25% in 2009. A comparatively better situation is in Riga Region. Kurzeme and Zemgale Regions in both years are in-between Vidzeme and Latgale.

It should be noted that in all regions, except Zemgale, poverty index has become lower, judging from the poverty risk index.

Poverty risk index in 2009, compared to 2008, has decreased in almost all types of households, except for the households with children, including those with 3 children or more.

In 2008 the poverty risk index was high in one person households, especially those consisting of female (62%), and also in households where the person is 65 years old or older (80%!). In both researched types of households the situation has improved – poverty risk index has decreased for 29 pp and 44 pp.

At this moment it should be reminded how the poverty risk index can be calculated. It is percentile proportion of inhabitants whose equivalent usable income is less than 60% of the national equivalent usable income median. How is it with equivalent usable income?

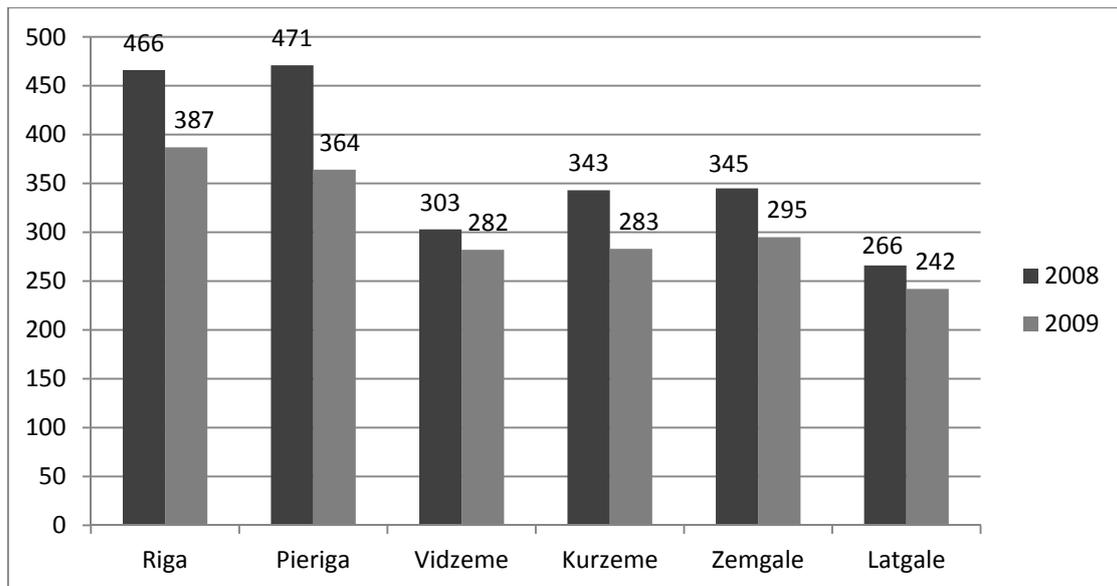


Figure 3. Household's usable income average to one equivalent inhabitant in statistical regions of Latvia, lats per month [8]

There is no region in which household usable income average per one inhabitant in 2009 compared to 2008 has risen!

Usable income stated before in 2008 was higher in places around Riga, but in 2009 – in Riga.

Compare the usable income of household's average for one household's member and average for one household in statistical regions of Latvia in appendix, Figures A.2 and A.3. In



Appendix Figure A.4 show average usable income per one equivalent person Dynamics from 2004 until 2008. It has risen by 2.6 times!

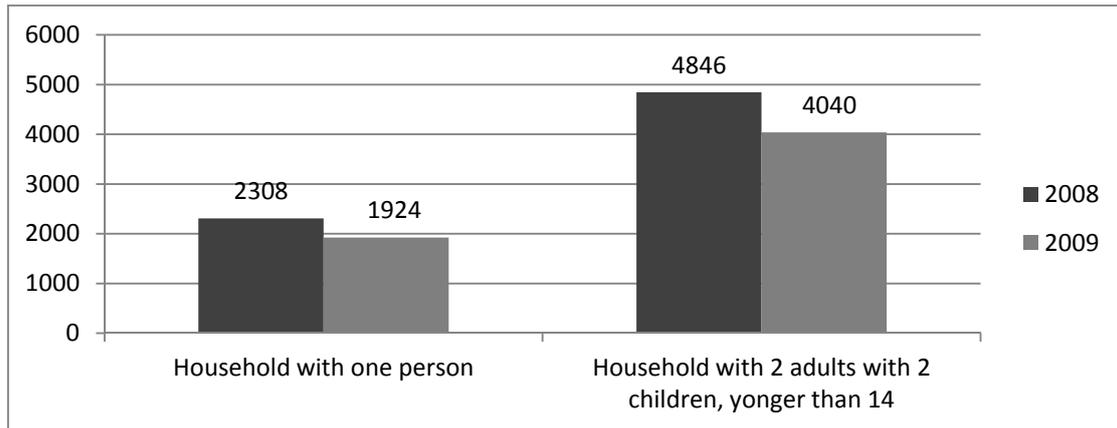


Figure 4. Poverty risk threshold (illustrative values), lats per year [8]

In 2009, compared to 2008, poverty risk threshold decreased for both households with one person and household with 2 adults with two children under 14 (for 384 and 806 lats per year). One person household risk threshold was Ls 160.33 per month. This equals (Ls 160) to the minimum salary until 1st January 2009!

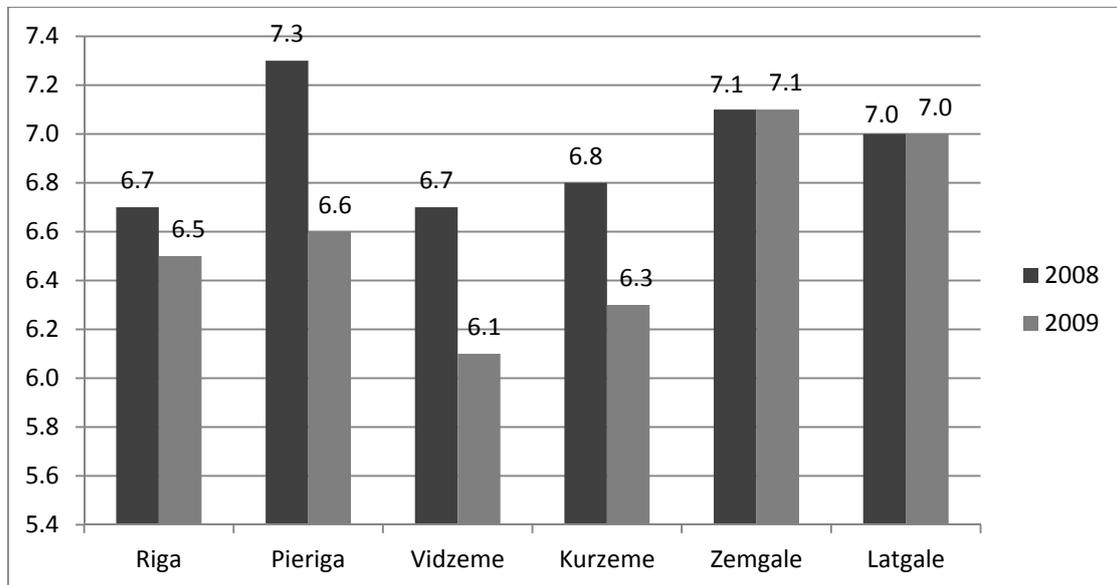


Figure 5. Income quintuplet relations index in regions of Latvia, % [8]



Poverty is closely connected to **inequality**. In each country there was some economic development (in 2007 and 2008), the income of inhabitants rose, the level of unemployment was low. Income did not rise for all of inhabitants equally, not everyone was able to adapt to the fast development and to use its potential. As the result, a part of inhabitants became really affluent, but the rest were poverty stricken. S80/ S20 quintuplet relations index describes, how many times the income of 20% of wealthy inhabitants is higher than that of 20% of the poor inhabitants' income. In 2007 and 2008 this index was 7.3, but in 2009-6.9 (provisional data) it has decreased (a little, but it has decreased!) [8]

In four regions out of six, income quintuplet index in 2009 decreased, compared to 2008. The index grew in Zemgale Region – for 1.2. In these 2 years the highest wealthy-rich proportion was in 2008 around Riga (7.3), but the lowest (5.9) – in Zemgale. The smallest index in 2009 was in Vidzeme Region – 6.1. Income of the fifth of inhabitants is six times higher than that of the poor fifth income...

In 2009, compared to the previous year, the number of households that could not afford to cover unexpected expenditures, rent, utilities, and credit repay, increased from 55.3% to 62.2%. It is assumed that household cannot cover utilities, rent or credit repay if it has been late with payment for 12 months due to the lack of money. The number of households who can afford a week vacation outside home (go on a vacation for 1 week, spend time in a summer cottage, visit relatives, friends etc.) is yet smaller. Unexpected expenditures are calculated each year depending on poverty risk threshold for one equivalent inhabitant in a year N-2 (for example, in 2008 they checked 2006 poverty risk threshold). In 2008 unexpected expenditures sum was 90 lats, 2009 – 120 lats. [5]

How has economic tension changed households in different regions?

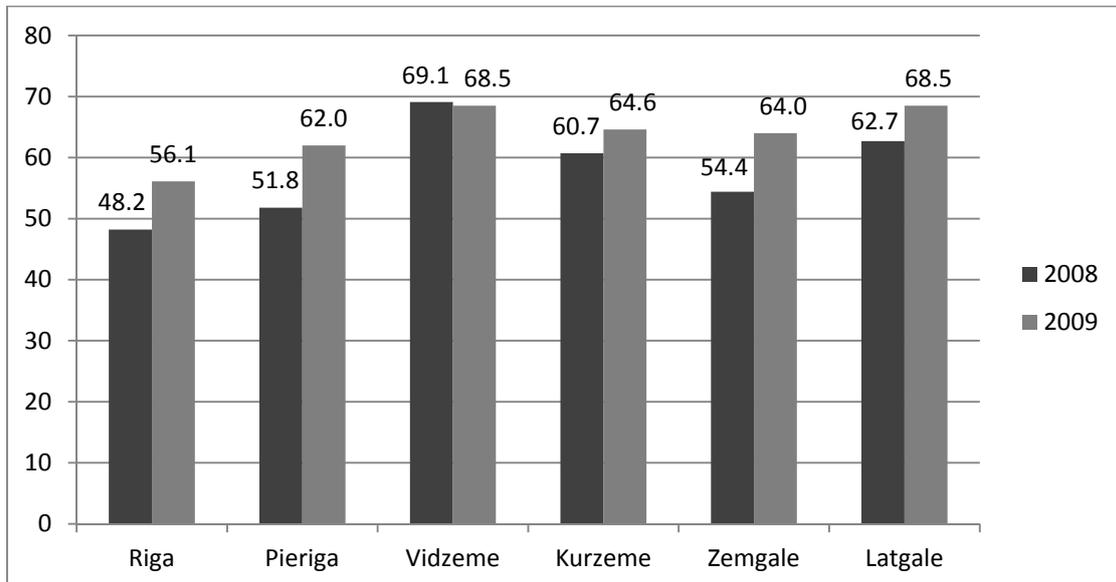


Figure 6. Economic tension in regional households, % [5]



Households in Riga Region and areas around Riga are in a relatively better situation – their economic tension rates are lower than the average. More dependent on tension are households in Vidzeme Region. In one year the index has lowered by just 0.6 pp. Except Vidzeme, tension has become higher in all the other regions – in Riga Region by 7.9pp, in the area around Riga – 10.2 pp. (the biggest growth!), Kurzeme – 2.9 pp., Zemgale – 9.6 pp, and Latgale – 5.8 pp.

In 2009 39.9% (2008 – 40.2%: a small difference in a year) households had one or more of the following problems which are a sign of unsatisfactory living conditions: a leaky roof, wet walls, ceilings, floors or house basement or rot in window frames or floors, too dark or too little daylight; no bathroom or shower; no toilet with flush.

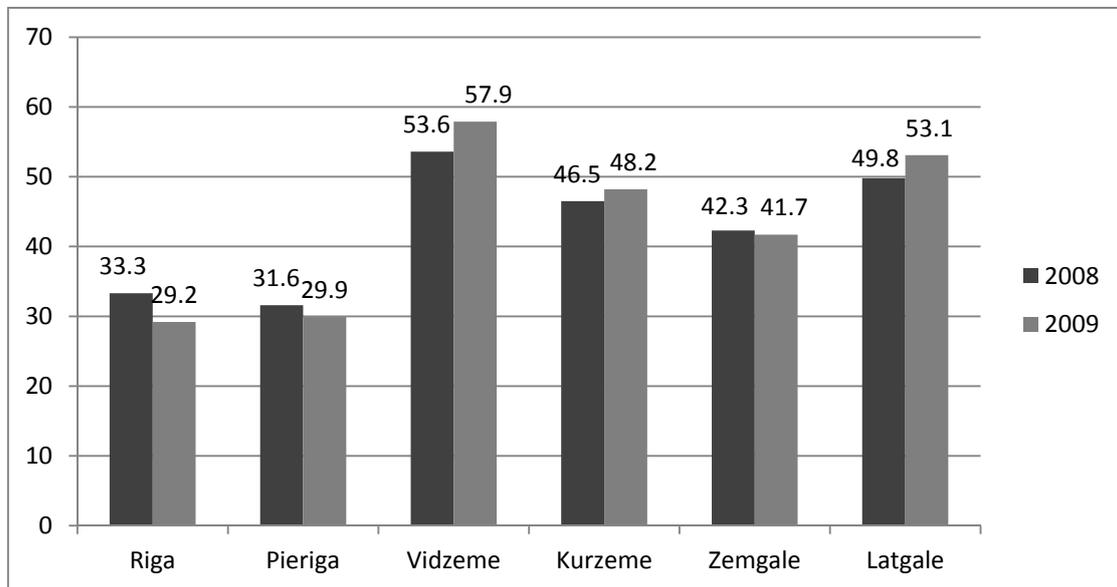


Figure 7. Households that pointed at unsatisfactory living conditions by regions, % [5]

In this figure you may notice that better living conditions are in Riga Region and areas around Riga. The worst living conditions are in households in Vidzeme, but Latgale, Kurzeme, Zemgale are not far either. In half of the regions households' living conditions have improved in a year (in Riga Region by 4.3 pp, areas around Riga by 1.7 pp, Zemgale Region by 0.6 pp.), but in the other half they have worsened (in Vidzeme Region by 4.3 pp, Latgale Region by 3.3 pp and Kurzeme Region by 1.7 pp).

The third material welfare indicator is proportion of households that are unable to afford to use particular long-lasting goods – phones, colored TV and washing machines. It is the least possible to afford a car.

On average 32.9% households of Latvia could not afford one out of four long lasting goods in 2008 and respectively 32.5% in 2009.

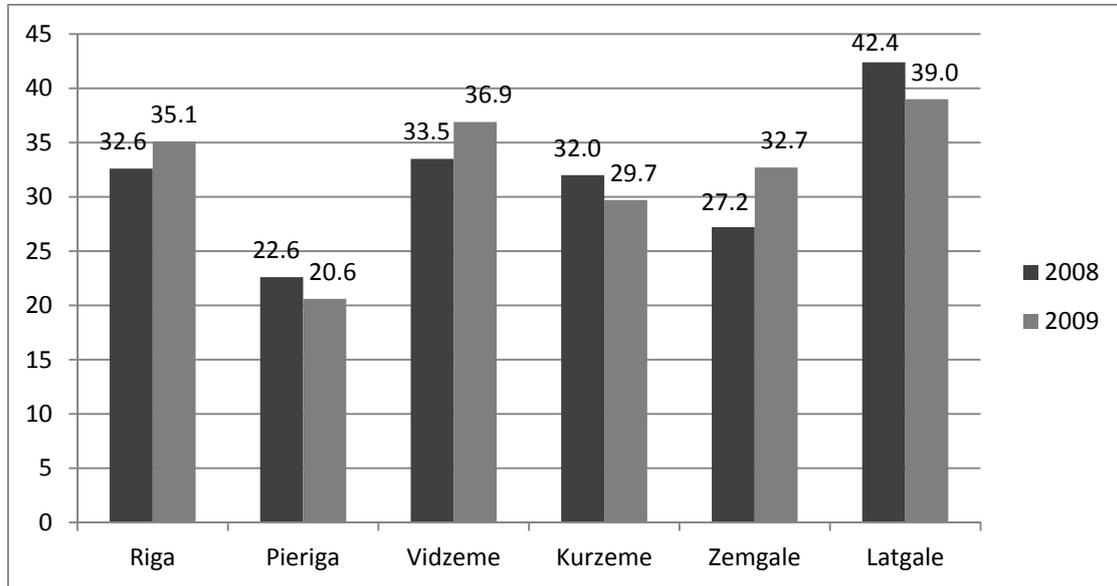


Figure 8. Households that were forced to deny using at least one (out of four) long lasting goods in regions, % [5]

In Latgale Region almost half of households in both years (42.4% in 2008 and 39.0% in 2009) could not afford purchasing one of four required goods. It should be noted that conditions in 2009 have improved a little.

In Vidzeme and Riga Regions the rates are high as well. In Riga Region the proportion of such households has grown. Purchasing power has increased in Kurzeme.

Due to lack of money most frequently households have to refuse using and buying a car, however it is a matter of further research. In addition to purchasing a car, in 2009 there are more households that could not afford another one of three goods, compared to 2008 (9.8% and 9.6%). See the graphical figure in appendix, Figure A.5.

Summary

Household living conditions have worsened in 2009 compared to 2008. Economic stress has increased, but the improvement of the household conditions has not been significant, so households have been forced to refuse acquisition of durable household goods and decline using them relatively often. In 2009, one of 3 households denied using at least one of 4 durable goods – a phone, a color TV, a washing machine or a car. Household conditions in regions have become worse, too.

Despite the identified bad household conditions many other different figures indicate the positive poverty tendency towards its reduction. In 2009, poverty risk index decreased in Riga and all regions of Latvia, except Zemgale. However, it should be pointed out that poverty risk index has actually increased for households with couples, as well as for couples with a child or



children. Poverty risk index remained very high for one person households consisting of only woman.

The average income and average usable income for one member of a household decreased in all statistical regions of Latvia, but more significantly in Riga and Pieriga.

Economic tension also increased slightly during 2008 and 2009 in all regions, except Vidzeme, and income quintuplet relations index in regions, even though decreased slightly, still remained on a very high level.

This contradiction in results shows the necessity to reevaluate the current methodology in order to find and eliminate its shortages. For example, the poverty risk line is being calculated only from household incomes ignoring its expenditures. The methodology of poverty risk line does not work in situations when purchasing capacity is falling due to high inflation. Therefore the index of poverty barrier will be in contradiction to the real situation.

Whilst researching poverty and material insecurity, it is important to get rates of deciles, centiles, not only of quintuplet, as it does not reflect stratification of households properly. Probably the utmost deciles, centiles would reflect hyper stratification. That could be the author's next object of research.

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Appendix

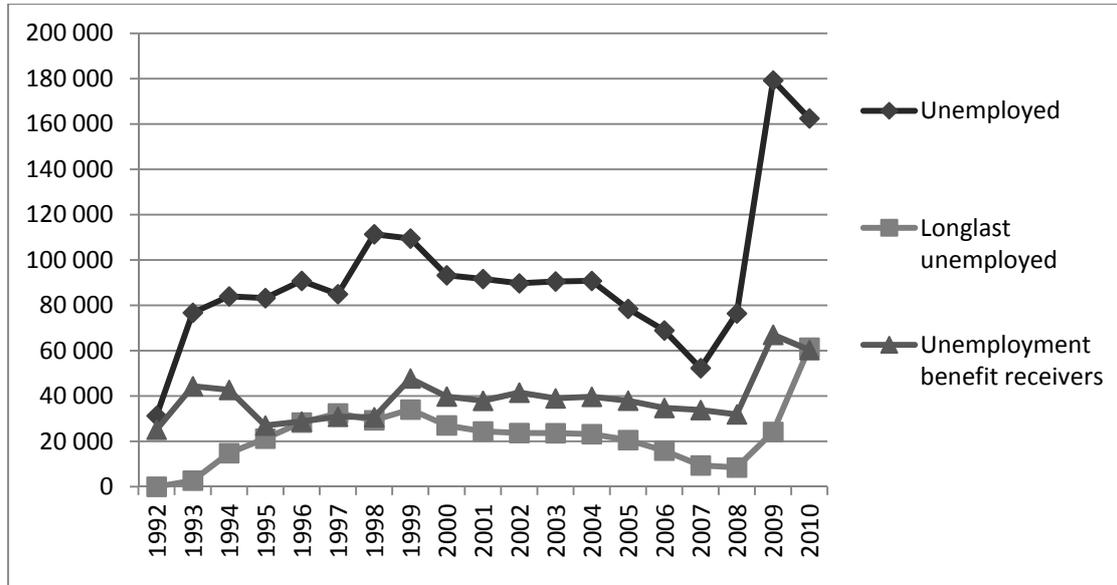


Figure A.1. Dynamics of the unemployed, long lasting unemployed and unemployment benefit receivers from 1992 to 2010 [8]

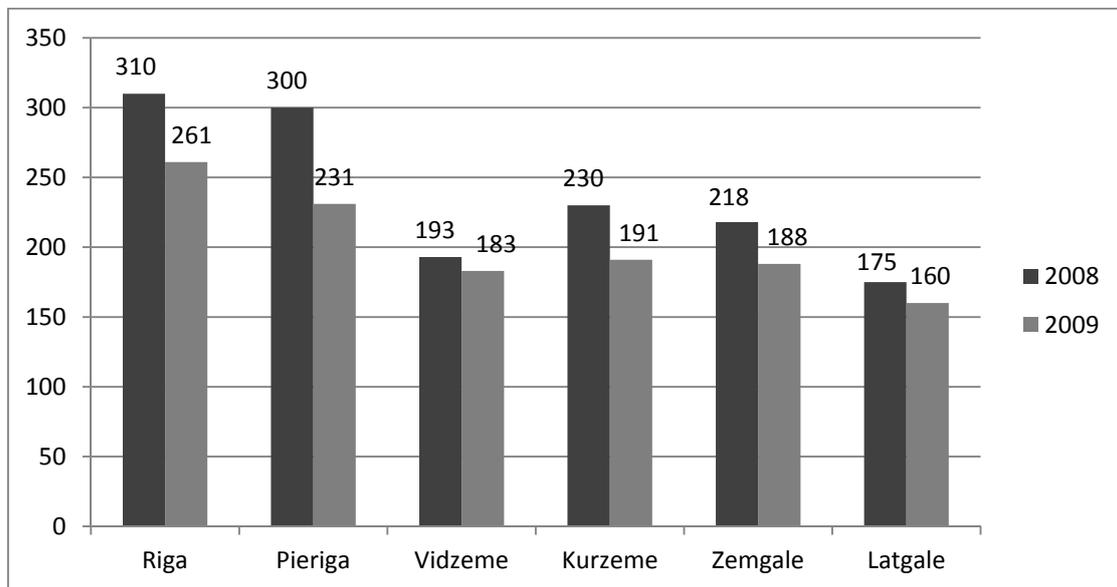


Figure A.2. The average income per one member of a household in the statistical regions of Latvia (Ls per month) [8]

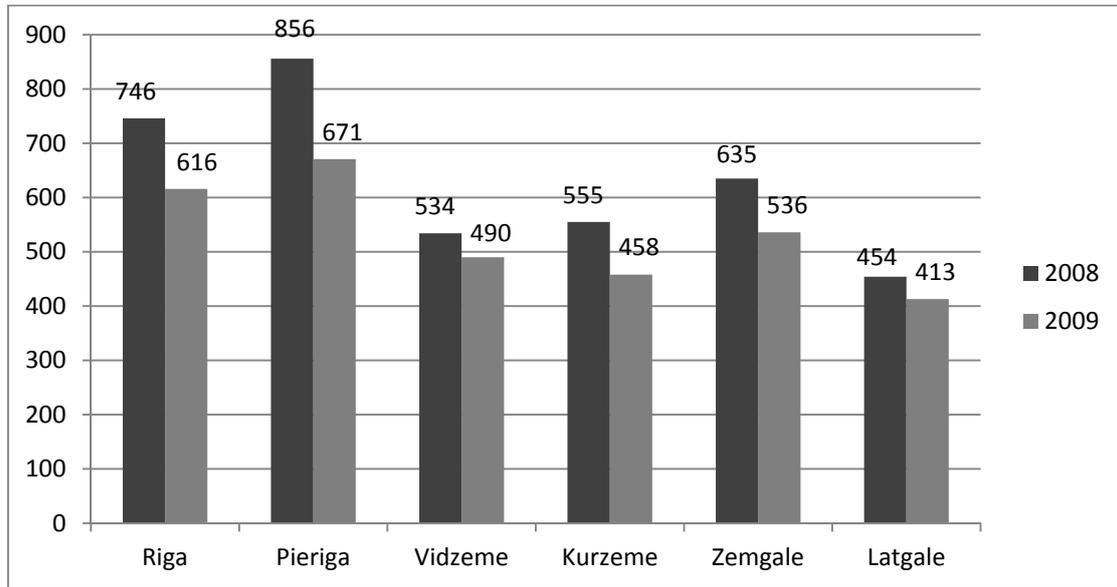


Figure A.3. The average usable income for one household in the statistical regions of Latvia (Ls per month) [8]

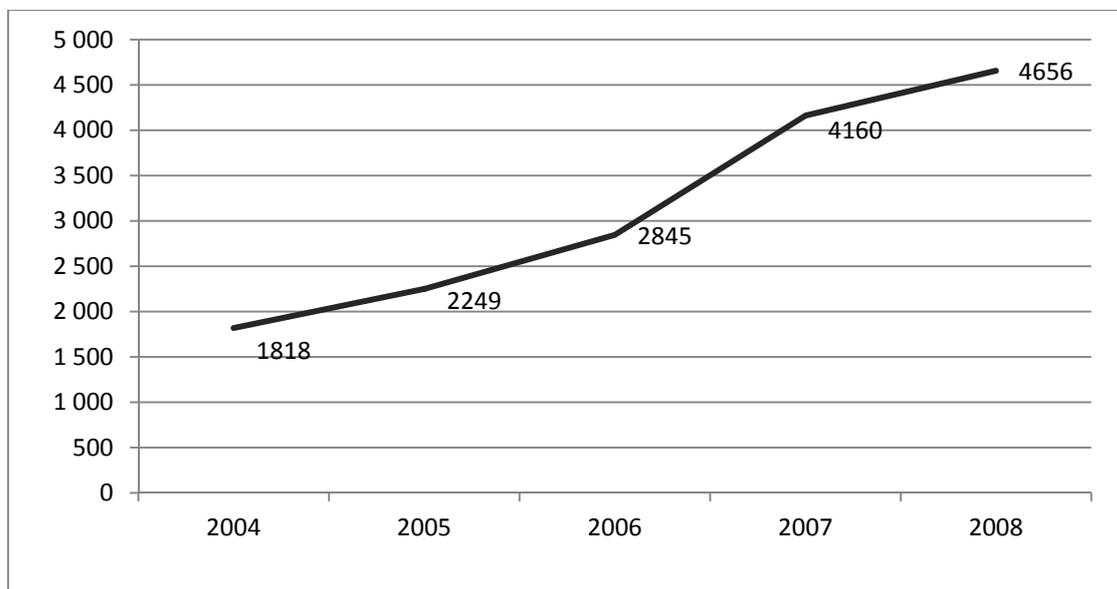


Figure A.4. The average usable income for one equivalent inhabitant (Ls per year) [8]

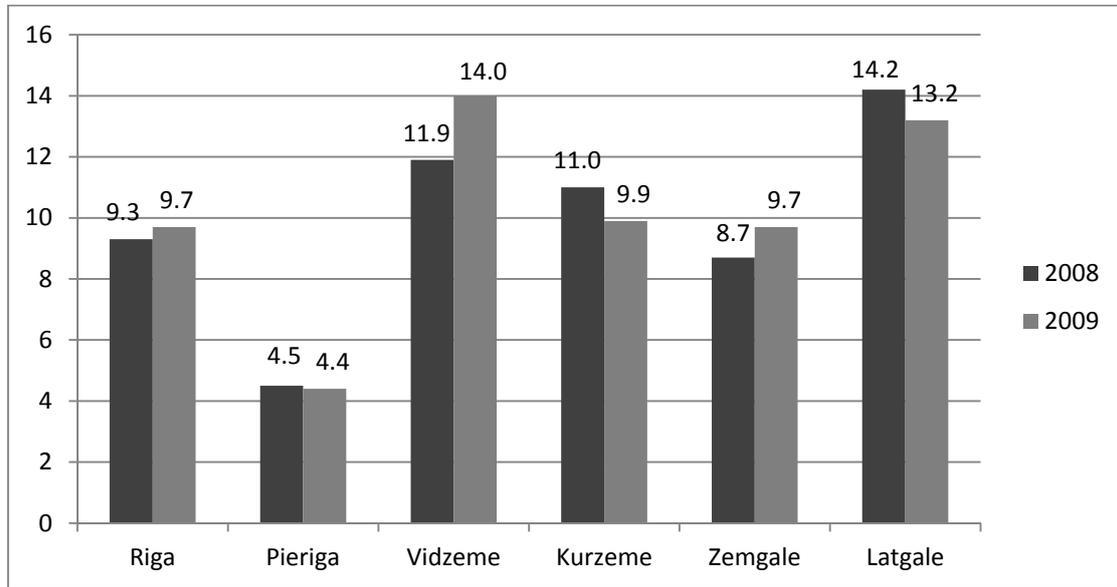


Figure A.5. Percentage of households forced to deny using at least one (out of three) type of long lasting goods in the geographical regions of Latvia during years 2008 and 2009 [5]



THE PERFORMANCE OF BALTIC EQUITY FUNDS

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Abstract

Nowadays mutual funds (investment funds) are popular collective investment vehicles around the world. It is a reason of large number of studies and researches dedicated to an evaluation of performance of mutual funds. The majority of studies investigate mutual funds in countries with highly developed markets of these financial vehicles. Due to of relatively weak development of Baltic market there is limited number of papers that evaluates performance of Baltic mutual funds. This study examines performance of Baltic equity funds during the period 2009-2010. The performance is evaluated using Sharpe ratios, M-square and CAPM methodology. Fund manager's superior security selection skills are analyzed using Jensen performance measure. Market timing ability is estimated using Treynor-Mazuy and Henriksson-Merton models. Afterwards funds were rated in accordance to obtained performance measures. Daily returns of investment funds over the time period covering years 2009-2010 were used for estimation of estimation. The risk adjusted performance measures indicate that majority of Baltic equity funds underperformed Baltic market but performed better than Eastern European emerging market index. The analysis of Jensen alphas showed that there is positive but insignificant security selection skill. The results obtained from Treynor-Mazuy and Henriksson-Merton models give no evidence that fund managers possess market timing ability. The rating of funds created in this paper was based on performance results. In overall ratings are consistent among various evaluation methods used. It can be stated that among Baltic countries Estonian equity funds performed better as the five of six funds at the top of the rating were managed by Estonian managers.

Introduction

The statement that Baltic mutual funds markets are comparatively new, small and weakly developed can be proofed by some facts and comparisons with other countries with strong mutual fund industry. First of all, the age of mutual funds markets in Baltic countries is eight to eighteen years (from the date when laws on mutual funds activities were adopted). For comparison, history of mutual funds in developed countries counts several decades. Secondly, in global scale, the share of Baltic funds market at the end of 2010 composed only 0.005% from the total mutual funds asset value in the world. Finally, on average the ratio of Baltic mutual



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fund assets to GDP was 1.53% that tends to be times less than in many other countries. For example in Luxembourg this ratio exceeded 4000%, while in Ireland it was over 400%.

Baltic mutual funds market had experienced slight growth from its emergence until year 2007-2008 when market was strongly affected by current financial crisis.

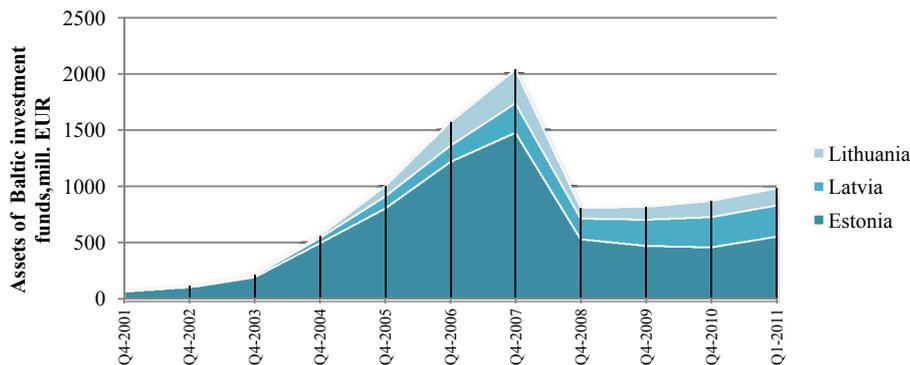


Figure 1. Baltic mutual fund assets in breakdown by country

Source: NASDAQ OMX Baltic Fund Centre Data

At the end of third quarter of 2011 the total assets of local domiciled mutual funds in Baltic countries were 983 million EUR. Figure 1 shows that despite decreasing tendency since the end of 2007 Estonian market has been keeping its dominant position in the Baltic market. Estonia's dominance can be explained by a fact that its mutual funds market emerged first among all Baltic countries.

In aspect of variety, the analysis shows that Baltic investment funds managers offer several types of funds – equity funds, bond funds, funds of funds, money market funds, balanced funds, real estate funds and other funds. Figure 2 shows a number of local domiciled funds in Baltic market in breakdown by type.

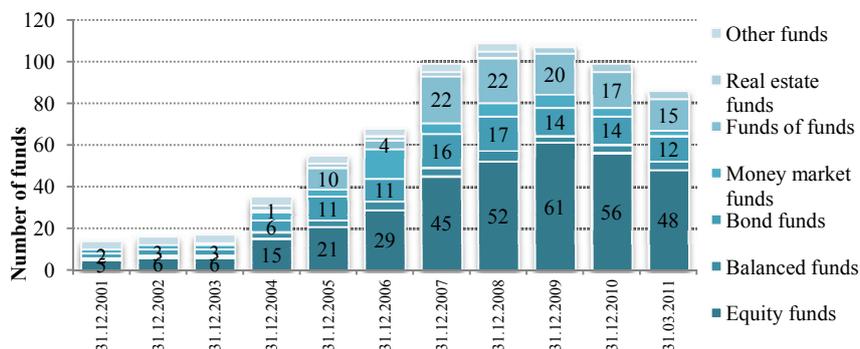


Figure 2. Number of local domiciled funds at Baltic market

Source: NASDAQ OMX Baltic Fund Centre Data



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At the end of third quarter 2011 there were offered 86 local domiciled investment funds at Baltic market. More than a half (48 funds) of them was equity funds. The greatest number of equity funds was managed by Estonian managers.

Data availability is one the reasons why the majority of studies are devoted to analysis of mutual funds in developed countries, for example USA, UK, Japan etc. However there is smaller number of researches which carries out an analysis of investment funds in emerging countries. The lack of such studies is one of the factors that hampers development of these markets. Investment fund markets in emerging countries are less competitive than markets in developed countries. The amount of public information about funds activities often is not sufficient; investors are more conservative and passive. In fact Baltic countries do not belong to the group of emerging countries but their investment fund markets possess the same characteristics. As well as there is small number of studies devoted to analysis of Baltic investment fund markets. The purpose of this paper is to work out a rating of Baltic equity funds based on the performance analysis of the funds. There are used generally accepted economic and econometric research methods. The research covers time period from 2009 to 2010.

Methodology and Data

For the analysis there were chosen 30 local domiciled Baltic equity funds that could be found in the data base of NASDAQ OMX Baltic Fund Centre on March 2011. Current analysis of performance of Baltic equity funds covers two years period from 01.0.2009 to 31.12.2010.

Data used are daily returns for each fund that were calculated from the daily net asset value (NAV) of each fund. They are net of management fees, but not net of entry or exit commissions, as the commission policy of each fund is not uniform across funds, across clients and over time. Several previous studies showed that percentage of funds whose returns exceed benchmark portfolio's return slightly decrease when NAV are adjusted by fees. The investment fund data on fund net asset values were obtained from date base of the Baltic Fund Centre and ensure continuity and uniformity. The data on management fees were acquired from *Morningstar* Latvian, Lithuanian and Estonian data bases.

An interest rate on Germany's 10 years Government bonds was used as a risk free rate for the estimation of risk adjusted performance of the funds.

To make results comparable it was chosen to use the same benchmark portfolio for all equity funds. The analysis of the Baltic equity funds faced a problem to find appropriate benchmark portfolio. The study of Lehmann and Modest (1987) proofed that the investment fund analysis results may differ significantly depending on the chosen benchmark portfolio [1]. In the same time Roll is his paper (1977) argues that proper benchmark portfolio has to include such assets as pieces of art, stamp collections, real estate precious metals etc. As result different stock market indexes do not represent the universe of all assets and CAPM results are not reliable. [2] Despite this critique CAPM is still widely used.

Majority of tested indices have weak correlation between funds and indices returns. In this research were used two benchmark portfolios **OMX Baltic Benchmark General Index** (OMXBBGI) and **MSCI Emerging Markets Eastern Europe Standard** (MSCI EMEE). These indexes had strongest correlation between returns.



Raw returns

The performance of portfolio (e.g. investment fund) can be estimated using different measures and techniques. The simplest but much criticised measure is raw return of the portfolio for specified period. The raw returns calculated using net asset values (NAV) of a fund in present and past time moments. To avoid non-stationarity problems of time series logarithmic returns were calculated as follows from equation 1.

$$R_p = \ln \left(\frac{NAV_t}{NAV_{t-1}} \right) \quad (1)$$

Portfolios differ not only by its returns but also by its exposure to risk and cannot be compared using only raw returns. This problem was solved using risk adjusted performance measures that allows comparing portfolios with completely different risk levels. Two of such measures are used in this paper and are given below.

Sharpe ratio

Sharpe (1966) has defined this ratio as a reward-to-risk ratio (S_p) [3]. Sharpe ratio is based on Capital Asset Pricing model and can be expressed by following equation:

$$S_p = \frac{E(R_p) - R_f}{\sigma(R_p)}, \quad (2)$$

where $E(R_p)$ – expected return of portfolio;

R_f – return of risk free asset;

$\sigma(R_p)$ – standard deviation of portfolio.

This measure shows the risk premium that funds generate on one unit of risk that fund takes.

M – square (M^2)

Modigliani square (M – square; M^2) as well as Sharpe ratio is risk adjusted measure used for evaluation of portfolio performance. M^2 is expressed in percentage and solves interpretation problem that accrues in the case of Sharpe ratio. The main idea behind M^2 is to use the costs of the market risk and adjust all portfolios with risk of the market portfolio. In this way portfolio risk and market risk gets harmonized. Afterwards the portfolios returns adjusted by this risk. [4]

The M^2 of a portfolio for certain period can be compared to average market return in a this period. A difference between them shows by how many percentage points portfolio performed better than a market if the difference is positive and contrariwise if the difference is negative. M^2 can be expressed following:

$$M^2 = \frac{\sigma(R_M)}{\sigma(R_p)} [E(R_p) - R_f] + R_f, \quad (3)$$

where $\sigma(R_M)$ – standard deviation of market portfolio.



Jensen alpha

This measure is used to evaluate security (stock) selection skills of fund manager. In fact this measure shows the risk premium that manager generate over the risk premium that is expected using Capital asset pricing model. [5] Rewriting the equation of CAPM α is expressed following:

$$\alpha = E(R_p) - [\beta_p E(R_M) + (1 - \beta_p)R_f], \quad (4)$$

where β_p – beta of portfolio.

If α is positive and significantly different from zero then portfolio had superior performance. Positive α indicates that portfolio manager's decisions add value to the fund. If α is negative and significantly different from zero then portfolio had bad performance and manager's decisions has decreased the value of the portfolio. In other words, portfolio performed worse than market did.

The process of security selection (evaluated with Jensen α) is based on forecasts that are made after microeconomic analysis of the securities and companies. Forecasting the market trends has a macroeconomical matter. The ability to adjust portfolio successfully using macroeconomical forecasts is called market timing ability. For estimating market timing skills have been worked out several models. Two of these models are Treynor and Mazuy model (1966) as well as Henriksson and Merton model (1981).

Treynor and Mazuy model

Both scientists have offered a model in which it is expected that portfolio manager can forecast both direction of market's movements (positive or negative) and a scale of such movements [6]. Model is given as follows:

$$R_p - R_f = \alpha + \beta(R_M - R_f) + \tau_{TM}(R_M - R_f)^2, \quad (5)$$

where τ_{TM} is a coefficient that estimates timing ability. This model of portfolio performance analysis states that manager has private information about the direction and scale of changes of market return. Using this information manager adjust the portfolio.

Henriksson- Merton model

In 1981 Henriksson and Merton offered their model which states that manager has information only about the direction of market changes [7]. Model is following:

$$R_p - R_f = \alpha + \beta(R_M - R_f) + \tau_{HM} \cdot I\{R_M > R_f\} \cdot (R_M - R_f), \quad (6)$$

where I is a dummy variable. It is equal to one if market return is higher than risk free rate. Dummy variable equals to zero if market return is lower than risk free rate. τ_{HM} estimates timing ability.

Obtained time series were used to evaluate CAPM, Treynor-Mazuy and Henriksson – Merton models that are described above. Each model allowed to estimate α and β coefficients for all funds. Two last models give possibility to estimates manager's timing ability using τ



coefficient. The regression models were estimated using OLS (ordinary least squares) approach. The unit root test was run and evidenced that time series are stationary. All regressions were adjusted with *Newey-West* corrected standard errors to avoid potential problems of heteroscedasticity and serial correlation (HAC).

The Results of Analysis

Descriptive statistics on performance of Baltic equity funds are given in Table 1.

Average daily returns of equity funds for analysed period vary from 0.0485% to 0.2035%. Daily standard deviations varied from 0.69% to 2.31% that evidences the high level of risk of Baltic funds.

Average daily returns of OMXBBGI and MSCI EMEE were 0.155% and 0.102% respectively. The risk level expressed by standard deviation is much higher for MSCI EMEE (2.66%) than for OMXBBGI (1.36%). As stated in the Table 1 twelve equity funds reached higher average returns than MSCI EMEE and returns of seven funds exceed returns of both benchmark portfolios. Five of the seven funds were managed by Estonian managers and two funds were managed by Latvian managers.

As shown in the table Sharpe ratios of both benchmark portfolios differ remarkably. For OMXBBGI Sharpe ratio is 0.105, but for MSCI EMEE it is 0.034. In fact, this means that investors in Baltic market got higher risk premium than in conditional Eastern European market (that is described by MSCI EMEE). As a result the number of funds which Sharpe ratios surpassed the ratio of each benchmark portfolio varies a lot. Sharpe ratio of OMXBBGI was exceeded by only four funds, but just three funds showed ratios lower than MSCI EMEE. The same conclusions can be made using M-square approach (Figure 3).

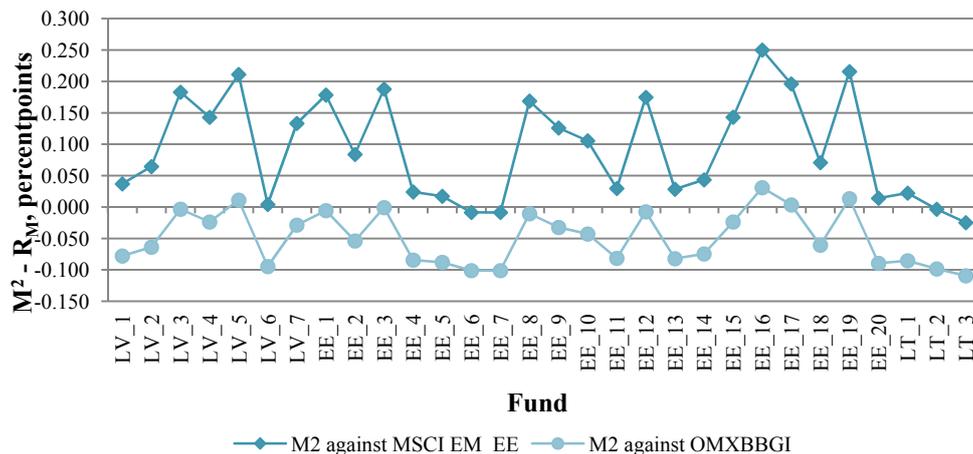


Figure 3. The performance of Baltic equity funds using M-square approach.

Source: Author's calculations



Table 1

Performance of Baltic equity funds 2009-2010

Country	Fund/Index	Code	Average return (daily), %	Standard deviation, %	Average return (annual), %	Standard deviation (annual), %	Sharpe ratio
	OMX Benchmark Index		0.1546	1.358	38.962	21.551	0.105
	EM EASTERN EUROPE Standard		0.1020	2.659	25.713	42.204	0.034
Latvia	AB.LV Global EUR ETF Fund	LV_1	0.0604	1.014	15.209	16.102	0.048
	AB.LV Global USD ETF Fund	LV_2	0.0778	1.134	19.607	17.996	0.058
	Baltic Index fund	LV_3	0.1257	1.108	31.678	17.595	0.103
	Citadele Caspian Sea Equity fund	LV_4	0.1335	1.388	33.647	22.03	0.088
	Citadele Russian Equity Fund	LV_5	0.2035	1.690	51.281	26.834	0.113
	Citadele Ukrainian Equity Fund	LV_6	0.0939	2.312	23.666	36.703	0.035
	GE Money Eastern Europe Equity fund	LV_7	0.1637	1.807	41.249	28.682	0.084
Estonia	Kawe Investment Fund A-unit	EE_1	0.1026	0.898	25.843	14.252	0.101
	Kawe Investment Fund D-unit	EE_2	0.0951	1.271	23.957	20.177	0.065
	Kawe Investment Fund E-unit	EE_3	0.1021	0.863	25.735	13.702	0.105
	LHV Emerging Europe Alpha Fond A	EE_4	0.071	1.375	17.894	21.831	0.043
	LHV Emerging Europe Alpha Fund B	EE_5	0.0701	1.442	17.665	22.884	0.040
	LHV Persian Gulf Fund A	EE_6	0.0485	1.194	12.222	18.951	0.031
	LHV Persian Gulf Fund B	EE_7	0.0485	1.194	12.222	18.952	0.031
	LHV World Equities Fund A	EE_8	0.0673	0.691	16.963	10.968	0.080
	LHV World Equities Fund B	EE_9	0.0681	0.691	17.151	10.976	0.081
	SEB Generic Pharma Fund	EE_10	0.0855	1	21.537	15.878	0.074
	SEB Growth Fund	EE_11	0.1021	2.002	25.736	31.779	0.045
	Swedbank Central Asia Equity Fund	EE_12	0.1724	1.611	43.454	25.577	0.100
	Swedbank Eastern Europe Equity Fund E-unit	EE_13	0.0871	1.686	21.951	26.762	0.045
	Swedbank Eastern Europe Real Estate Equity Fund	EE_14	0.0885	1.525	22.303	24.211	0.050
	Swedbank Russian Equity Fund E-unit	EE_15	0.1985	2.126	50.011	33.754	0.088
	Trigon Active Alpha Fund	EE_16	0.1956	1.436	49.279	22.788	0.128
	Trigon Agri-Sector Fund A	EE_17	0.1581	1.358	39.853	21.562	0.108
	Trigon Balkan Fund A	EE_18	0.0887	1.268	22.344	20.136	0.061
	Trigon Emerging Financials Fund A	EE_19	0.1642	1.324	41.387	21.025	0.115
	Trigon New Europe Small Cap Fund A	EE_20	0.0627	1.296	15.8	20.581	0.039
Lithuania	OMX Baltic Benchmark Fund	LT_1	0.0667	1.296	16.801	20.581	0.042
	Ukio bankas Rational Investment Fund	LT_2	0.0729	1.87	18.371	29.686	0.033
	ZPR US Small Cap Fund	LT_3	0.0650	2.16	16.384	34.285	0.025

Source: Author's calculations

There were three equity funds which risk adjusted performance (M-square) exceeded return of OMXBBI, but a surplus varied from 0.004 – 0.03 percentage points. For the rest of



the funds M-square was up to 0.10 percentage points lower than return of OMXBBI. Quite opposite are results against MSCI EMEE as 27 of 30 funds performed better than this benchmark portfolio. The highest exceed over MSCI EMEE return was 0.25 percentage points and was achieved by *Trigon Active Alpha fund*.

The analysis of Baltic equity funds using CAPM, Treynor-Mazuy and Henriksson-Merton models allowed evaluating such characteristics of fund managers as stock selection skills and timing ability. The results of analysis are shown in Tables 2 and 3.

Table 2

Performance evaluation of Baltic equity funds against OMXBBI

Code	CAPM		Treynor-Mazuy model			Henriksson – Merton model		
	α (%)	β	α (%)	β	τ_{TM}	α (%)	β	τ_{HM}
1	2	3	4	5	6	7	8	9
LV_1	0.0189	0.228	0.0059	0.219	0.778	0.0309	0.235	-0.00024
LV_2	0.0411	0.206	0.0451	0.209	-0.238	0.0339	0.202	0.00014
LV_3	0.1003 **	0.130	0.0267	0.075	4.393 **	0.2168	0.190	-0.00232
LV_4	0.0835	0.315	0.1265 *	0.347	-2.572 **	-0.0259	0.259	0.00217
LV_5	0.1359	0.461	0.1827 *	0.496	-2.799	0.0822	0.434	0.00107
LV_6	0.0872	0.144	0.1585	0.197	-4.258*	0.1994	0.202	-0.00223
LV_7	0.1150	0.350	0.1690	0.390	-3.225	-0.0127	0.284	0.00254
EE_1	0.0267	0.448	-0.0115	0.420	2.277	0.1008	0.486	-0.00147
EE_2	0.0195	0.472	0.0368	0.485	-1.031	-0.0007	0.462	0.00040
EE_3	0.0577	0.080	0.0368	0.224	1.248	0.1658 ***	0.295	-0.00215**
EE_4	-0.0068	0.497	0.0069	0.507	-0.817	0.0595	0.531	-0.00132
EE_5	-0.0048	0.484	0.0060	0.492	-0.646	0.0968	0.536	-0.00202
EE_6	0.0125	0.206	0.0324	0.221	-1.192	0.0447	0.223	-0.00064
EE_7	0.0125	0.206	0.0325	0.221	-1.193	0.0446	0.223	-0.00064
EE_8	0.0376	0.211	0.0540	0.223	-0.980	0.0490	0.217	-0.00023
EE_9	0.0265	0.211	0.0430	0.223	-0.984	0.0393	0.218	-0.00025
EE_10	0.0397	0.256	0.0712	0.279	-1.880	0.0730	0.273	-0.00066
EE_11	0.0080	0.674	0.0113	0.677	-0.198	0.0430	0.692	-0.00070
EE_12	0.1123	0.403	0.1402*	0.424	-1.670	0.0336	0.363	0.00156
EE_13	0.0065	0.546	0.0417	0.572	-2.100	0.0656	0.577	-0.00117
EE_14	0.0141	0.488	0.0141	0.488	0.000	0.1101	0.538	-0.00191
EE_15	0.1307	0.516	0.1288	0.515	0.109	0.1101	0.538	-0.00191
EE_16	0.1430**	0.336	0.1559**	0.346	-0.769	0.2402**	0.386	-0.00193
EE_17	0.0952	0.397	0.1535**	0.440	-3.482**	0.1247	0.413	-0.00059
EE_18	0.0334	0.339	0.0592	0.358	-1.538	0.0854	0.365	-0.00103
EE_19	0.1152*	0.303	0.1508**	0.329	-2.129	0.1395	0.315	-0.00048
EE_20	-0.0098	0.455	-0.0120	0.453	0.133	0.1246	0.524	-0.00267*
LT_1	-0.0058	0.455	-0.0080	0.453	0.133	0.1286	0.524	-0.00267*
LT_2	0.0296	0.322	0.0750	0.356	-2.709	-0.0339	0.290	0.00126
LT_3	0.0373	0.258	0.0744	0.285	-2.214	0.1849	0.334	-0.00293

Notes: α , τ_{TM} un τ_{HM} coefficients are marked as follows: * – statistically significant with probability of 90%, ** – of 95%; *** – of 99%. β coefficients are statistically significant with probability 99%, except LV_6 fund.

Source: Author's calculations



The sensitivity of the fund's returns to the OMXBBGI, measured with β , in general between 0.08 and 0.69, indicates that sensitivity is low. It was observed that estimated α was negative for 4 out of 30 funds (in CAPM). However, only 3 of 26 positive α coefficients were statistically significant. As a result it could be concluded that there is little evidence that funds performs worse than benchmark portfolio. There were 2 out of 30 positive τ_{TM} coefficients in TM model and 7 positive τ_{HM} coefficients in HM model. There was one statistically significant τ_{TM} coefficient in TM model. In overall it can be stated that Baltic equity fund managers do not possess security market timing ability.

Table 3

Performance evaluation of Baltic equity funds against MSCI EEM

Code	CAPM		Treynor-Mazuy model			Henriksson – Merton model		
	α (%)	β	α (%)	β	τ_{TM}	α (%)	β	τ_{HM}
1	2	3	4	5	6	7	8	9
LV_1	0.0212	0.259	0.0170	0.259	0.05848	-0.0420	0.243	0.00121
LV_2	0.0393	0.263	0.0334	0.263	0.08303	0.0214	0.258	0.00034
LV_3	0.1143 **	0.045	0.0921	0.046	0.31233	0.1684	0.059	-0.00103
LV_4	0.1113 *	0.159	0.0838	0.160	0.38878	0.1724	0.174	-0.00117
LV_5	0.1406 ***	0.520	0.1453 ***	0.520	-0.06681	0.2596***	0.551	-0.00227*
LV_6	0.1155	-0.051	0.1117	-0.051	0.05265	-0.0071	0.056	0.00234
LV_7	0.1143 **	0.429	0.1629 ***	0.427	-0.68471	0.3721***	0.495	-0.00492***
EE_1	0.0698	0.198	0.0659 *	0.198	0.05445	0.1874***	0.228	-0.00224*
EE_2	0.0530	0.305	0.0926 **	0.304	-0.55763***	0.1094	0.319	-0.00108
EE_3	0.0761 **	0.143	0.0972 ***	0.142	-0.29752***	0.2396***	0.185	-0.00312***
EE_4	0.0171	0.411	0.078 *	0.409	-0.85819	0.0837	0.428	-0.00127
EE_5	0.0184	0.400	0.0861 *	0.398	-0.95407	0.1071	0.423	-0.00169
EE_6	0.0309	0.103	0.0405	0.102	-0.13498	0.0656	0.112	-0.00066
EE_7	0.0309	0.103	0.0405	0.102	-0.13520	0.0656	0.112	-0.00066
EE_8	0.0464 **	0.186	0.0411 *	0.186	0.07387	0.0567	0.188	-0.00020
EE_9	0.0353 *	0.186	0.0302	0.186	0.07205	0.0441	0.188	-0.00017
EE_10	0.0507	0.223	0.0768 **	0.222	-0.36858	0.089	0.232	-0.00073
EE_11	0.0243	0.686	0.0736 **	0.684	-0.69465	-0.016	0.675	0.00077
EE_12	0.1284 **	0.360	0.1399 **	0.359	-0.16205	0.0312	0.335	0.00186
EE_13	0.0299	0.475	0.1134	0.472	-1.17694	-0.0625	0.451	0.00176
EE_14	0.0375	0.405	0.0904	0.403	-0.74666	0.0369	0.405	0.00001
EE_15	0.1257 **	0.664	0.0833	0.666	0.59782	0.0839	0.654	0.00080
EE_16	0.1572 ***	0.293	0.2147***	0.292	-0.81014	0.1649	0.295	-0.00015
EE_17	0.1239 **	0.252	0.1572**	0.251	-0.46993	0.1998 *	0.271	-0.00145
EE_18	0.0481	0.293	0.1232**	0.291	-1.05862	-0.0921	0.257	0.00268 **
EE_19	0.1241 **	0.295	0.1570 ***	0.294	-0.46382	0.0933	0.287	0.00059
EE_20	0.0168	0.338	0.074 3*	0.337	-0.81042	-0.0261	0.327	0.00082
LT_1	0.0208	0.338	0.0783	0.337	-0.81042	-0.0221	0.327	0.00082
LT_2	0.024	0.434	0.0213	0.434	0.03750	-0.0614	0.413	0.00163
LT_3	0.0302	0.368	0.1087	0.366	-1.10633	0.1991	0.412	-0.00322

Notes: * – statistically significant with probability of 90%, ** – of 95%; *** – of 99%

Source: Author's calculations



The conclusions regarding fund performance using MSCI EMEE as a benchmark portfolio are similar to those obtained using OMXBBGI. The sensitivity of fund's returns to the MSCI EMEE is low. The large number of positive α coefficients states that funds do not perform worse than benchmark portfolio. There is no evidence for security market timing ability.

The Methodology of Creating Baltic Equity Funds Rating

Organisations that rate investment funds use different methodologies. Some ratings are based both on quantitative measures and qualitative characteristics. The rating worked out by the author in this paper is based on past performance of the funds. The creation of Baltic equity funds rating is a process that of several stages. The process starts with selection of measures that are used in the rating (Figure 3).

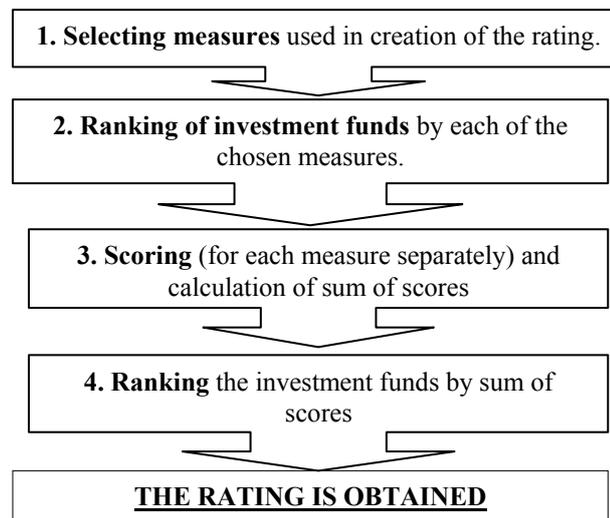


Figure 4. Ranking of Baltic equity funds

Source: Made by author

Stage 1 – selection of measures for the rating. For compiling the rating there were used following measures:

- **average return** – despite its imperfection average return is the indicator that is often used by less experienced investors for fund selection;
- **M-square** – risk adjusted performance measures in all modification are widely used as they give opportunity to compare funds with different risk levels;
- **Jensen alpha** – this measure is chosen to asses fund manager's stock selection skills.

Stages 2 and 3. Ranking of funds by each of the measures and scoring. Investment funds were ranked in decreasing order by each of indicator used for composing of the rating.



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There was given one point to the investment fund with highest value of the corresponding measure and thirty points to the fund of lowest value. Total sum of points was calculated.

Stage 4. The funds were ranked by sum of points in decreasing order.. The ranked series represent rating of funds. It means that the smaller is a sum of points the highest position in the rating gets a fund.

Table 4

The rating of Baltic equity funds

Code	Fund	Average return	M ² (EM EE)	M ² (OMX)	α (OMX)	α (EM EE)	Total points	Position in rating
EE_16	Trigon Active Alpha Fund	3	1	1	1	1	7	1
LV_5	Citadele Russian Equity Fund	1	3	3	2	2	11	2
EE_19	Trigon Emerging Financials Fund	5	2	2	4	5	18	3
EE_12	Swedbank Central Asia Equity Fund	4	8	8	6	3	29	4
EE_15	Swedbank Russian Equity Fund E-unit	2	10	10	3	4	29	5
EE_17	Trigon Agri-Sector Fund	7	4	4	8	6	29	6
LV_3	Baltic Index fund	9	6	6	7	8	36	7
LV_7	GE Money Eastern Europe Equity fund	6	12	12	5	9	44	8
EE_3	Kawe Investment Fund E-unit	12	5	5	11	11	44	9
LV_4	Citadele Caspian Sea Equity fund	8	11	11	10	10	50	10
EE_1	Kawe Investment Fund A-unit	10	7	7	18	12	54	11
EE_8	LHV World Equities Fund A	24	9	9	14	16	72	12
EE_10	SEB Generic Pharma Fund	18	14	14	13	14	73	13
EE_2	Kawe Investment Fund D-unit	13	15	15	20	13	76	14
EE_18	Trigon Balkan Fund A	15	16	16	16	15	78	15
LV_2	AB.LV Global USD ETF Fund	19	17	17	12	17	82	16
LV_6	Citadele Ukrainian Equity Fund	14	26	26	9	7	82	17
EE_9	LHV World Equities Fund B	23	13	13	19	19	87	18
EE_14	Swedbank Eastern Europe Real Estate Equity Fund	16	18	18	22	18	92	19
EE_11	SEB Growth Fund	11	20	20	25	24	100	20
EE_13	Swedbank Eastern Europe Equity Fund E-unit	17	21	21	26	23	108	21
LV_1	AB.LV Global EUR ETF Fund	28	19	19	21	26	113	22
LT_2	Ukio bankas Rational Investment Fund	20	27	27	17	25	116	23
EE_4	LHV Emerging Europe Alpha Fond A	21	22	22	29	29	123	24
LT_3	ZPR US Small Cap Fund	26	30	30	15	22	123	25
EE_5	LHV Emerging Europe Alpha Fund B	22	24	24	27	28	125	26
LT_1	OMX Baltic Benchmark Fund	25	23	23	28	27	126	27
EE_6	LHV Persian Gulf Fund A	29	28	28	23	20	128	28
EE_7	LHV Persian Gulf Fund B	30	29	29	24	21	133	29
EE_20	Trigon New Europe Small Cap Fund A	27	25	25	30	30	137	30

Source: Made by author

First six positions in the rating above were taken by five Estonian and one Latvian equity fund. Domination of Estonian funds is not surprise because 20 of 30 equity funds analysed in this paper were managed by Estonian managers. The study of rating has disclosed some



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interesting facts about six best funds. Firstly, in general (with the exception of the both *Swedbank* funds) top rated funds have best results in all performance measures-raw returns, M-square and stock selection skills. Secondly, the most important destination of geographical asset allocation for four funds (*Trigon Active Alpha Fund*, *Citadele Russian Equity Fund*, *Swedbank Russian Equity Fund E-unit*, *Trigon Emerging Financials Fund*) was Russia. Thirdly, the managers of six best funds were the biggest market players in their home markets.

Conclusions

In this paper there were utilized different methods and models for evaluation of 30 Baltic equity funds for the time covering two years period (2009-2010). The results are summarized below:

1. Average daily returns of 12 equity funds exceeded return of MSCI Emerging Markets Eastern Europe Standard Index and returns of 7 funds were higher than average return of MSCI Emerging Markets Eastern Europe Standard Index and OMXBBGI
2. Risk adjusted performance measures (Sharpe ratio and M-square) indicated that majority of Baltic equity funds performed better than MSCI Emerging Markets Eastern Europe Standard Index but worse than OMXBBGI.
3. Results of CAPM showed that in general Baltic equity do not perform worse than benchmark portfolios. Three funds outperformed OMXBBGI and twelve outperformed MSCI Emerging Markets Eastern Europe Standard Index with at least 90% statistical probability.
4. The market timing ability of the fund managers is negative or non-existent.
5. The rating created in this paper is based on the past performance outlined six equity funds that performed the best in analysed period.

The rating which was worked out in this paper makes it possible to identify investment funds that performed best of all during research period. The rating could be a useful information tool for investors to make their investment decisions.

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RISK-MANAGEMENT IN FINANCING RESIDENTIAL REAL ESTATES

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Introduction

During the last and still ongoing financial crisis also known as Subprime Mortgage Crisis, triggered by a dramatic rise in mortgage delinquencies in the USA, more than 4 million US families lost their homes in cause of foreclosures. Another 4.5 million households are still (end of 2010) in a foreclosure process [1, p. xv]. The USA had nearly 2.8 million foreclosures in 2009 and estimated more than 3 million in 2010 [2]. Millions of people lost a lot of money at funds mostly with high speculative products but even with their pension funds. Huge former triple-A-rated banks as Lehmann Brothers had to declare their bankruptcy. Other banks got billions of taxpayers Dollars/Euros to survive as Citigroup or the two biggest U.S. mortgage banks Fannie Mae and Freddie Mac or they were nationalized as the German Hypo Real Estate Bank. Island and Greece got massive financial problems, which are leading them nearly to a governmental bankruptcy. Spain, Portugal and even big G8 countries as USA and Germany got into big troubles with their financial systems. All these things happened because U.S. credit grantors and credit users did not realized their real risks in financing real estates with subprime loans. In addition the securitization of the credit risks and the worldwide allocation of the products made this crunch, which was created in the USA, to an international crisis. In general, financial systems are characterized by ups and downs. The financial market is a permanent cyclical process. It is very important to take an early perception of signs of an economic slump, to avoid such giant and worldwide impacts on the economy of so many countries.

The aim of the paper is to reveal that poor risk management in the policies of lending money and of securitization of mortgages led doubtless to this disastrous situation. A verification for that assumption is e.g. that the Financial Crisis Inquiry Commission of the US Congress used inside "The Financial Crisis Inquiry Report" from January 2011 the word "RISK" for 1093 times [1]. The very bad risk-management is also named as the cause of the crisis by many other authors like Shiller in "The Subprime Solution" [3, p. 24], Tett in "Fools Gold" [4, p. 296] or Barth in "The Rise and Fall of the US Mortgage and Credit Markets" [5, p. 184]. Inside the paper there is a brief explanation of kinds, effects and stakeholders of risks in financing. Furthermore there is written how risk-management should work and how it worked,



which general risks of financing real estates exist for lenders, borrowers and third parties and which activities are able to avoid or to minimize these risks. The main aspect for stakeholders is to get the knowledge to identify and evaluate potential risks in order to manage them.

Risk-Definition

The definition of the word “risk” can be very extensive because there are so many different kinds of risks. In the view of the topic “financing residential real estates” it is helpful to use the New Oxford American Dictionary, which defines “risk” as “*a situation involving exposure to danger*” or in economic terms “*the possibility of financial loss*”. The notion of “risk” is coming from Italian noun “risco” (danger) or Italian verb “rischiare” (run into danger) [6]. Thus, the mean association to this word is negative. Risk-aversion is a normal behavior of anxiety in the human nature. Risk-management can handle these anxieties and can avoid risks. (See chapter: Risk-Management). Mostly there will be seen only the danger of losses without the chance and the opportunity of making profits, compare Maier [7, p. 3]. Jorion defines risk as “*the volatility of unexpected outcomes*” [8, p. 3]. Volatility is the negative and positive deviation from the statistical average. People and institutions can choose, how much risk they want to accept. There is common sense of the ratio between risk and return, as higher the expectations of returns as higher the risks that have to be accepted. The core investments (as e.g. bonds) have a low risk and a low return too. They are income oriented. That means there will be a low but fluently return on the investment. The opposite are opportunistic investments (as e.g. private equity funds or other high speculative real estate investments). These have a high risk of loosing the invested amount but also the possibility of a high return. In this case the tendency of return is normally not fluently. Often there is only a single but a very high return. This investment is total return oriented. Hui, Wang and Zheng use the term of “*risk appetite*” to describe the “*investors’ tolerance for financial risks and willingness to bear uncertainty*” [9, p. 421]. Risk is described by the uncertainty of future events.

Types of Risks

As much possibilities of definitions of the word “risk” are existent as much types of risks are existent. To explain the kinds of risks is also dependent on the stakeholder of the risks. In the field of financing real estates the two main stakeholders are the lenders and the borrowers of the money. **Lenders** as corporations are concerned to two main types of risks: business and financial risks [8, p. 3]. **Business risks** are connected to activities of the corporation that means which products it makes or sells, which technologies it uses in which markets it operates and which risks it wants to carry for the main aim to create maximum added value for the share- and stakeholders. Strategic risks as part of business risks are connected to fundamental changes in the economical or political environment of the corporation e.g. the decision of Germany to stop the nuclear power production for concerned energy corporations or the break of economical connections to politically unstable regions for concerned firms. **Financial risks** can be classified into: Market risks, Credit risks, Liquidity risks and Operational risks. **Market risks** are those, which are linked to changes of the prizes



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of a category of products at the markets, in the case of real estate financing – the prizes of the real estates. The volatility of prizes is depending from the supply and demand of a product. If there are too much products/houses at the market the prizes will decrease and vice versa, as happened during the subprime mortgage crisis of 2007/2008. Financial institutions use several variables of the markets e.g. prizes of shares, interest rates, exchange rates and so on to control the development at their business.

Credit risks are highly connected to the default risk of the borrowers in case of being unwilling or unable to repay a loan. Credit risk leads directly to losses for the financial institution because of replacing the expected cash flows from repayment. This kind of risks was the most important of all risks as trigger of the financial crisis. **Operational risks** pertain to firms by internal or external causes of interrupting the “normal” business operations. Internal causes can be failures of management or of technology systems, fraud (e.g. unapproved trading) or other human errors in trading, inadequately control mechanisms and many other organizational risks. External causes can be fraud as well by externals, natural catastrophes and others. The Basel Committee on Bank Supervision (BCBS) defined operational risk at the Basel II Accord as “*the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events ... includes legal risk, but excludes strategic and reputational risk*” [10, p. 144]. Regulatory and Legal risks are belonging to the external part of the operational risks and they are those, which are set e.g. by political decisions, changes of regulations or laws e.g. of accounting standards, tax codes. Legal risks are also exposures to fines and penalties, resulting from judicial or governmental regulation authorities in case of breach of financial restrictions e.g. manipulation or insider trading. **Liquidity risks** are connected to the possibility of having enough liquid money for all liabilities and the daily business both in private or commercial sector. If a bank doesn't have enough liquidity the core business is in big trouble so as seen in the case of the British Northern Rock bank in the September 2007. The assets of the bank were very solid and of a good quality but as the news told that investors wont give cash money to mortgage lending banks the effect was a bank run at Northern Rock, which led to a complete illiquidity and to the nationalization of this bank in 2008. **Borrowers** of the money for real estates are concerned nearly to the same kinds of financial risks as liquidity risk, default risk and credit risks, with little modifications. Their liquidity and default risk is reliant on their personnel situation of earnings and expenses. The credit risk of the debtors is also dependent on the kind of mortgage contract that they have. Fixed Rate Mortgages (FRM's) or Adjusted Rate Mortgages (ARM's) is possible. The FRM have the safety of a fix interest rate for the duration of the contract mostly long term 15 to 30 years. The interest rate of ARM's can and will change during the time of the contract. Often there is only a short time fix and a long time variable interest rate e.g. 2/28 means 2 years fix and 28 years of variable rates. The changing of interest rates can be an advantage or a disadvantage depending on the direction of change. The number of ARM's had a steep increase at the US market between 2001 and 2004 from 12% to 34% see [5, p. 33]. The 2008 default rate of subprime ARM's was 33.4% vs. 3.0% of prime FRM's see [5, p. 91]. Connected to the theme of the dissertation project the main risks that are concerned to financing real estates are at least always the financial risks both for credit lenders as for credit borrowers.



Categorization of Risks

Maier divided risks at the real estate sector into the following categories: one or two-dimensional risks, systematical and non-systematical risks, quantifiable and non-quantifiable risks, existential and financial risks, see [7, p. 10 et seqq.]. According to that definition: **One-dimensional risks** are typically connected to dangers for the business as natural or other catastrophes (as e.g. weather events or the 9/11-event) or the default of credits. Maier wrote that only arbitrage (the simultaneous selling and buying of securities, currency or commodities at different markets / countries to use the advantage of different prizes / courses for the same thing) is a possibility of a one-dimensional risk with the chance of positive yield. **Two-dimensional risks** can have a chance or a danger such as the most kinds of market risks (as e.g. change of interest rates, of exchange rates, of currency rates or of the value of the assets / house prizes). Whether it is a chance or a danger is dependent on the view of the stakeholder. An increase of the interest rate for an adjusted rate mortgage (ARM) is bad for the borrower and well for the lender of the credit. **Systematical risks** are macro economical risks as cyclical changes in markets e.g. change of interest rates, change of exchange rates or changes of political or legal conditions. The worst case of systematical risks is the collapse or dysfunction of financial markets through multiple defaults or a huge rate of illiquidity, nearly experienced at the financial crisis of 2008, compare Duffie and Singleton [11, p. 5]. **Non-systematical risks** are based on micro economical facts as changes of a single asset, a single credit contract or changes of the solvency of a single credit borrower. These non-systematical risks are also titled as idiosyncratically or specifically in the view of a single corporation or contract partner [12, p. 274]. **Quantifiable risks** are those, with a great number of exposures. They are measurable and evaluable with statistical calculations and they can be documented as historical data. **Non-quantifiable risks** are those, which happen only once or a few times, which cannot be evaluated statistically such as “Black Swans”. The black swan theory developed 2007 by Nassim Nicholas Taleb describes unpredictable situations with massive impact on the economy. There was a big discussion if the existence and the burst of the subprime mortgage bubble was a “Black Swan” event or not, compare [13, p. 131]. But there were a lot marks to percept the existence of this U.S. real estate bubble, not at least by the wood of “For Sale” signs. **Existential risks** are operational uncertainties of a single real estate e.g. the risk of devastation of the house through fire or weather conditions, changes in prizes or the risk of investment, operation and maintenance or conversion of this real estate. The operational risks of a corporation or financial institution are existential risks in this categorization. **Financial risks** are those, which are not connected with a special product, contract or a special real estate. The financial risks were explained before at the chapter types of risks. The categories of risks are equal to the stakeholders. Both groups of stakeholders can have one- or two-dimensional risks, existential and financial risks but generally on other levels, e.g. the existential and financial risks are hitting borrowers at another financial level than lenders but mostly with the threat of personnel illiquidity and the of loss of property. The lenders are more concerned to systematical risks. Borrowers are more affected to non-systematical risks. Quantifiable and non-quantifiable risks are more relevant to debtors than to creditors. If a great part of borrowers produces the same kind of valuable risks e.g. default risk with ARM’s so the creation of quantifiable risk is given.



Stakeholders and their Risks

In the “traditional” process of financing real estates **without securitization** of the mortgages there are two main groups of stakeholders. These are the originator bank institutions with their shareholders as credit lenders and the credit borrowers. The main risks in lending money for **originator banks** are: Default risk of borrowers, Liquidity risk, Market risks. Financing real estates is long term orientated and the possibility of change of social, political and legal circumstances can lead to a basic risk, which is marked by a high indefinable volatility. The risk of low fungibility of the asset class real estates is visible if a mortgage defaults. The bank is than owner of the real estate. The possibility to make liquidity from it depends on the market demands. If there are to many defaults the market demands are falling thus the liquidity risk will rise.

The main risks in having a mortgage for **borrowers** are: Financial and Market risks. Internal financial risks are personnel risks as inability to repay for the mortgage because of unemployment or other personnel circumstances. External financial risks happen with increasing interest rates by lenders at ARM’s or in case of follow-up financing. Market risks can occur if falling prizes of real estates lead to a higher value of the mortgage than the value (prize) of the house in case of sale. This is a direct financial loss for the borrower. A lot of American mortgage holders, that were having this problem, used their right to give the real estate back to the bank without further financial duties. Thus, it became a problem of the bank.

In the case **with securitization** of mortgages there is a third part involved – the investment section of banks, those that are purchasing the mortgages from the originator banks. In this process the risks are relocating from originator to the **investment banks**. The investment bank bought the full risks from the originator bank in unawareness of the market value of the real estates or the real financial abilities of the borrowers. What they got is the amount of the mortgages and the scores of the borrowers, but there is no control if this score is real. As the originator bank knew that they would sell the mortgages, their interest of managing default risks was very low. This behavior is also called “Moral Hazard”, which means that the behavior sometimes can change if a risk is insured. The investment banks bundled the mortgages in new products mostly CDO’s (Credit Default Obligations) and sold these to hedge funds or other investors with high expectations of returns but connected with high risks too.

The risks for borrowers stay the same with a little difference; the new mortgage creditor will define the interest rates at ARM’s. By the effects of the **huge amount of foreclosures** and the beginning crisis there was concerned a fourth group by financing real estates - the group of **communities, governments and politicians**. As the financial risks of defaults couldn’t handled by the banks themselves there was the danger and the reality of bankruptcy of huge financial institutions as seen at Bear Stearns and Lehman Brothers. These risks seemed to be developing to a systemic risk with the worldwide danger of a massive collapse at the financial markets with a so-called “*Domino Style*” effect [11, p. 5]. Now the governments had the problem of regulating that risk by holding the markets ongoing, with huge financial securities, e.g. by nationalization of banks as seen at the German Hypo Real Estate bank or in 2008 at the USA by “pumping” 700\$ billions of tax-payers money into the system with the Troubled Asset Relief Program (TARP) to buy troubled assets from banks, see [4, p. 280]. There is no doubt this was the only possibility for states to save the markets to avoid a situation like the Great Depression.



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In 1936 John Maynard Keynes wrote about this behavior of governments to support the economy in times of crises, see [14, p. 320]. During a crisis the state should increase its investments and the state should save money during boom-times. Another problem to governmental organizations or communities is to handle all these people, which were threatened by foreclosures or other financial problems. They were coming to their community asking for a shelter and some money to live. Cities as Cleveland, Ohio had more than 10.000 foreclosures until 2009. “*The city estimates that 10,000 houses, or 1 in 13, are vacant. The county treasurer says it’s more likely 15,000.*” [15]. Sometimes there are a quarter of the houses in a street vacant. That leads to further problems e.g. complications with the infrastructure as e.g. the problem that wastewater tubes are not used by the way as the dimensions need or the growing problem with vandalism at the empty houses. It was created a new artificial term for that, O.V.V. what means Open, Vacant and Vandalized.

Risk-Management

The aim of risk-management should be to organize a situation for borrowers and lenders in which they are comfortable with their risks of financing. The main tasks of risk-management are the diagnosis of the recent and future risks and the decision of which risks are acceptable or which risks have to be managed by the organization [12, p. 2]. Risk-management is no longer a voluntary practice for enterprises since the Accords of the Basel Committee on Banking Supervision (BCBS) are fixed in governmental laws or regulations such as the International Financial Reporting Standards (IFRS) and not at least at the codes of Corporate Governance or the 2002 Sarbanes-Oxley-Act at the USA. The Basel II Accord requires at the side of the internationally active banks a minimum capital for managing worst-case situations. This required capital is the sum of the credit risk, operational risk and market risk related amount [10, p. 5].

Irrespective the legal determinations risk management is a necessary tool for corporations to react quickly on the permanently changing market conditions as e.g. share-values, interest rates or exchange rates. Risk-management is a row of processes (shown at the Figure 1), which contains risk-identification, risk-measurement and analysis, risk-handling and risk-controlling. These processes are running dynamically. At the beginning of the risk-management process the financial corporation has to identify, which types of risks are close to it. The next step is to measure and analyze the outcomes of the risk. At the end of these two stages the enterprise knows its risks and the financial value of the vulnerability. The next process is to decide how to handle the risks. It has to be made a strategy, which instruments should treat the risks. Depending on the risk aversion of the corporation there are different methods to minimize or to avoid the risks, but there will not be a complete risk avoidance without the minimization or elimination of returns too, see [7, p. 3]. Afterwards the kind of risk handling is defined the realization of the strategy has to be organized, done and controlled. Risk management is basically a necessary tool for moneylenders but some of the following processes are useful for borrowers, too.



Risk-Identification Types of Risks	Risk-Measurement Risk-Analysis Business Ratios	Risk-Handling Instruments	Risk-Controlling Organization
<ul style="list-style-type: none"> • Credit Risks • Market Risks • Operational Risks • Liquidity Risks • Legal Risks 	<ul style="list-style-type: none"> • Expected Loss • Worst Loss • Volatility • Value at Risk • RaRoC 	<ul style="list-style-type: none"> • Prevention • Limitation • Compensation • Diversification 	<ul style="list-style-type: none"> • Planning • Control • PDCA • Information

Figure 1. Process of Risk-Management

Source: own in adaption to Wolke, [16, p. 4]

Risk-Identification

The task of the risk identification is to allocate the types of risks and their dangers or chances for the enterprise. In the case of financial institutions that are lending money and giving mortgages for real estates the main types of risks are as mentioned before market, financial especially credit risks and operational risks. The main risk and the **trigger of the financial crisis from 2008 was the credit default risk**. The extreme delinquency rate of credit borrowers with subprime loans initialized a chain reaction at the system of the second mortgage market, where the mortgages were securitized and bundled into Collateralized Debt Obligations (CDO). The breakdown of this CDO-market was followed by the crash of giant financial institutions as Bear Stearns or Lehman Brothers and a led to a world wide financial crisis. CDO's are a part of the derivative market. Derivatives were originated as an instrument to shift the risk from debts (see chapter risk compensation). They have developed themselves to a much higher risk than the original risk before. CDO's have shifted the default risk from the originator banks to the investment banks, which were holding the CDO's and the risks now without the possibility to be shifted or minimized again.

Risk-Measurement

After identification of risks there follows the measurement and analysis of the risks. This process is a core process of risk-management and it is essential to further decisions in what ways the risks should be handled. Only things that are measured can be analyzed and if need be changed analog to "What gets measured gets managed (or gets done)" by Peter Drucker. Risk-measurement can be divided into quantitative and qualitative approaches. Qualitative methods are the determination of scorings or ratings. **Quantitative methods** are based on the determination of risk ratios. These are discovered by measurement of countable data of financing and using these data at stochastic equations to describe the risks. There are simple Quantitative Risk-Ratios as the Expected Loss and there is a second part of more complex risk ratios as Worst Case Loss, Unexpected Loss, Variance, Volatility or Value at Risk (VaR). Duffie and Singleton discussed the primary focus for financial institutions and warn for extreme losses as e.g. the Unexpected Losses (UL) as a significant ratio for insolvency [11, p. 13]. The main



ratio for risk measurement of firms is the Value at Risk. The Basel Accords also require that ratio for the determination of needed economical capital for the three main risks (financial, market and operational risks).

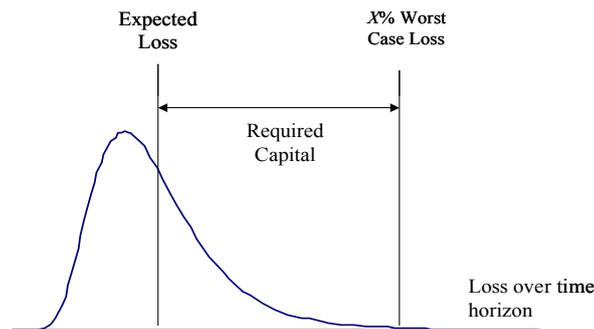


Figure 2. Distribution of Credit Losses [12, p. 280]

The EAD (Exposure at Default) is the monetary amount of outstanding debts. LGD (Loss Given Default) is the percentage of money that is lost in case of default of the credit counterparty. It is the difference 1 minus Recovery Rate (RR) what is that part of the loan, which is repaid already, see E-1. The Expected Loss (EL) of a portfolio of loans can be estimated as the weighted sum of all possible losses ($EAD_i \cdot LGD_i$), each weighted by its probability of default (PD_i). It represents the average or the mean of losses (μ), see E-2. The amount of the expected loss is predictable and will be prized into the interest rate of a loan. The Worst Case Loss (WCL) is the highest default during a time period, which will not be exceeded at a specified level of confidence, see E-3. The WCL varies with the Worst Case Default Rate (WCDR), which depends from the correlation ρ between the assets of the portfolio and their probability of default PD, see E-4. The Unexpected Loss (UL) is that amount of money that defaults outside of the confidence level of the PD. The Basel II Accord requires capital reserves for the amount of that Unexpected Loss, which is determined as the difference amount between Worst Case Loss and Expected Loss, see E-5. One cause for this is, that the value of UL is mostly much higher than the value of EL, compare with Figure 1. The next ratio that can be computed is the variance, which is defined as the weighted sum of squared deviations around the mean, see E-6. The volatility is the ratio of the standard deviation around the mean and will be calculated from the variance. The volatility as a worldwide-accepted ratio for risk measurement is a necessary instrument to evaluate shares and portfolios of credits, see E-7. The Value at Risk (VAR) is that expected maximum amount of money, which could be lost during a target time horizon (T) and with a given confidence (c), see E-8. Basel Committee requires for credit risks: Time is one year and Confidence is 99.9%. The confidence is the base for determination of factor α . As higher the confidence level as higher the VAR. The J.P. Morgan Bank New York created the VAR-Model in 1994. Value at risk is today the standard tool in risk management for banks and other financial institutions as well as for regulation authorities. A disadvantage of the VAR is that the VAR is not useful for extreme situations as i.e. the massive default of subprime loans, which do not reflect the VAR assumption of a normal distribution [8,



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p. 543]. Advantages of VAR are: easy to use, easy to understand and it can be back or stress tested. The VAR-model has to be adapted immediately for such extreme situations with the assumption of higher default rates.

Qualitative methods as Scorings of Borrowers are a worldwide used aid to evaluate the quality of the credit buyer and the quality of the property that should be financed. The financial and social capability of borrowers and their credit worthiness will be investigated as well as the value of the property by an appraisal. The determined score is necessary for decisions i.e. of the amount of a loan or the interest rate and further to categorize the quality of the credit. It is a very subjective method but a good and necessary addition to the more objective quantitative methods of evaluating risks of the credit counterpart. The qualitative measurement with scoring-models is not only an addition but also a requirement for quantitative evaluations [16, p. 66]. To get a score the financial institution has to define attributes, which count the spread of valuation by numbers and their weight for the whole system. Standard attributes are personnel credit worthiness, which depends on financial status, willingness to pay, liquid capital, job situation, kind and amount of securities, credit card and former credit stories, consumer behavior, payment patterns and many more. In the field of financing real estates further attributes are those from the real estates as macro and micro location and market factors, value of the real estate and the loan to value ratio (LTV). The sense of scoring is to reduce the credit default risks for lenders. By scoring they get information of their clients and this increases the trust to the clients or not, depending on the information. The United States and Canada use the Credit Bureau Scores also known as FICO scores, which were developed by the Fair Isaac Corporation (FICO) in 1956. The range of points is from 300 to 850. Scores below 650 are so called sub primes. Their number increases from 2001 to 2005 from 7.8 to 21.3% see [5, p. 49]. The scoring will be made at the USA by credit agencies as i.e. Equifax or TransUnion. In Germany banks get credit worthiness information of the credit borrowers by SCHUFA the German credit agency, which was founded in 1927. To do that, SCHUFA and the banks change information permanently. SCHUFA has 479 million data sets from 66.2 million people [17]. SCHUFA gives a scoring of a person, which consists of points (max. 1000), a rating class: A, B, C... (A is best) and a percentage of the probability of credit default PD (low is best). **Scorings of Lenders:** Financial institutions are subject to a scoring as well as their credit clients. These scorings are not as relevant for the borrowers of private credits as for other banks, financial institutions and insurances because if a bank wants to lend money by another bank or if a bank wants to sell loans, derivatives or other products to other financial or insurance institutions the counterparties want to have this scoring information of the bank and of the product. The score depends on the obligor's capacity to meet its financial commitment, on its business, financial and economic conditions. Scorings for financial institutions reach from AAA, AA, and A... to D (AAA is best). The evaluation and determination will be made in the USA by credit agencies: S&P (Standard and Poor's), Fitch Ratings or Moody's Investor Service.

Risk – Analysis

The risk analysis is the next step following after risk measurement. The analysis and the further decision process depend at first of the risk awareness of the financial institution. This



can reach from total risk averse to adventurous or risk seeking, compared to Wolke [16, p. 67]. The corporation should differentiate their risks into maybe three categories (critical, fundamental and unimportant) reliant on the danger of the measured risks and the risk awareness. This phase is necessary to prepare the decision of how to handle the identified and measured risks and expected revenues.

Risk – Handling

To handle the risks there are many different possibilities. This paper explains four main instruments of them: risk limitation, risk diversification, risk prevention and risk compensation.

Risk limitation is a process to avoid market risks by setting limits to shrink the VAR value of the corporation. Limits at financial positions can be: stop-loss-limits, sensitivity limits, nominal limits or scenario limits. Nominal limits are a preset amount of money to be used for a special position. If there is a stop-loss-limit then there will be sold the affected positions by reaching of this point. At the point of reaching a predefined sensitivity the financial position will not be increased or decreased. Special events or scenarios determine a scenario limit as i.e. financial crisis or worst-case events in financial positions. At this point they will be sold analog to the stop-loss-limit. **Risk diversification** is a process to use the effect of shrinking the risk by putting low- or uncorrelated assets into a portfolio. By this way the portfolio VAR is smaller than the sum of each VAR. This is the system of the so-called portfolio theory from Markovitz, created in 1952. The originator banks made diversifications of risk by putting mortgages with different ratings and from different locations into a portfolio to diversify the default risk and sold this portfolio as CDO to investment banks. This kind of diversification worked good for long time with commercial loans, because there were historical data for stochastic computations available. The problem with real estate mortgages was that really a lot subprime mortgages from nearly all locations defaulted. This problem could not be calculated before because there were not enough historical data of subprime mortgage defaults available. **Risk prevention** is an activity, which it used to increase the equity capital resources or the economic capital. A few banks hold a higher amount of economic capital than the Basel Committee requires being better prepared to outcomes of risky occasions. Possibilities to provide risk prevention are the holding of securities as financial guarantees or financial rights of assets. To much of these rights of being the new owner of the assets in case of credit default combined with bad market conditions led to liquidity problems as seen at the crisis 2007/2008. Risk prevention is at first the control of the credit worthiness of the clients. **Risk compensation** can be made by using derivative products or insurance products to decrease the primary risk position. Derivatives are instruments as forwards, futures, options or swaps whose values are dependent on future market conditions of underlying assets. That means if a derivative deal is a profit or a loss depends on the asset prize difference between the contracting time and the future reality. But only one of the contractors can win! Forwards and futures stand for a deal at a predefined date and a predefined prize. Options have the same function but the option is to realize the deal or not. A swap is an instrument to change financial assets between the contractors at a predefined date and to predefined conditions. Derivative products are only available for traders of banks at the stock exchanges (futures and options) or at OTC-Over the Counter markets (forwards, swaps,



options). These deals have often a vast amount of many million dollars. Risk compensation with derivatives is a market instrument since the eighties of the twenties century. Insurance products are available for lenders and borrowers of credits as well. Products for lenders should reduce operational or credit risks and can be also derivatives. Products for credit borrowers are mostly life insurances.

Risk Controlling

As every business – the risk management has to be under control. Risk controlling is a process of planning and control of risks. Measurement and analysis is the base on which the planning of risk handling can be done. The control of the actual with the target risk values and the analysis of differences is a further step. A global used method of controlling business is the PDCA-circle by Edwards Deming. PDCA means Plan, Do, Check, Act. The following things have to be done in relation to risk management. Plan: definition of risk management handling after measurement and analysis of existing values. Do: do the planned things of risk treatment. Check: check if the planned and realized things and the expected outcomes are OK. If not Act! Restart the cycle. The PDCA is a permanent process to improve the performance of business. Another function of controlling is to give the collected data to the management / board of the corporation for further decisions and as a base to realize their liability of information as this is required by regulations for corporate governance as well. The other risk management processes defaulted as well as did the risk controlling process. But this is more dramatic because controlling should avoid such risky developments and make interventions if needed.

Conclusions for Risk Management

The Subprime mortgage crisis was a result of that what happens if there is an immense failing of risk management. All four phases, which were described before did not work. At first the risks with subprime loans were not identified effective. With the knowledge of this crisis the financial institutions are able to make better **Risk Identifications**. The loosing of the diligence to check borrowers credit worthiness is a further massive fault. It is not only a question of fairness to sell such unchecked mortgages but also a question of fraud and should be corrected directly. Doing this, the investment banks have an enhanced chance to analyze their risk. One security to avoid such trade could be a rule, which requires that up to 30% of all mortgage tranches should stay property of the originator banks. Professor Hull made a recommendation of 20% see [12, p. 411]. **Measurement and Analysis** have to be improved as well. One problem with quantitative measurement of the credit value of risk ratio defaulted because of missing historical data of defaults from subprime mortgages. This can be changed now with actual data. The big financial institutions as J.P. Morgan or CitiGroup, which are experts of measuring credit risk [4, p. 238] and the financial science should think about adaption of existing or creation of new models for risk measurement. The treatment of the risks went terrible wrong because even if financial institutions as CitiGroup realized that the situation has the possibility of great losses they let run the business because of massive returns with these CDO products [18, p. xii]. When house-prizes were falling and default rates were rapidly increasing the situation went catastrophic. Thus alike CitiGroup



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many other big players were hit by massive losses with their CDO's. Recommendations for the field of **Risk Handling** are at first risk prevention by increasing of checking borrowers before giving a loan. This decreases directly the credit risks for all stakeholders. The supervision of the real estate market is also a basic thing for banks to manage the number of credits in view of avoiding further real estate bubbles. Credit originators should significantly decrease the number of the subprime ARM's. More transparency and a better information infrastructure will increase the confidence to and the reputation of the banks as well as increasing of fairness. Prof. Shiller wrote at "The Subprime Solution" that banks have the responsibility to inform their clients about their risks with credits and further on he requires that public education should "*promote comprehensive financial advice for everyone*" [3, p. 123]. The governments should think about change of regulation of the financial especially the second mortgage market. This is really a rigid suggestion because it reduces a part of free financial markets but the banks got lot of taxpayer's money to survive and the state should have the public concern that this situation will not repeat again. A further advice is to change the short-term revenue orientated payment of bank staff into a long term to increase the long-term results.

Risk Controlling went wrong on sides of all stakeholders beginning at the borrowers following by the internal and external controlling of financial institutions and further on at the governmental side. Regulation authorities made huge faults in controlling the banks business in the field of the second mortgage market with securitization of real estate loans. Instruments to control the risks were given with the Basel Accords even before the crisis of 2007/2009. So, why did not the existing risk management methods avoid this crisis? Explanations can be found in the science of financial behavior. Aspects like Moral Hazard, attributes as greed or psychological effects of the stock exchange and other financial markets are driver for financial decisions. Regulation authorities have to control financial institutions strictly on the background of the Basel Accords.

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Appendix

Risk-Management-Ratios

$$LGD = (1 - RR) \tag{E-1}$$

$$EL = EAD * LGD * PD \tag{E-2}$$

$$WCL = EAD * LGD * WCDCR \tag{E-3}$$

$$WCDCR = N * \left(\frac{N^{-1} * (PD) + \sqrt{\rho} * N^{-1} * (0.999)}{\sqrt{1 - \rho}} \right) \tag{E-4}$$

$$UL = WCL - EL = EAD * LDG * (WCDCR - PD) \tag{E-5}$$

$$V(X) = \sigma^2 = \sum_{i=1}^n (x_i - \mu_i)^2 * PD_i \tag{E-6}$$

$$SD(X) = \sigma = \sqrt{V(X)} = \sqrt{\sum_{i=1}^n (x_i - \mu_i)^2 * PD_i} \tag{E-7}$$

$$VAR = EAD * (\alpha * \sigma * \sqrt{T} - \mu * T) \tag{E-8}$$



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THE CAPITAL ASSET PRICING MODEL (CAPM) VERSUS INTERNAL RATE OF RETURN (IRR): A TESTING CONCEPT FOR INFRASTRUCTURE ASSETS

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Keywords: Capital Asset Pricing Model (CAPM), Internal Rate of Return (IRR), Infrastructure, Renewable Energy, Czech Republic.

Abstract

Notably quite a number of infrastructure funds have entered the markets since the early 2000's in Europe helping to establish infrastructure as an alternative asset class in the investment universe in Europe (also quite heavily fuelled by the forerunners of Private-Public-Partnership (PPP) projects in the UK). Since the early days of infrastructure investments by private (in the sense of non-state) parties the return expectations that were promised to investors have not shifted still today being in the range of 10-15% equity Internal Rate of Return (IRR). In other words since a decade investors are willing to get the risk of infrastructure assets rewarded in a constant range as per above. This seems especially remarkable since "non defaultable" rates as well as debt costs have shifted quite substantially during this time bearing the emergence of two crises both of different gravity to the overall economy.

Based on the observed constant return targets of infrastructure investors versus shifting debt markets/ debt cost the research focuses on the comparison between IRR and Capital Asset Pricing Model (CAPM) based equity valuation for this asset class since the latter is postulating a link between cost of (debt) capital, asset specific and market driven risk for the determination of cost of equity versus the earlier being observed to be constant.

Following the key postulate of the CAPM (both as a single and a multi-period model) the equity return should always be dividable into a risk free rate adding a risk premium determined by the underlying market (unlevered) beta re-applied to the asset's specific leverage driven risk. Bearing in mind the observed substantial decline in "non defaultable" returns both on the short and long end of the interest curve and the – at the same time constant – equity return expectations of investors, it appears unlikely that the postulate of the CAPM is applicable to this specific asset class and/or regarded as valid by the market/ investors. In other words the market (unlevered) beta and the respective re-levered beta would have to perfectly counterbalance the effect of the decline of the "non-defaultable" returns under the CAPM in order to produce a "flat line" equity return expectation for investors.



Summarizing the above the aim of the paper is to present a rationale for testing the CAPM versus IRR based valuation methods, i.e. focusing on the suitability of the CAPM as a decision tool for management when valuing investments in the space of infrastructure (or more precisely renewable energy assets in the Czech Republic).

1. Research Interest and Problem Statement

Notably quite a number of infrastructure funds have entered the markets since the early 2000's in Europe helping to establish infrastructure as an alternative asset class in the investment universe in Europe (also quite heavily fuelled by the forerunners of Private-Public-Partnership (PPP) projects in the UK). Just between January 2005 and June 2008 the number of infrastructure funds raising money has grown from well below 10 to over 70 [1].

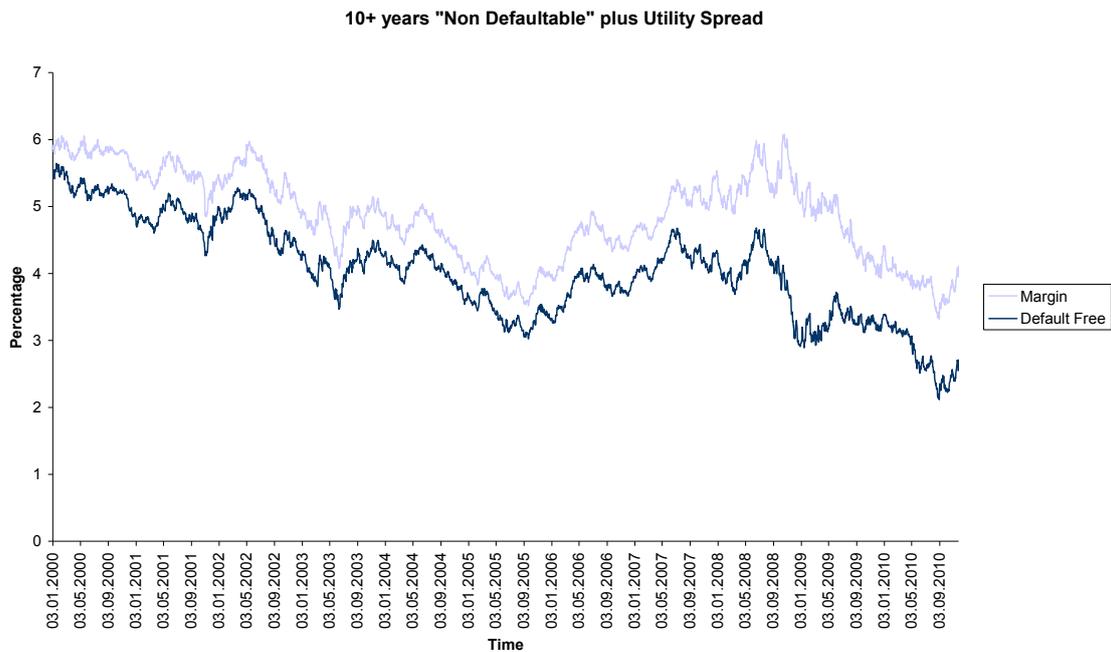


Chart 1. 10+ years "Non Defaultable" (German Government Bond) plus Utility Spreads, Bloomberg [5]

Since the early days of infrastructure investments by private (in the sense of non-state) parties the return expectations that were promised to investors have not shifted still today being in the range of 10-15% equity Internal Rate of Return (IRR) comprising for 45% of all funds launched since records started in 1993 [1]. This seems also to be supported by actual return rates for the asset class, Peng and Graeme [2] finding the return rates for 19 Australian infrastructure funds being at 14.11% over 11 years (Q3, 1995 – Q2, 2006) or RREEF Real Estate Research [3] finding that a



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historic hypothetical return index for European infrastructure, which is referred to as ‘could be seen as the “market” ’ is returning 12.5% annualised or Colonial First State Research [4] finding a 13.5% annual return for unlisted Australian infrastructure over a period of 10 years (back tested from 2006). In other words since a decade investors are willing to get the risk of infrastructure assets rewarded in a constant range as per above apparently regardless of their geography (and currency involved). This seems especially remarkable since “non defaultable” rates as well as debt costs in the form of margin spreads above “non-defaultable” rates have shifted quite substantially during this time bearing the emergence of two crises both of different gravity to the overall economy (bursting of the “internet bubble” in 2001 and the “sub-prime crisis” in 2008), please compare Chart 1 + 2 below.

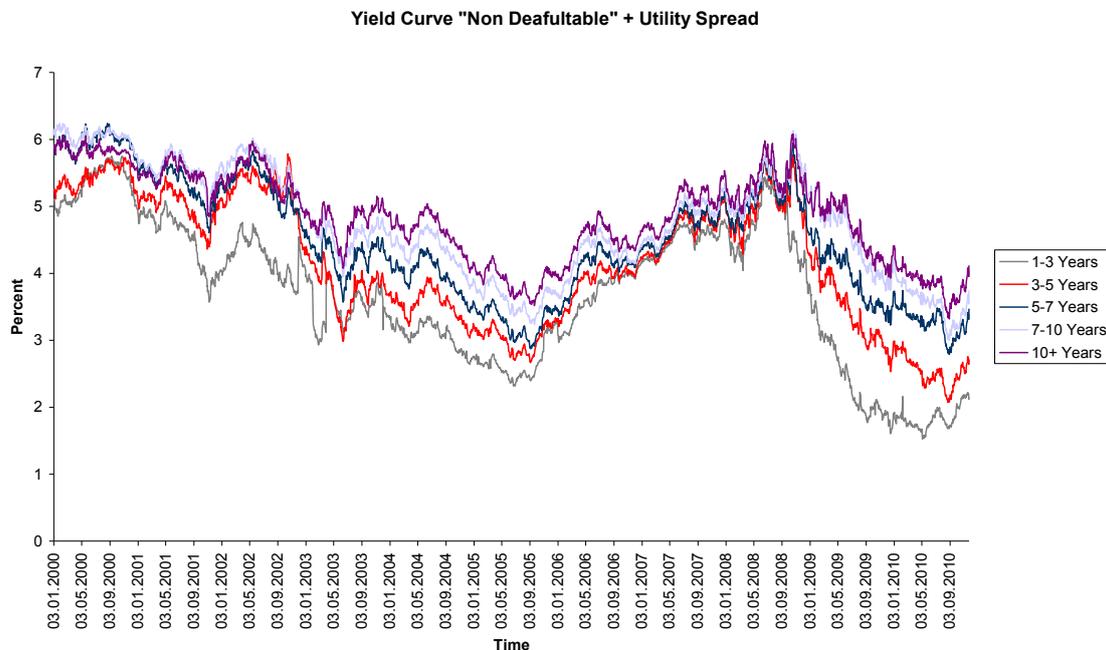


Chart 2. Short and Long End Yield Curves “Non-Defaultable” (German Government Bond) plus Utility Spread, Bloomberg [5]

Following the key postulate of the Capital Asset Pricing Model (CAPM) (both as a single and a multi-period model) the equity return should always be dividable into a risk free rate adding a risk premium determined by the underlying market (unlevered) beta reapplied to the asset’s specific leverage driven risk. Bearing in mind the observed substantial decline in “non defaultable” returns (Chart 1) both on the short and long end of the interest curve (Chart 2) and the – at the same time constant – equity return expectations of investors and the actual achieved return rates as per above, it appears highly unlikely that the postulate of the CAPM is in existence for this specific asset class and/or regarded as valid by the market/ investors. In other words the market (unlevered) beta and the respective re-levered beta would have to perfectly counterbalance the effect of the decline of the “non-defaultable” returns under the CAPM.



Another way to approach this problem would be to have a closer look at the underlying risk attached to this asset class. Most of the assets in this sector are either fully regulated due to the monopolistic or oligopoly nature providing so called backbone services to society (e.g. water or gas and electricity grids) or highly subsidised due to the lack of feasibility of the projects on a stand alone basis (e.g. renewable energy and solar within this field specifically). As a result the revenue and consequently the cash flows available to investors (considering the stable nature of operating costs due to very low variable cost components) are mostly delinked from the actual economic environment with the exception of inflation (most of the regulations and subsidies are inflation linked) and financing costs. The resulting driving factors of any equity valuation should therefore be borne in inflation and financing costs (and not in the risk directly attached to the business) one would expect the equity risk premium for the asset class to remain stable under the CAPM postulate and consequently to lead to declining overall equity return expectations of investors when the “non defaultable”/ risk free rate is contracting, which appears not to be the case.

Based on the above described observations, representing only a comparative snap shot, my interest arose to analyse the suitability of the CAPM for the valuation of infrastructure assets or more precisely for the equity valuation of solar power assets from a scientific point of view. In order to achieve this target, I will use an assumed standardised solar power asset operating under the Czech Renewable Energy Act 2009 and compare daily theoretical valuations derived from financial market data under the CAPM with daily theoretical valuations under an IRR based method in a period three years pre- and post the collapse of Lehman, marking the beginning of the crisis for the purpose of this study.

2. Brief Theoretical Overview of Valuation Techniques and Tests Applied to the CAPM

The CAPM is arguably one of the most widely tested theories of modern science of finance. Since its inception by Sharpe [6] and Lintner [7] it has been altered, adjusted for or further developed by Merton [8], Breeden [9], Black and Scholes [10] and Ross [11]. For an overview of Financial Markets Theory please refer to Chart 3.

As mentioned the CAPM was altered, criticised and tested (and consequently both confirmed and rejected) by an exhaustive list of researchers. Listing and categorising all of the articles published over the past 37 years in research journals in detail would probably go beyond the aim of the paper at hand. Following this logic, below please find a very brief overview of selected researchers commenting on the CAPM or its versions and tests applied:

Shanken [13], Fama and French [14, 15], Ng [16] and many more found the CAPM to return unsatisfactory results when applied.

Contrarian to the above it was found acceptable by Ray et al. [17], Grauer and Janmaat [18] and others provided an appropriate set of tests is applied.

Breeden et al. [19] commented on the Consumption Based CAPM (CCAPM) by Rubinstein [20], finding no different results to the traditional version of the CAPM, on the contrary Lettau and Ludvigson [21] found that conditional CAPM versions indeed perform far better than their original counterpart.

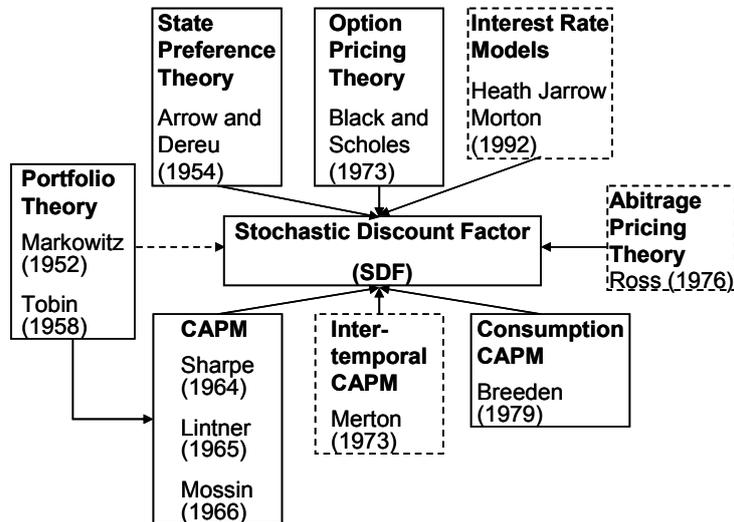


Chart 3. Capital Market Theories, source: Köhler, Küpper, Pfingsten [12]

What appears clear from the above (selected) findings is that the test applied is most probably the crucial point and in my opinion the base for scientific creativity and progress in this field (please see below selected researchers applying new introductions).

Terregrossa [22], combining analysts' consensus forecast for growth with CAPM, Chou [23], testing the CAPM with a Wald general methods of moments (GMM), Lee et al. [24] testing the zero-beta version of the CAPM, Hunag [25] allowing for two different states of risk and consequently two sets of betas, finding that the low risk state supports CAPM and Huang's [26] introduction of price limits in his study or Handa et al. [27] using yearly rather than monthly return rates.

Central to the above displayed overview of Financial Market Overview in Chart 3 appears the stochastic discount factor as all of the various angles to the issue of risk pricing need a specific discount factor for the respective asset class. Given the proposed test works with the assumption of a given (since observed) discount factor for infrastructure, I would like to explore a little closer on the state of the art literature reflecting on the so far performed research on (i) the in principal applicability of the CAPM on infrastructure assets and the controversial discussions (ii) the comparison of IRR valuation methods versus CAPM, i.e. the work done to date in the specific field selected for the research proposed:

Literature research suggests (i) the use of the CAPM to estimate project value also for infrastructure assets appears to be an adequate instrument (although not widely reported in academic literature given the lack of research on his specific asset class) Wibowo [28], Banovac et al. [29], Leviäkangas [30] and (ii) the limitations and estimating factors needed to arrive at risk adjusted returns (please see below findings):

Ohlson [31] finds in his research that the "notion of risk is general and the CAPM only applies for special cases". The observed lack of shift in investors' return rates (please see Section 1) may follow the same logic as observed by Ohlson [31] as the notion of risk reward expectation for infrastructure assets may be general and consequently not alter when market returns are moving (supporting the research need in this field).



From a totally different angle than for the research proposal at hand, Lundtofte [32] suggests that the expected excess return on any asset depends on its covariance not only with the market portfolio, but also with changes in the representative agent's estimate. Although Lundtofte refers in his research to the estimated dividend growth rate, his findings may be also interpreted as further pointing the direction that valuation is not only dependent on pure market pricing variables as suggested by the CAPM but also be influenced by investors' expectations arguably even more true for the expected rate of return for the respective asset class, please also compare Smith and Wickens [33] as per below.

Adrian and Franzoni [34] allowed investors to learn the long term level of betas, which could be interpreted as actually leaning into the direction observed under constant IRR expectations as observed in the market given constant betas would lower the volatility of valuations over time.

Smith and Wickens [33] have performed an in-depth study of the stochastic discount factor model (SDF) versus CAPM based on observable discount factors finding that a key issue in selecting an SDF model is the choice of the pricing kernel, or discount factor. This specific finding, to use observable factors to choose the discount rate, support the main target of the research at hand given the discount factor can be well observed from the markets.

Nevertheless it appears that a test as proposed in this paper, comparing CAPM and IRR based valuations, was to date not performed with respect to infrastructure assets in this depth (producing daily theoretical valuations for both methods using actual market data with respect to financing and inflation expectations), let alone renewable energy assets in the Czech Republic pre and post Lehman.

3. Is the Proposed Test Really New to Infrastructure?

In existing studies Khan and Fiorino [35] have already tested IRR versus CAPM based equity valuation methods for energy efficiency projects (which could be seen with some imagination as infrastructure investments), and observed differing results when using either one of the aforementioned methods. Nevertheless it has to be mentioned that in their study four energy efficiency projects have been tested in three "state of the world" scenarios simulating low, medium and high oil prices, deducting the respective electricity prices and inflation as a model input. This test lacks – as admitted by the authors – the far more complex interlink between markets than reflected in electricity prices ("The reason for the anomaly [lower variance of the individual projects in the test than the market portfolio] lies in the effect of the oil prices [sic!] changes: the economy as a whole undergoes far wider fluctuations than the price of electricity of [sic!] natural gas, which determine the benefits from energy efficiency projects").

Further there is a far more fundamental break in the testing conditions in my opinion: first the determination of electricity prices from oil prices (A) and second the inflation rate (B).

(A) Determination of electricity prices: Following simple supply and demand as well as cost driven markets the input variables for the determination of electricity prices are mainly dependent on the following two parameters assuming no overproduction, which usually – regardless of the fuelling commodity – is not the case given the long development periods of power stations usually not the case: the expected production in a single market and the production costs of the respective facilities.



To elaborate the complexity of this mechanism a little more dwelling is needed:

Ad i) as per above: One would not only have to exactly determine the point in time when a production facility goes online (which is dependent on national productions plans, permits, financing available, construction time [or overrun], etc.) but also determine how the single market is defined at that point in time, i.e. define if there are any cross border/ cross network transmission charges or other trading limitations in place.

Ad ii) as per above: The production costs over the electricity portfolio of that respective single market is dependent on the portfolio mix of fuelling resources, in case of gas fuelled facilities on the so called gas formula, i.e. the gas brand mix the respective utilities use to generate electricity – just to mention one example out of the 4 major commodities (gas, coal, oil and uranium). As one could imagine this gas formula is one of the most protected secrets of each utility given the high influence on production costs for the respective portfolio and usually underlined with long term delivery contracts with equally well protected terms. Following this logic one would hence have to first determine the portfolio of fuelling resources (being more complex than taking the oil price) and second take a view/ make assumptions on the price development of the underlying commodity mix.

Summarising the above, assuming the oil price to be the single one determinant of the electricity price would be over simplistic to say the least, bearing in mind that the above elaborations are again taking quite substantial short cuts on additional influencing factors such as possible state subsidies, etc.

(B) Inflation Assumption: Inflation was deducted from the expected change of oil price hence assuming a perfect correlation between oil prices and inflation, which again appears overly simplistic given the broad diversity of economy.

In my opinion the above arguments underline the relevance for the research necessity, especially given the misrepresentation of major influencing factors under the test conditions, which I believe to be more thoroughly reflected in the research design proposed.

As per my research design, the corner stone of my research will consequently be the influence of (debt) capital cost, the market (unlevered) beta, the re-levered project beta and the risk free or “non-defaultable” rate on the overall cost of equity and the consequent valuations derived from this method versus an IRR based valuation approach.

Summarizing the above, the CAPM is a clearly controversial valuation technique widely commented on and tested throughout academic literature since its inception. Nevertheless the literature review suggests insufficient testing of the CAPM versus IRR valuation methods in infrastructure projects (and more specifically in renewable energy assets under a specified regulatory framework, in this case the one implemented in the Czech Republic).

4. Design of the Proposed Test

The corner stone of the test will be the valuation of a standardised solar power plant pursuant to the Czech Renewable Energy Law using both methods, the CAPM and an IRR based valuation method tested at daily financial market data starting on 15 September of 2005 ending on 15 September 2011 marking three years each time direction from the commonly perceived start of the current economic crisis, the collapse of Lehman Brothers on 15 September 2008. The selection of the time frame reflecting both uptrend and down trend markets seems espe-



cially significant reflecting the findings of Cooper [36] arguing that the test applied by Pettengrill et al. [37] are biased given the association of high beta shares in bull markets tend to outperform the market and consequently justify the CAPM (or falsify the CAPM when inversely applied).

From the proposed test at hand the model will produce approx. 1,500 data points (approx. 250 trading days per year) for each of the two methods evenly time wise distributed around the defined start of the “sub prime” crisis.

The significance of the test lies, contrary to other market back testing of the CAPM in past research, in the fact that the testing object, the standardised solar power plant, and the subsequent cash flow calculations are

- (i) stable, due to the regulated nature of the revenue streams, as defined in the Czech Renewable Energy Act, i.e. are not subject to general misjudgement of market environment and economic development as is the case for most other industries,
- (ii) the only alterations of projections (e.g. inflation expectations, interest rate expectations, et al.) are again derived from financial market data, i.e. allowing for a truly neutral and independent measurement object.
- (iii) the testing object is by definition not subject to market movements as it is not a listed company but rather a physical asset, i.e. the test relates to a neutral object incapable of producing any “self fulfilling prophecies” but rather objectively comparing valuation techniques.

5. Aim, Summary and Limitations of the Test

The main target of the paper is to present the proposal of a test to determine the scientifically correct valuation tool for decision makers in the investment/ divestment process in infrastructure assets (and solar power plant assets in the Czech Republic more specifically). The result of the test (which is to be presented in following papers) will be either: (i) the CAPM and the IRR are equally useful valuation tools or (ii) the aforementioned are not. Following this logic, the test will help to provide a better understanding of the appropriate tools for the valuation of infrastructure assets and help decision makers (management) in investment or divestment processes to apply appropriate concepts when finding the inherent value of the asset at hand. As a consequence the proposed test will contribute to the decision making process when selecting the appropriate technique, although the test has limitations with respect to the reliability of the outcome and should be further researched by subsequent tests:

One of the major limitations of this testing concept is the CAPM itself and the consequently needed adoption of market data with respect to the selection of the market line, i.e. the peer group performance against which risk is tested (market beta). The composition of the peer group and data/ time range for the so created market line is one of the most influential parameters for the researcher (as not externally/ purely market determined like the remaining financial input data) given that it will most probably be necessary to take short cuts when selecting the sample for the reason of available data on comparable companies (and defining comparability). Consequently one may argue that the respective selection of the peer group was biased, as suggested by Scott and Brown [38]. Berglund and Knif [39] go even that far to smoothen out/ stabilise the beta for small sized companies. I do not agree with this approach given this would ulti-



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mate scrutinize the overall concept of the proposed test due to delinking it from market movements. On the contrary the need to stabilize betas for some assets actually suggests the need of “stabilized” IRR valuations. Despite the alternative suggested by the aforementioned, the extensive data samples taken in the research may well mitigate this factor given the 6 year period of testing. This appears especially true since Low and Nayak [40] found that the “true” market portfolio does not alter CAPM validity conclusions.

Next to the above mentioned general limitations, the proposed testing of the CAPM would only allow conclusions for solar power plants in the Czech Republic and no general conclusions of the validity of the CAPM for the same asset class in any other market, opening the field for further research in (i) other infrastructure sub-asset classes such as transportation or social infrastructure assets and (ii) other markets.

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RISK ASSESSMENT IN THE PROJECT INITIALIZATION PROCESS AS PART OF THE COST – BENEFIT ANALYSIS

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Abstract

Characterizing and communicating uncertainty – a critical part of any risk analysis – becomes a crucial task when there are many sources and types of uncertainty. Cost-benefit analysis (CBA) is a technique intended to improve the quality of public policy decisions, using as a metric a monetary measure of policy decision. Therefore, for risk assessments to provide information that can be used in CBA, it is important to enlarge the capacity to express how risks vary with changes in concentration or exposure.

The purpose of the paper is to analyze project risks and assess their impact in the frame of CBA based on public fund financed projects case study. For project risk evaluation the empirical data analysis and scientific literature analysis has been done.

According to the project management theory project controlling and risk assessment should be done. Internal controls should provide for an assessment of the risks a governmental entity faces from both external and internal sources. A precondition to such risk assessment is the establishment of clear, consistent goals and objectives at the entity-wide level, and also the activity or program level if applicable.

Implicit in management’s approach to risk assessment is an underlying cost/benefit analysis. In other words, the design of an internal control system to mitigate risks must reflect the fact that there will invariably be resource constraints and that the benefits of controls must be considered in relationship to their costs. In formulating such a cost/benefit analysis, management should further consider both the likelihood of risk occurrence and the associated risk impact, and then allocate resources to those areas of risk where the combination of risk likelihood and impact will sustain the greatest negative consequences for the entity.

1. Project Risk Analysis Scientific Literature Review; Methods and Principles in the CBA

The international project management practice has developed and uses an entire complex of methods that help justify the usefulness of the financial resources spent on a project and prevent inefficient administration of financial resources.



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Project risk management is a topic of major current interest. It is being actively addressed by many government agencies and most of the professional project management associations around the world, and many relevant standards are extant or being developed. Some examples from the many approaches in use include:

- Project Management Institute (PMI), USA (2008), *Project Management Body of Knowledge*, Chapter 11 on risk management [1];
- Association for Project Management, UK (2004), *PRAM Guide* [2];
- AS/NZS 4360 (2004), *Risk Management*, Standards Association of Australia [3];
- IEC 62198, *Project Risk Management – Application Guidelines* [4];
- ISO 31000:2009, *Risk management – Principles and guidelines on implementation* [5];
- Office of Government Commerce (OGC), UK (2002), *Management of Risk* [6]; and
- Treasury Board of Canada (2001), *Integrated Risk Management Framework* [7].

Unfortunately the standards and the guides from the professional associations provide only an outline of the topics that are essential for managing project risk, and they offer few insights into how the risk management process works in practice.

Projects, by their nature, are unique and many of the more interesting ones are complex. They frequently take place over an extended period of time and demand the engagement of a wide range of resources, including people, finance, facilities, materials and intellectual property. In most circumstances, projects have defined objectives or an end-state that provides those involved in the project with a clear vision and specification of their goal. The purpose of project risk management is to minimize the risks of not achieving the objectives of the project and the stakeholders with an interest in it, and to identify and take advantage of opportunities. In particular, risk management assists project managers in setting priorities, allocating resources and implementing actions and processes that reduce the risk of the project not achieving its objectives [8]. For the purpose of project, *J.Charvat* has defined *risks* as “those project events that are most likely to adversely affect the ability to produce the required deliverables.” The risk management process is fundamental to the successful delivery of any project – whether it is light or heavyweight in nature. The risk management process is there to ensure that each risk is properly identified, documented, categorized, and resolved within the project environment. [9]

In the real world, variables are both very uncertain and often correlated to some extent. Future service demand is uncertain and so is the willingness to pay. In addition, the regulatory environment, technology evolution and levels of competition are highly uncertain. Changing one variable at a time and looking at the impact is a cumbersome and incorrect method.

All public-investment decisions can be modelled in the same standard way, using as the general framework for analysis the same four components:

- a parameters table;
- an incremental-effects model;
- a table of costs and benefits over time; and
- a table of possible investment results and a statistical and graphical analysis of NPV and investment risk.

Each benefit-cost model generally has several variables that are subject to uncertainty. To use this model for risk analysis, you need a computer program for simulations. The computer runs the model over and over again, each time selecting a value for each variable. The program



is not difficult to use – you simply instruct the computer to choose a value within a certain range and to select that value according to the stated probabilities.

The typical approaches to risk and risk analysis adopted in engineering and in business and project management represent completely different views, making the exchange of ideas and results complicated and not very effective. In traditional engineering applications, risk is a physical property to be analysed and estimated in the risk analysis, the quantitative risk analysis (QRA) and the probabilistic safety analysis (PSA); whereas in business and project management, risk is seen more as a subjective measure of uncertainty. [10]

Bernstein's concludes that the mastery of risk is a critical step in the development of modern society. One can discuss the validity of his conclusion, but there should be no doubt that risk and uncertainty are important concepts to address for supporting decision-making in many situations. The challenge is to know how do describe, measure and communicate risk and uncertainty [11].

Project risk is a significant factor even before there is a project. Projects begin as a result of organisation business decision to create something new or to change something old. Projects are a large part portion of the overall work done in organizations, and can be undertaken at any given time. The process for choosing projects both creates projects risk and relies on project risk analysis, so the processes for project selection and project risk management are tightly linked.

Project selection affects project risk in a number of ways. Appropriate project selection can minimize several problems: too many projects; project priorities misaligned with business and technical strategies; and overestimated resources and resource capabilities. Indicate analysis during project selection creates these risks. Decision about which projects to select, change, or reject are generally based on the relative costs and benefits of each option. Expected project benefits and returns are estimated in a number of ways for these portfolio decisions, including predictions of financial metrics for return on investment [12].

With projects, however, this luxury of ignoring the risks cannot be permitted. By their very nature, because projects are inherently unique and often incorporate new techniques and procedures, they are risk prone and risk has to be considered right from the start. It then has to be subjected to a disciplined regular review and investigative procedure known as risk management.

2. Research on Project Risk Analysis in the Frame of CBA, Case Study

The structural funds of the European Union envisage a total of 4.53 billion euro for Latvia in the planning period of 2007-2013, for the financing of various types of projects [13].

The EU structural funds are financial tools created in the European Union for the purpose of mitigating the differences in development levels of various regions. The objective of the structural funds is to use long-term financing to even out both the social and economic inequality among the EU member countries.

Increase in foreign financial investments and various public support mechanisms and financial instruments requires for the quality project prioritization and selection, to ensure the efficient administration of resources and get maximum returns. To assess the project risks as part of the project cost-benefit analysis, the author conducted a case study of public sector



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supported project. The basis of the draft risk assessment has been done by the expert method (DELFI) and empirical data analysis. To identify and structure the project risks, as well as to assess their effects the author has developed an expert questionnaire.

The project “Establishment of alternative day care center” overall objective is to promote equal employment opportunities, ensuring children, persons with disabilities and senior social care, social skills development, educational and useful and creative leisure opportunities, developing alternative care services.

Specific objective is a development of new alternative care services, renovating and modernizing care center – the adaptation of local municipality – owned building. The total project budget is LVL 350 000.

Frame of the evaluation is the consequences of risk occurrence and level of risk, where the occurrence and consequences of their credit risk rating is as follows:

- 1 – Minimal effects (loss of up to LVL 500);
- 2 – Moderate effects (loss of LVL 500-2000);
- 3 – Severe consequences (loss of more than LVL 2001);

Consequently the risk level shown as:

- 1 – Low risk;
- 2 – Medium risk;
- 3 – High risk.

Risks are grouped as management and personnel risk, financial risk, project implementation risk and juridical/legal risk. Categorizing risks is a useful way to identify specific problems. The experts has defined 24 risks in total, according to previous mentioned risk groups. There were identified 44 risk consequences. The relative occurrence and impact of risks of various types provide the basis for improved risk discovery and for more selective and cost-effective risk management.

When carrying out risk analysis for the project “Establishment of alternative care day center”, author concludes that the expert ratings risks associated with project financing and implementation process is evaluated with the highest ratings, respectively, personnel and human resource risk assessment is low, of course, there are also exceptions in evaluations. In calculating the amplitude of variation and assessment, as well as the standard deviation, author concludes that the dispersion around the average is low, which shows a high degree of harmonization of experts evaluation ratings.

As the part of cost – benefit analysis is net cash flow; author has analyzed possible maintenance costs during the project life cycle which has been defined as 20 year. At the same time the hypothesis was defined – whether maintenance costs increasing in relation to the project lifecycle.

Using SPSS software tools are being prepared graphic evaluation and statistical analysis. Figure 1 gives the table output data in graphical representation. From the data produced a linear regression graph showing marked value and the appropriate project life cycle.

All municipalities have aging infrastructure and their managers need to identify the required budgets to sustain maintenance and renewal programs. At the same time, the majority of cities and towns continue to grow and expand; thereby creating new infrastructure that must also be maintained. Cost – benefit analysis (and risk analysis as part of it) can be used as a



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decision support tool to help engineers/managers propose, compare, and select the most cost effective, alternatives for maintenance, renewal, and capital investment programs.

Municipal infrastructure managers must have immediate access to reliable cost data to make responsible engineering decisions. For example, the decision makers must take into account: the different methods of analysis, the typical acquisition expenses, the anticipated ownership costs, the probability of future costs, and the uncertainties in the cost-benefit analysis calculations.

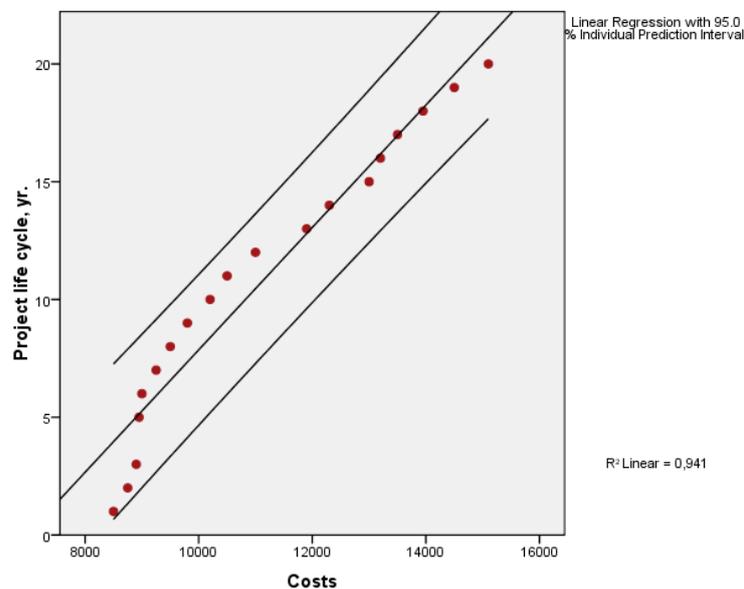


Figure 1. Linear regression model for project life cycle cash flow

The graph shows the relationship between the two variables i.e. project life-cycle year, and infrastructure maintenance costs. This is shown by the broken line, which tends to pursue the 'bottom up' the relationship is positive. However, no correlation diagram, not empirical regression does not allow to quantifying the relationship between the two parameters. Accordingly, using the analysis tools, it is determined whether there is a correlation between years and the amount of maintenance expenditure. Calculations show that the correlation is positive close. Correlation analysis with SPSS software concludes that the correlation coefficient is positive, which is equal to 1 or maximally similar to the value of the 1 in this case, signs are characterized by the increase in the project life cycle, maintenance costs are increasing, i.e., low x values are characterized by low values of y while high x values correspond to high y values.

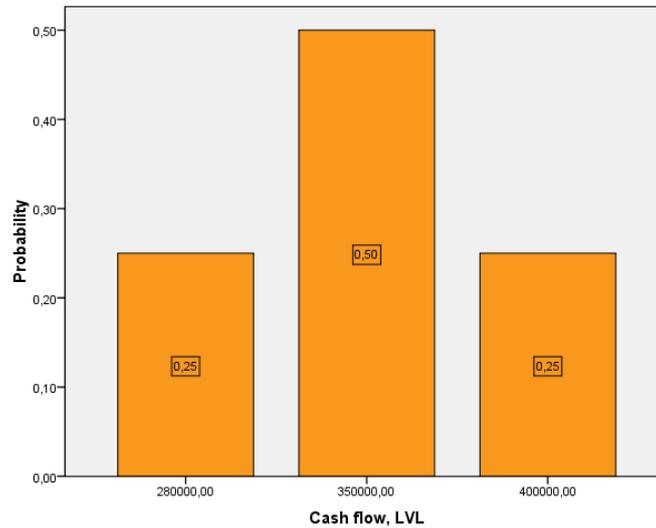


Figure 2. The histogram of projects alternative to cash flows

At a normal scenario, the cash flow probability $p = 0.5$, at positive scenario probability is 0.25 and the p -value for the negative scenario of cash flows LVL 400 000 is 0.25. At the same time, author concludes that the project alternatives cash flow correspond to normal distribution. The given figure shows the histogram of projects alternatives to cash flows.

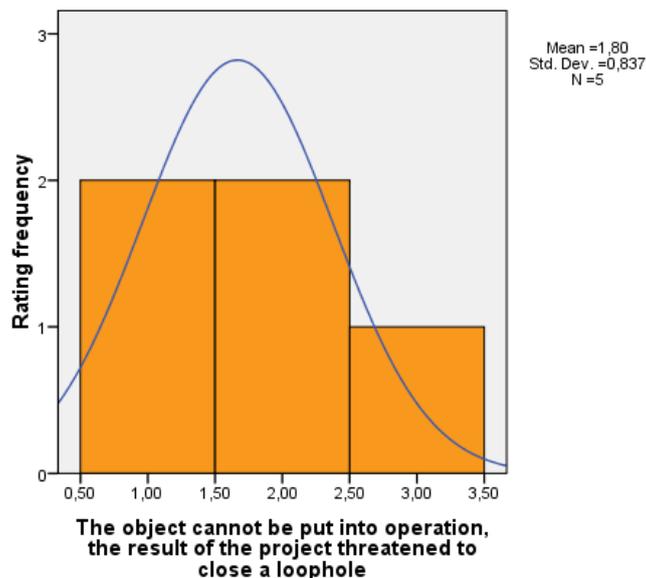


Figure 3. Expert evaluation of project implementation risk consequence's



Using SPSS software, it's possible to create a graphical illustration of data analysis. As the given data in the analysis corresponds to the normal distribution it may reflect the findings as the histogram, and indicate a normal distribution curve. In the present case, the author gave an illustrated presentation of the project risk consequences – the object cannot be put into operation, the result of the project threatened to close a loophole.

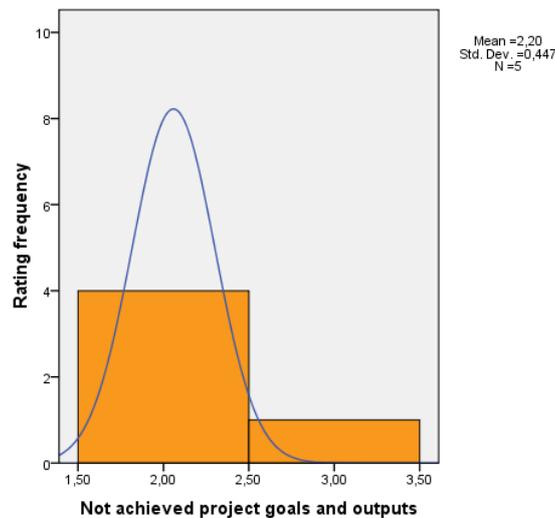


Figure 4. Expert evaluation of project implementation risk consequence's

To reflect the various possible options the author made a graphic illustration for the project implementation consequences assessment – not achieved project goals and outputs. In this case four ratings were identical (score -2), one expert rating is 1 (Figure 4).

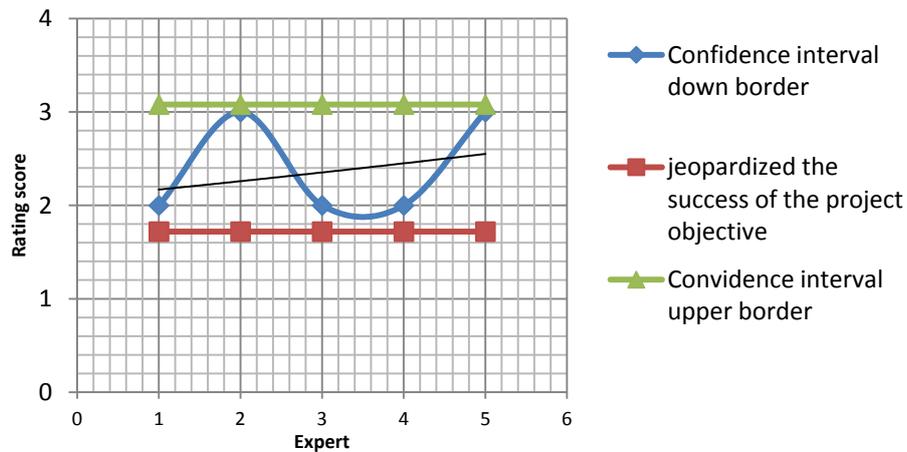


Figure 5. Assessment of risk consequence



Sample average standard error x characterized the assessment of risk consequence – *Jeopardized the success of project objective*, the average dispersion around the average mean of the population: the greater error in the arithmetic mean of the sample can be located further away from the general group average. In the author example, the standard error is 0.24495, and it's indicates that sample mean is close to the population average.

Table 1

Model summary for risk consequence – *Jeopardized the success of project objective*

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.289	0.083	-0.222	0.606

Coefficient of determination R-Square (0.083) shows which part of distribution of common resulting variable explains the factorial variable. This means that the peer review explains 91.70% of the variation around the average risk assessment of the risk consequences, remaining 8.3% explained by other factors.

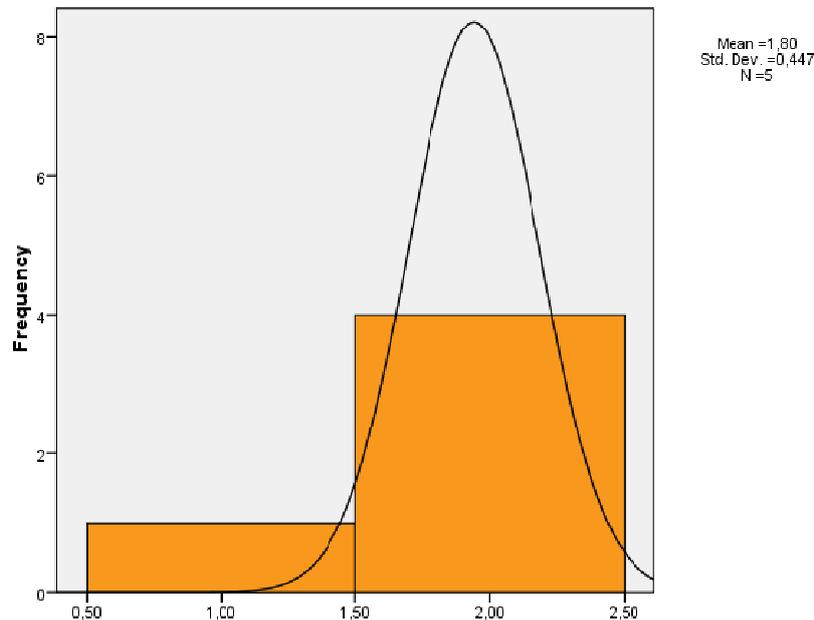


Figure 6. Disagreements between the project staff

The financial instrument administration institution given methodology requires the project applicant to define and evaluate all possible project risks (including cost increases risk etc.), to which the project applicant may face during the implementation of the project and which could adversely affect, impair or impede the project implementation. For example: the



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potential cost increases, construction of service availability and quality of human resource availability and professionalism (the project management team's risk), service time link with the project deadlines, juridical risks, etc. Implementers should provide information on planned measures for identified risk, defined prevention or mitigation activities, as well as state and will be overseen by a risk-prevention measures and take new potential risk identification. Although the methodology and regulations of Cabinet of Ministers clearly define the need for project risk analysis, the practice shows that the public sector project risk analysis is comprehensive and not always defined as the risk analysis in the content of the standard risk management theory. Project submissions presented in the risk analysis and prerequisites are given as generalized forms, and often not defined as a risk.

To demonstrate the experts and project applicants' different approach for risk analysis the author used comparative analysis method to examine project applicants and field experts risk assessments (Figure 7.). Comparative analysis shows that experts have defined financial risks (non-eligible costs, lack of pre-financing, inflation impact etc.) as important.

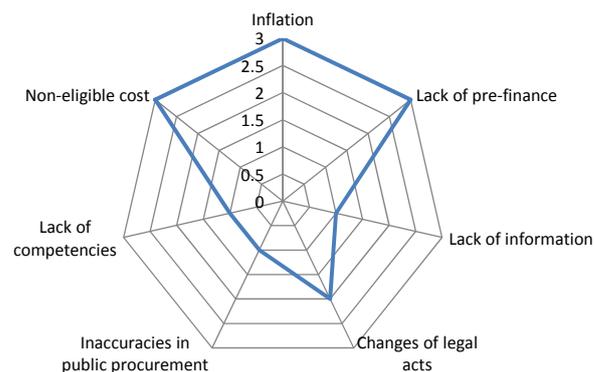


Figure 7. Expert main risk evaluation summary

Meanwhile, analysis shows that project applicants has defined risks regarding to human resources and project management as well as project implementation risks at the highest rate. It's means that applicants consider themselves as uncompetents in project management field. It could be explained also as the fear of administrative institution decisions regarding to project acceptance process. In the international project management standards (PMBOK, IPMA ICB baseline, PRINCE2 etc.) the human resource and management risks has been defined as important, but not so important as the financial and implementation risks. Meanwhile the leading authority on project management *H. Herzner* has defined that risk analysis is reasonably well defined for schedule and cost risks and do not emphasize the risks regarding to human resources [14].

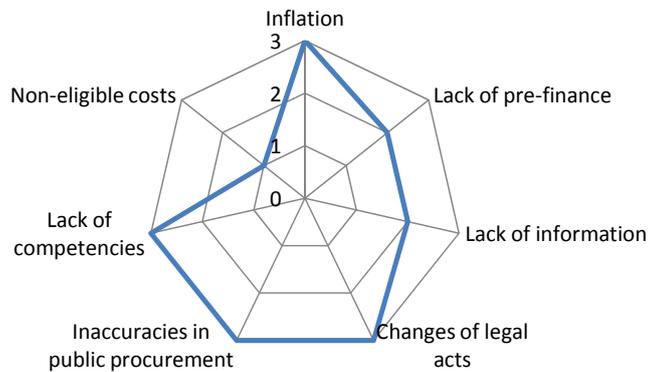


Figure 8. Project applicants risk evaluation summary

There are two essential conditions that must be taken into account when carrying out risk analysis, i.e., whether the project is implemented in pure project organization form or mixed form of organization in the risk analysis of the widely prevalent definition of risk management and a variety of prevention measures. Clearly, the human factor is key to the success of the project, but the risk analysis shows that local governments often justify them with the risks that employees amateurism, improper implementation of actions, ignorance, inaptitude, incorrect application of law rules, etc. It should be remembered that these defined conditions cannot be considered a risk. If a person applied improperly, or unprofessional, then the project manager simply builds a team which is professional and knowledgeable in project management. The definition of risk by itself has already determined that it is an unexpected event or activity that might affect the achievement of project results, so the incorrect application of risk analysis is unacceptable because it just proves the incompetence of the project developer, if you can afford to believe that the same employee is incompetent.

When carrying out risk analysis for the project “Establishment of alternative care day center”, author concludes that the expert ratings risks associated with project financing and implementation process is evaluated with the highest ratings, respectively, personnel and human resource risk assessment is low, of course, there are also exceptions in evaluations. In the calculation of the amplitude of variation and assessment, as well as the standard deviation, author concludes that the dispersion around the average is low, which shows a high degree of harmonization of experts given ratings.

According to estimates provided by experts, all the recognized ratings were reasonable values, and they have given their assessment of the risk of occurrence for each effect event.

In the cases when expert ratings reflect the full consistency, it's not possible to define the standard deviation, standard error, variance and standardized moments (kurtosis, skewness) values.



Conclusion

All projects have risks at the outset because of the many unknown factors, some of which may be removed during the project planning phase. In practice risks disappear and new risks appear as the project progresses. A formal risk management process is a continuous process for systematically addressing risk throughout the product/project life-cycle. Risks can be introduced (or latently reside) at the very earliest stages of the software life-cycle. The ability to identify risks earlier translates into earlier risk removal, at less cost, which promotes higher project success probability.

The author analysis shows that project applicants and field expert risk assessments differs, where experts point out as the main – financial and implementation risks while applicants has defined as the main – human resource risks. Meanwhile no one of the international project management and risk analysis standards identify human resource competencies, lack of information and skills as risks. Its shows the projects management problems and project managers lack of competencies and knowledge's.

Author concludes that public sector project risk analysis is inaccurate because in risk analysis has been included activities which cannot be defined as the risks (lack of information, lack of competencies and skills, ignorance, inaptitude, confusion etc.). It means that municipalities have defined the problems and inaccurate human resource management as the risk, which shouldn't be defined as risks, but avoid by implementing accurate project human resource management. At the same time based on the same criterions expert methods (Delphi) analysis show a high quality results on risk assessment.

A major component of risk management planning is risk avoidance. Many risks can be avoided by controlling and planning the human side of the corporate equation. Succession planning, adequate severance and outplacement, executive coaching and development will ensure that an organization has the means to deal with current and future challenges. There is still discussion should human risks be divided from standard risk management as the human resources are closely related to the human management and personnel management not to risk analysis.

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IMPROVEMENT POSSIBILITIES OF THE CREDIT GRANTING PRACTICES IN THE COMMERCIAL BANKS

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Abstract

In recent years many countries experienced stagnation or even decline in the households mortgage. Moreover according to the households as well as bank employees point of view the credit-granting process has become significantly complicated, is less transparent and long-lasting comparing to previous years before the crisis. This study seeks to define the improvement possibility of credit granting practices in the commercial banks through creation a simple, transparent and accountable framework of the whole credit granting process. To execute the purpose of the study authors used both qualitative methods – structured interviews, and graphical tools – a decision-making tree. The main findings of the study are two. The first one is development of the practically applicable mobile model of the credit granting process. The second one is practical recommendations for improvement of credit granting process alternative solutions (whether positive or negative), which exceed the median and mathematical expectation. The empirical results shows that the commercials banks gain opportunity to improve customer satisfaction as well as better control over expenses side resulting from the unjustifiably long-lasting alternative solutions of the credit granting process through implementation of the developed model in their real-life practices. This research provides first empirical study in field of process analyze of the credit granting and



introduce valuable framework for process analyze applicable for wide range of organization having the same complicated and multiple stage decision making process as in case of the credit granting process of the commercial banks.

Introduction

In recent years many countries, including USA [1], United Kingdom [2], Germany [3] as well as Latvia [4], according to the provided by the state regulators statistic data experienced stagnation or even decline in the households mortgage. Often experts explain it as a result of the world economic crises. At the same time, the excessive and reckless lending practice of commercial banks in the pre-crisis years is pointed as one of the causes for the same crisis [5]. This observed opposite interdependence obviously is bottleneck in successful crises overcoming. In spite of the drawbacks of the excessive lending it, at the same time, is one of the most effective tools to overcome crises [6], as well as the fastest way to accelerate the turnover of money [7]. Experts agree that reactivation of crediting policy is essentially required to support business and household growth and development, at least in low risk areas, industries and projects [8].

Decrease of credit portfolio to households experienced by Latvian commercial banks in year 2010th increased and represents decline by 5.7% comparing to 4.96% indicated in 2009th. Operative results of first half of 2011th indicate increased decrease of credit portfolio to households by 7.4% comparing to the same period of the last year [9].

Statistic data of Latvian banking sector provided by Commission of Finance and Capital Market (CFMC) shows that the commercial banks granted more than 104 thousands of new loans since the beginning of 2011th. 58.17% from the total amount of granted loans were granted to the corporate customers – residents, 10.45% to the households - residents and 30.06% to the non-residents of Latvia. However the total amount of the loans granted to the households – residents in July 2011th decreased by 0.7%, however portfolio of corporate customers – residents increased by 0.6%, comparing to the previous year results [10].

Survey on the commercial banks lending practices accomplished by Bank of Latvia in January 2011th presents evidence that there is increase in number of commercial banks, which sees mitigation of the credit-granting standards and according to the commercial banks observation considerable increase of household demand for loans is expected to be in the first half of this year [11, 12, 13]. Stated in the survey evidences is also confirmed by announcements some of commercial banks about their activation and receptiveness in the field of mortgage lending to the households [14, 15].

The observed noncompliance between the commercial banks statement and still continuous decrease in credit portfolio to households, could be explained by two factors:

- i) increase of demand for household credit was not large enough and / or
- ii) the commercial banks, despite previously expressed willingness to mitigate credit granting standards to the households, did not implemented them in real life credit granting practices.

According to the households as well as bank employees point of view the credit-granting process has become significantly complicated, is less transparent and much more long-lasting comparing to previous years before the crisis. Credit-granting process experienced significant changes. If during pre-crisis period power of decision to grant credit was delegated to the single



person, then currently decision mandate is significantly reduced and the credit-granting decision now belongs only to the group of persons – bank credit committee.

This research paper seeks to define the improvement possibility of credit granting practices in the commercial banks through creation a simple, transparent and accountable framework of the whole credit granting process (practice).

As the purposes of this study authors define 4 items:

1. Transform the complicated household mortgage credit granting process into simple, transparent and accountable map, using graphical tool – decision-making tree;
2. Identify the problematic stages of the process in the aspect of time and operational constraints;
3. Develop practical recommendations for the commercial banks on improvement possibilities of credit granting process;
4. Assess potential of presented method to solve credit granting process's challenges.

To achieve purpose of the study, 4 different tasks are defined:

- Conduct interviews with Loan officers from Latvian commercial banks;
- Transform results of interviews to the decision-making tree and fixe the time and probability of the each alternative action;
- Carry-out the verification of decision-making tree items to check it compliance with the usual household mortgage granting process - the order of the actions and reached approval rates;
- Capsule the results of the credit granting process decision-making tree.

The rest of the paper has the following structure. Section 1 presents short overview over the theory background, credit granting challenges and research limitation. Section 2 introduces methodology of the empirical study. Section 3 describes the performed experiment to map the credit granting process using the decision-making tree tool. The results of the empirical study are presented in section 4. And ends with section 5, which is devoted to the conclusions.

1. Theory Background

The fact of still observing high actuality in the financial crisis effect overcoming by the commercials banks in credit granting area convinced the authors refer to detailed attention in gaining full understanding of the components and processes involved in the credit granting practices applied by the commercial banks.

The credit granting practice according to suggested by the authors credit granting structure consists of two interrelated so say blocks – credit granting procedure and credit granting process. Under the credit granting procedure the authors understand credit-granting methodology of the commercial banks. Those methodologies are supposed to establish wide range of requirements and standards for credit granting in order to sustain proper risk evaluation.

Credit granting process, in turn, represent the set of steps which should be performed by the employee of the commercial bank as well as by each credit applicant to obtain response of the commercial bank on credit granting whether positive or negative. The authors' observations over those two interrelated blocks suggest that it is highly recommended to the commercial banks to analyze them not only as a whole but also individually, because analysis results would



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provide the commercial banks with distinct data results, which could be used (integrated) more properly in achievement of wider range of goals.

The operation of the commercial banks, including credit granting is strongly regulated and supervised by the state regulator institutions [16, 17], which main tasks are to protect customers from business activities of the commercial banks with excessively high profile of risk and supervision over the operational activities of the commercial banks to gain development and sustain stability of the financial market [18]. It became obvious as a result of the occurred in year 2007 – 2008 financial sector crises that the state regulator institutions failed to fulfill their main tasks. According to *Protiviti* this failure could be due to wide range of reasons, including: i) [...Regulators failed to see and react quickly enough to signs that many financial institutions were aggressively growing risky businesses without proper risk management...], and ii) [...Existing regulatory requirements for capital, loan loss reserve provisioning and valuation practices amplified rather than buffered the impact of financial shocks...]¹ [19], which are more than true in case of Latvia [17]. To overcome identified gaps in their regulations and guidelines the state regulator institutions recently have developed and introduces series of new regulations and guidelines supposed to stiffen control and cover apparent gaps in supervision over the operation of the commercial banks [19]. To support above mentioned it is worth to mention that CFMC in Latvia during past three years introduced new regulations on “Assets quality evaluation and loan-loss provisions establishment”², “Credit Risk Management”³. Very much the same is the situation with regulations and guidelines in other countries also.

Relating to the regulations and guidelines imposed by the state regulators on the commercial banks it should be considered that [... regulations, like most policy making, is about judgment ...] and [... regulator institutions according to M.Boleat always has [... to make choice between conflicting objectives...], for example, in respect of regulating mortgage lending institutions, judgment has to be exercised in respect of the laws and regulations and their application in practice...]⁴ [21].

Despite of permanent supervision and control executed by the state regulator institutions over commercial banks operation as well as despite of the different kind of developed risk evaluation procedures on credit granting by the commercial banks themselves, they still according to *M.Boleat* [... can place strains ...] on the credit granting [...monitoring process...]⁵ under certain circumstances and conditions such as [...aggressive growth, bank size an competitive market...] [22]. Therefore the commercial banks should keep (hold) their credit granting and monitoring procedures and practices on continuous improvement and monitoring base in order to show secure performance in credit granting. This would be helpful

¹ Protiviti, *Regulatory Reform in the Financial Services Industry*, *www.provity.com*, 2010, <http://www.protiviti.com/reformtaskforce>.

² FCMC: *Aktīvu novertesanas un uzkrājumu veidošanas normatīvie noteikumi*, FKTK, Latvija, 2010, http://www.fktk.lv/lv/tiesibu_akti/kreditiestades/fktk_izdotie_noteikumi/regulejosas_prasibas/20090325_aktivu_kvalitates_nov/.

³ FCMC (2010), “Regulations on Credit Risk Management”, [on-line], Available: http://www.fktk.lv/en/law/credit_institutions/fcmc_regulations/2010-03-25_20100106_regulations_on_/.

⁴ M.Boleat (2003), “Regulation of mortgage lending institutions”, World Bank Symposium on Mortgage Market Development, Egypt [on-line], Available: http://www.boleat.com/services/housing_finance.

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tool for the commercial banks to keep their loan-loss provisions on the relevant level in terms of regulations and guidelines as well as in term of stakeholders' interest, who usually are unwilling to tie their money funds in excessive loan - loss provisions for insecure debts.

Credit granting practice in terms of credit granting procedures represent [... a tradeoff between the perceived default risk of the credit applicant and potential returns from granting requested credit.]⁶. "Tradeoff" to large extent is subjective and capacious criteria. Therefore a credit granting procedure of each particular commercial bank represents not only standards and requirements to evaluate potentiality of default risk of credit applicants but also a powerful instrument for gaining competitive advantage over other banks – competitors.

Credit granting procedures of the commercial banks include wide variety of requirements and standards. Large part of requirements and standards are similar at the extent of the followings factors – proper and fair market value of property / collateral, collateral value proportion to the amount of loan, credit applicants credibility (income sufficiency to repay loan and pay interest), credit applicant segment (type of credit applicant, collateral location area), complementary collateral in terms of guarantees, deposits, moveable property and etc., credit history of a credit applicant. In all other terms those procedures essentially differ, including their volume as well as content. Moreover the procedures miss transparency and structure for accomplishing valuable comparison and meaningful concluding.

Contrary to the credit granting procedures of commercial banks, which are appropriately and in most cases well and fully documented and represent risk management issues, the situation with credit granting process procedures in not so well represented and documented (if any). Most of credit granting process procedures available for analyze are accomplished in two ways – weather descriptive or visual. In case of visual ways the credit granting process the commercials banks use two kinds of support-tools (models): flow charts and Entity-relationship model. Those tools have serious drawbacks such as lack of transparency, as in case of descriptive way, or miss of accountability as in case of flow charts and ER.

Lack of proper representation of the credit granting process assumes that the commercials banks have not paid detailed attention to credit granting process, which, in turns, implies that they do have little control over credit granting process itself. As a result of that the authors hypothesize that the commercial banks might have areas for considerable credit granting performance improvements, which, in turns, might result in increase of granted credit and / or decrease complexity of the process and / or decrease of proceeding time. Knowledge and accountability of the credit granting process could enlarge range of instrument used by the commercial banks for achievement of efficient business running and operations. Applied area for practical implementation of the credit granting process analysis's findings could be human resources for human resources planning and incentives development as well as sales management for meeting sales estimates and other targets set by the top management of the commercial banks.

By addressing identified weaknesses of existing problem with representation and accountability of the credit granting process and highlighting importance of necessity in its proper mapping the purpose of this paper is to develop relevant map of the credit granting process to simplify, classify and create a framework the whole credit granting process which is

⁶ K.Keasey, G.Veronesi (2008), "Lessons from the Nothen Rock Affair", Journal of Financial Regulation and Compliance, Vol. 16, Iss: 1, 8-18.



an analytical instrument for deep understanding and evaluation of all components of credit granting process.

After briefly search the current literature on credit granting process the authors identified that there are only few researches about credit granting available. Those researches are devoted to risk management issues and not to the process of the credit granting itself. Therefore this research paper provides first empirical study that relates to the mapping of the credit granting process, which is performed using a graphical tool – decision-making tree and provide valuable insight into acknowledgment of the credit granting' process inside interdependencies as well as give rise to a series of new researches.

The empirical study of this paper is limited to the representation of the credit granting process for mortgage credits to households. The period of time covered in this research is post-crisis years, meaning last 3 years. Another limitation of this paper refers to the exclusion of risk management issues from the research as well as evaluation and analysis of the credit standards applied by the commercial banks.

2. Methodology

The only possibility to transform the credit granting process into a perceptible, traceable methodological form is to use graphical tools. Authors of this paper recommend a decision tree to graphically translate a structured credit granting process.

2.1. Decision Tree⁷

It is said that an oriented graph (γραφω – “to write” in Greek) is defined by a complete set of points: the set of graph vertices and the set of point pairs – the set of graph edge. The talk is about the beginning and the end of the arc. Oriented graphs are represented geometrically. Incidence matrixes accompany analytically oriented graphs.

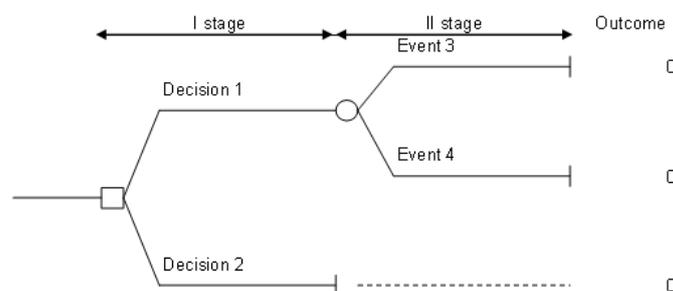


Figure 1. Decision tree sample – an oriented graph

Path – a series of arcs, where the end of the first arc is the beginning of the second arc, the end of second arc is the beginning of the third arc, etc. The length of a path is the number of

⁷ T.Reizins , D.Rutitis (2006), “Decision Tree as a Support Tool in Expert Team Decision Making”, Management Theory and Practice: Synergy in Organization, Tartu, 324-339.



arcs that make the path. The path is recorded either by naming arcs that make the path or by naming the vertices. A path can be called simple if each vertex does not occur more than once in the trace of the path. A closed path is a path whose first and last vertex are the same, namely, the beginning and the end of the road coincide with each other.

The decision tree is an instrument that explicitly interprets any process and can be stated as strategy where actions of decision makers can be determined, in the same time the stochastic state of nature can be kept as given. The main purpose of creating a tree is that afterwards the decision makers can easily decide how to act in each decision node and follow their decision further in depth. In that case, the pace of process execution depends mainly on the state of nature. Decision tree provides the possibility for decision makers to analyze and compare the different paths of the decision tree. Such approach is fully consistent with one purpose of this research – to simplify, to classify and to create a framework the whole credit granting process.

2.2. Formalization of Expert's Opinion

As authors of the paper stated previously, the common practice in commercial banks for describing a credit granting process is detailed procedure written or drawn in flow-chart. Such approach is acceptable if we look at the credit granting process from the point of view of new employee training. Whereas such formalization doesn't provide any feedback to persons that are granting particular credit, whether they spend less possible amount of organization resources like working hours or do they accumulate the highest possible amount of new credit takers.

Conversely such decision support instrument as decision tree gives clear understanding of what to do and what is going to happen and how often particular outcome is expected.

According to formalization of a decision making process Reizins and Rutitis provided in their work about expert team decision making, authors of this paper will provide the formalization of a credit granting process.

Before the formalization sequence is described it is a must to remark a few assumptions that are taken into account:

- Since the input data for the decision tree structure comes from expert, the interview or questionnaire holders must respect experts' thoughts and proposals with regard to the credit granting process according to his/her experience. In other words, if an expert has provided the stochastic distribution of probabilities for a set of alternatives, it is a must to consider that information and supplement the constructed decision tree.
- Another assumption is that through the time credit granting process was adjusted according to local legislation and therefore even the expert skips some part of the whole process or decides to merge some process, it is a must to implement in formalization of a credit granting process every claim legislation request.
- The final assumption is that each bank has optimized its credit granting process from the necessity of particular decision (before bank grants a credit to a potential client) point of view. It is not the aim of research either to provide alternative decisions, nor cut a know decision out of a whole credit granting process.

The formalization process itself consists from three iteration as shown in figure above (See Figure 2. *Formalization of expert's opinion*). Accordingly to previous research on forma-



lization of expert's opinion and taking into account assumptions and restrictions that belongs to this research, authors suggest to follow such sequence of acts:

- 1st Iteration – The first iteration is carried out by a structured interview. Expert provides the exact sequence of decisions that are involved in credit granting process. After completing the interview and analyzing the answers authors are able to draw an initial decision tree. This first formalization of a credit granting process provides the exact sequence of decisions that bank is carrying out to accumulate the final decision. Due to authors' competence in field and knowledge of the decision tree concept it is for sure that decision tree is a complete reflection of credit granting process;
- 2nd iteration – It is a must to get the validation of the drawn decision tree from the expert who provided initial information. Such validation is made during the second iteration. If that is the case the structure of the decision tree becomes stable. Authors are tracing any adjustments or modifications expert asks under legislation framework. The only restriction in this iteration is ability to transform expert's answer into a decision tree node. In every case expert is asked to paraphrase his statement noted during the interview;
- 3rd iteration – Third iteration is analysis phase in which expert provides the empirical distribution of probabilities of each alternative decision tree branch. Each combined probability is formulated as product of all probabilities which are contained in particular decision tree branch.

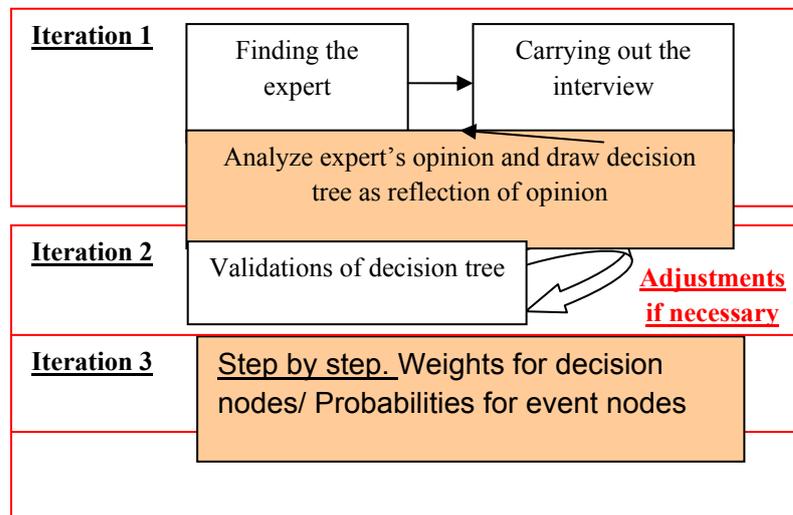


Figure 2. Formalization of expert's opinion

3. The Experiment

Since theoretical study is useless without a practical application, authors of this research carried out an experiment. The main goal of the experiment is to clarify the provided theoretical



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background and to examine the possibility of implementation of provided methodology in a real life credit granting process.

To avoid any subjectivity in a credit granting process analyze authors are interviewing an expert in credit granting field with an experience more than 10 years. During the carrier in bank sector the expert has gathered the knowledge about the credit granting process itself; moreover expert has achieved the acknowledged level in human behavior and intensions assessment.

Iteration 1

The first iteration of the experiment is a structured interview. During the interview choice expert provides the decisions that are involved in credit granting process. Structured interview is a good technique to gather as much information as possible, meanwhile stick to the agenda stated by authors of this research. Since expert had poor knowledge about decision tree tool, the exact sequence of decisions were proposed by authors and will be validated in further iterations. By analyzing the answers authors are able to draw an initial decision tree. This first formalization of a credit granting process provides the exact sequence of decisions that bank is carrying out to accumulate the final decision. In experiment the whole credit granting process was divided into 6 phases – 1st appointment, 1st analysis by credit manager, Intermediate, 2nd appointment, 2nd analysis by credit manager, Credit committee. During each phase there are a number of decisions that applicant and credit manager must carry out. That makes a total of 40 statements to which an answer is required before process can move further. The result of first iteration is described as logical and that permits authors to turn to second iteration.

Iteration 2

Before authors of this paper could carry out further analysis it is a must to get the validation of for the drawn decision tree during the first iteration. At this moment of experiment, it is very important for to familiarize expert with decision tree concept, so that he or she is able to understand the task of validation. Depending of expert's knowledge in are of graphical tools and sequential decision making, explanatory process can take indeterminate amount of time. Authors are forced to trace a few adjustments and modifications expert is asking under legislation framework. In addition expert is asked to paraphrase his statements that were changed by authors due to legislation framework during the first iteration of credit granting process formalization. After expert give the approval of provided sequence of decisions in credit granting process, the structure of the decision tree becomes stable.

Iteration 3

In analysis phase expert provides the empirical distribution of probabilities of each alternative decision tree branch. That was carried out by evaluating the decision tree phase by phase and sequentially each of 40 statements that belong to particular phase of credit granting process. After that a combined probability is formulated as product of all probabilities which are contained in particular decision tree branch. In the same way expert gives his experience toward coetaneous time of each statement to fulfill. Afterwards that gives the cumulative time that describes particular decision tree branch.



4. Results of the Credit Granting Decision Tree

Research done with decision tree method provided an opportunity to get a more complete picture of the credit granting process and achieve the transparency and accountability of it. Ascertain progress, chronology, order and probability of execution. Disclose of credit-granting process with decision tree method, provided serious benefit – creation of mobile (flexible) model of the process, which enables deep-dive analysis of it.

Developed decision tree of credit granting process was the subjected of statistical and mathematical processing. It is important to mention, that the developed decision tree is very voluminous and display of it in full amount until is really difficult. Given these limitations (characteristics), authors in the Figure No.3 presents the process of decision trees in a fragmented representation. Represented decision tree is consists of the credit granting decision process nodes, sections and reflected time of the decision-making. Probability of occurrence is fixed. Authors pay attention, that the analysis and statistical processing of credit granting process is carried in different framework.

Developed analysis of credit granting decisions is based on the investigation of the alternative solutions of the process. Decision tree branches are measured with the probability of the node of each event. Values of the decision tree branches have been determined by the common time capacity. Event nodes values have been disclosed as time instants.

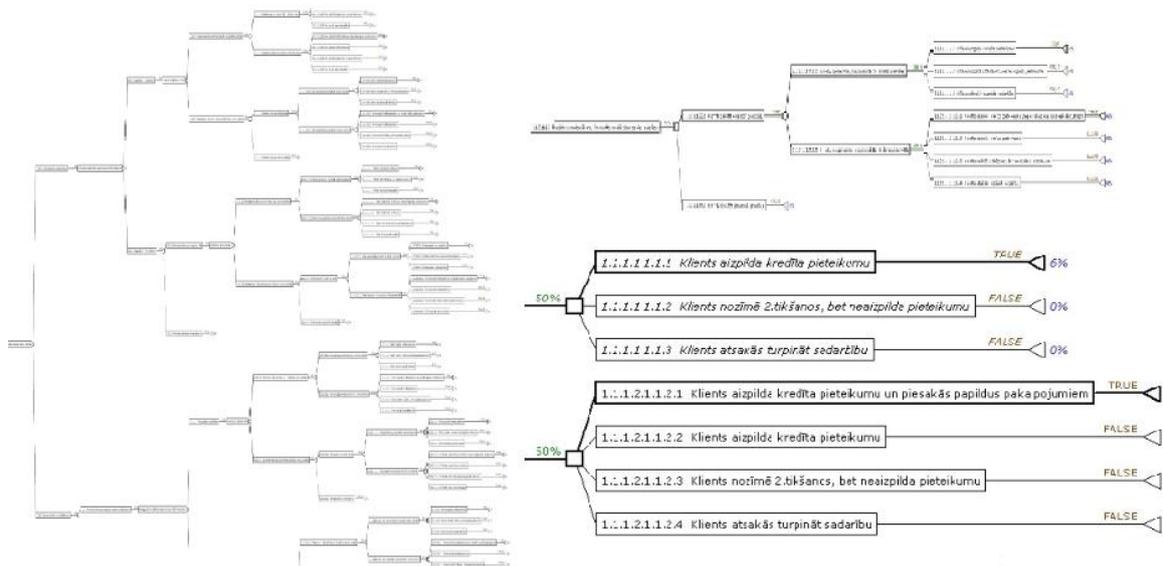


Figure 3. Graphic representation of the Credit-granting decision tree

Method of process representation, used by the authors, make possible to compare events during credit granting – to group alternative solutions of the process, according to their



characteristics – “positive”, “negative” and the empty sets, and to make statistical analysis of the decision tree branch time value, defining the minimum and the maximum of the value.

Table No 1 illustrates the characteristic of the decision tree – credit-granting process consists from 17,554 branches. This result brings evidences, which methods used before – flow chart, Entity-relationship model or description of the process do not provide comprehensive transparency of the process. Authors offered method of credit-granting process reflection in its turn prevents the above methods deficiency. This model is able to present the flexible model of the process, which consists of six sections, which are divided into 40 credit-granting process queries.

Table 1

Decision tree characterization of the Credit-granting process

Indicator	Results
Total number of credit-granting process queries (nodes) in the decision tree	40
Breakdown of Queries to the sections	6
Alternative solutions (decision tree branches) in the Credit-granting process	17 554

Results of decision tree in Table 2 illustrate the results, that 35% of the alternative solutions so called “empty sets”. The authors explain these situations as situations, which probability of the existence and of the occurrence, according to the experts opinions are close to zero. Taking into account huge proportion of the “empty sets”, this is important observation. Deep-dive analysis can provide solutions or recommendations to improve the process. It is possible that process contains irrational actions, which slow down the process without the reason.

The largest share of alternative decision-making solutions belongs to those, which probability of occurrence is rejected.

Table 2

Characterization of alternative solutions in Credit-granting process

Indicator	Results
Alternative solutions of the process (<i>decision tree sets</i>) do materialize	29.17%
Alternative solution of the process (<i>decision tree sets</i>) do not materialize	35.82%
“Empty sets”	35.02%

From the process results given in Table 3 follows that positive decision (granting of the credit) occurs only in 14.60% of cases. After verification of results, authors recognized that results completely comply with statistical data – the return of 100 monthly meetings with loan applicants are 15 signed loan agreements. These results confirmed, that the model provides proper reflection of the credit granting process. The results are valid and credible data for further analysis.



The results suggest, that due diligence should be applied to the alternative solutions of the negative decisions. Improvements of credit granting process can be reached by reduction of negative decisions durations. Gained time can be used to serve larger number of the credit applicants. Return of the credit granting process can be improved.

Table 3

Groups of the credit-granting process alternative solutions

Indicator	Results
Positive decisions (credit is granted)	14.60%
Negative decisions (granting of credit is rejected)	85.40%

The developed model can be practically used to identify the time-intensive and non-rational solutions (branches). Identification of such alternative solutions have serious potential to improve credit-granting process. It is important to identify the coherent time limits of decision making, using the information given in Table 4, Figure 2 and Figure 3: maximum, minimum, average decision-making time, the median, mode and a weighted average value of the time.

Table 4

Execution times of alternative solutions in credit-granting process

Alternative solutions group of credit granting	Indicator	Results	
		Minutes	Working days
Overall in credit granting process	Maximums of decision time	4064	8.47
	Minimum of decision time	3	0.01
	Average of decision time	2512	5.23
Positive decisions (credit is granted)	Maximums of decision time	4064	8.47
	Minimum of decision time	564	1.18
	Average of decision time	2412	5.03
	Mathematical expectation	782.07	1.63
	Median	2441	5.09
	Mode	1591	3.31
Negative decisions (granting of credit is rejected)	Maximums of decision time	3764	7.84
	Minimum of decision time	3	0.01
	Average of decision time	2130	4.44
	Mathematical expectation	107.28	0.22
	Median	2081	4.33
	Mode	2431	5.07



Calculation indicators help to define the decision-making time, which is acceptable for credit-granting process. Alternative solutions, which exceed these recommended limitations, are subjects to analysis. By reduction of decision – making duration can be achieved reduction of the average decision time.

The maximum time, which is required for decision – making is 4064 minutes, while the minimum time - just 3 minutes. The average time for decision - making is 2512 minutes (5 days). Model verification with experts confirmed that results are similar with their experience-based data.

Duration maximum for positive decisions branches (Figure 3) is 4064 minutes, minimum duration – 564 minutes. Significant dispersion of results was observed. Average duration for a positive decision is 2412 minutes (5 working days). Mode is 1591 minutes (3.3 working days). The median is 2441 minutes or slightly more than 5 working days.

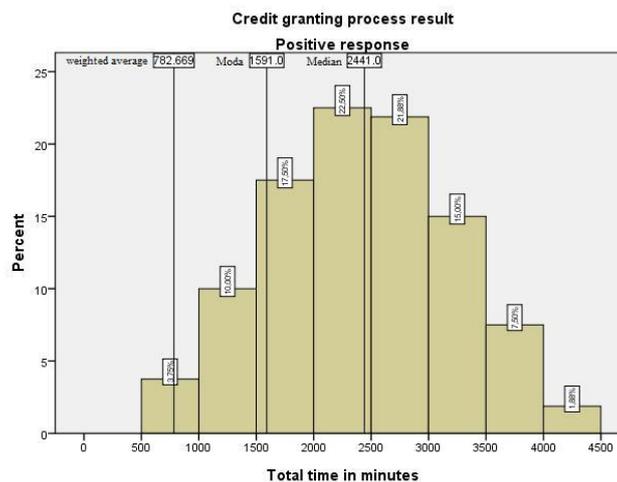


Figure 3. Graphic representation of positive decisions (the credit is granted) in credit-granting process.

Duration maximum for branches of negative decisions (Figure 4) is 3764 minutes, but the minimum is just 3 minutes. Dispersion is greater than in the branches with positive decisions. The average duration for the negative decision is 2130 minutes (4 working days). Mode is 2431 minutes (5 working days). Median – 2081 minutes (more than 4 working days).

Cooperation of the results demonstrates, that in average, till the negative decision is possible to get faster (2412 minutes comparing with to 2130 minutes). The most common duration of decision is shorter for positive decisions (1591 minutes comparing with 2431 minutes).

Dispersion of results between the maximum and minimum duration of decision-time is appropriate to both – positive and negative decision-making branches. The authors have calculated indicator, which describe the highest probability and represents the most common



average duration of decision time. Authors entitled this indicator as “Mathematical expectation”. In positive cases of credit-granting decision-making process the mathematical expectation is defined as 782 minutes or 1.63 work days, in the negative decision-making cases – 107 minutes (approximately 2 hours). These ranges can be considered as the optimal duration of decision-making. Cases, where alternative solutions exceed this indicator, are subject to detailed analysis. It is necessary to determine the reasons, which extend the duration of the process.

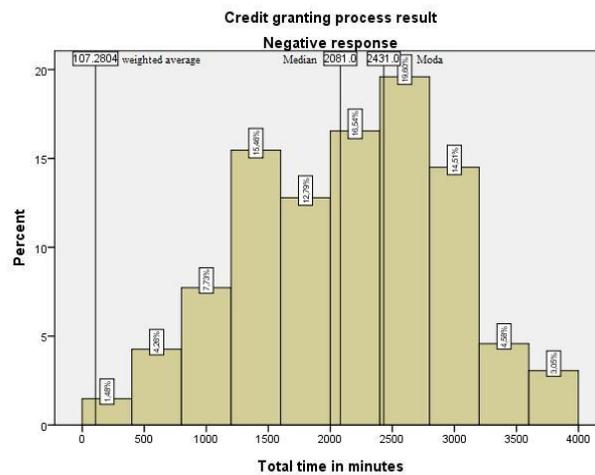


Figure 4. Graphic representations of negative decisions (the credit is rejected) in credit-granting process.

Comparison of the “mathematical expectation” for the positive and negative credit-granting decisions, indicates that a negative result can be achieved much more faster. This should be considered as reasonable approach, because each minute spent in decision – making process generates the costs. Rejection of credit does not generate income, which may cover the costs in future.

5. Conclusions

The haste of decision making in commercial banks essentially impacts the credit granting process. The full understanding of this process gives for decision makers the possibilities to improve competitiveness, to optimize time and fund expenditures.

In the framework of this research, authors have elaborated the decision tree that gives opportunity to analyze and evaluate the whole credit granting process. The experiment that was carried demonstrated the fact that it is feasible to reflect credit granting process by using graphical tool, that provided methodology was appropriate to use and that elaborated model is adaptable in practice.



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The reflection of credit granting process through decision tree provides transforms the process into easily understandable graphical diagram. By using decision tree it become possible to calculate the time that is needed to make a single decision, the cumulative time of particular decision sequence – a decision tree sub-branch, and the probability of each single alternative outcome. Acquired data encourage for extended analysis of credit granting process to improve perfectiveness of its structure and effectiveness of its usability.

When decision tree is voluminous, it is hard to comprehend it through graphical diagram. In these cases a transformation to numerical matrix is necessary to carry out mathematical analysis.

With this approach it is possible to express the length of each alternative solution in time units. Alternative solutions can be compared with weighted mean of decision making time. That alternative solution, which cumulative time exceeds average indicators, contains opportunities for improvements. By finding settlement for decreasing the cumulative time of alternative solutions of credit granting process it is possible to optimize the total credit granting process. Improvement of credit granting process leads to decrease of the average indicators.

According to author's assessment any deviations and measurement errors are insubstantial. Elaborated model is universal and with slight adjustments it can be used in any commercial bank.

Main benefit of created model is possibility to enhance credit granting process by diminishing time needed for decision making. Time required for decision making is key indicator in human resources cost assessment. Cost factor allows determining point of intersection in which credit granting process is no more cost effective for commercial banks and can cause losses to them.

This research is the first extended insight in credit granting process. It opens opportunities for further process optimization under discussed approach of credit granting process analysis.

Authors recommend using discussed methodology in organization where decision-making process is characterized as long, complicated and can be divided in stages. It is also suggested to use provided methodology not only in mortgage granting process reflection, but also in insurance, auditing and examination (in Universities) process reflections. For the remark, authors caution that results provided by model must be verified before practical use of particular model.

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CORPORATE IDENTITY FRAMEWORK AND DIMENSIONS OF THE LATVIAN COMMERCIAL BANKS

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Keywords: organizational management, corporate identity, marketing management, services marketing, brand building.

Abstract

Latvian banking industry has followed the path of rapid development like entire Latvian economy did in the last 20 years. Along with expansion and provision of financial services by Latvian banks to non-resident customers from foreign countries, each individual commercial bank has established specific positioning and corporate image within the local and international markets. Also, some banks have gone through corporate strategy and visual identity changes in order to adjust to the volatile market conditions and implemented up-to-date adjustments to their marketing communications with the target audience and markets in general.

Corporate identity framework developed by Melewar and Jenkins [1] is used as benchmark model to analyze the corporate identity formation of four largest Latvian commercial banks in terms of their assets [2] – Swedbank, SEB Banka, Nordea, Dnb Nord. Paper contains 5 figures.

Hypothesis: there exist specific factors, which contribute to corporate identity formation within banking industry and which should be common for major commercial banking industry participants. Aim of the research: to explore the corporate identity formation in commercial bank industry by surveying commercial bank representatives.

In order to test the research hypothesis the research has been split in several consecutive tasks: 1. Selected literature analysis on the corporate identity concept – review of corporate identity definitions and the latest research papers regarding corporate identity concept and related issues; 2. Semi-structured expert interviews with bank representatives to determine differences and similarities of different corporate identity formation based on corporate identity framework by Melewar and Jenkins. 3. Analysis of possible reasons that explain differences of corporate identity formation for the selected commercial banks.

Research results show that main corporate identity dimensions are common for all researched Latvian commercial banks. However, the difference is in relative importance or the extent to which each of the dimensions is relevant for the respective bank.



Introduction

Latvian banking industry has followed the volatile development path similarly to the entire Latvian economy in the last 20 years. Along with expansion abroad and provision of financial services by Latvian banks to non-resident customers from foreign countries, each individual commercial bank has established specific positioning and corporate image within the local and international markets. Also, some banks have gone through corporate strategy and visual identity changes in order to adjust to the volatile market conditions and implement up-to-date adjustments to their marketing communications with the target audience and markets in general.

This paper is based on qualitative research of the 4 largest Latvian commercial banks in terms of assets in 2011 – DnB Nord, Nordea, SEB, and Swedbank – to research corporate identity concept and corporate identity formation process in respect to commercial banks.

After carrying out analysis of the existing research on corporate identity concept development, authors stated hypothesis that there exist specific factors, which contribute to corporate identity formation within banking industry and should be common for major commercial banking industry participants.

From this hypothesis there was formed the aim of the research – to explore the corporate identity formation of the major Latvian commercial banks by surveying commercial bank representatives.

In order to test the research hypothesis the authors have divided research aim in several consecutive tasks:

1. Selected literature analysis on the corporate identity concept – review of corporate identity definitions and the latest research papers regarding corporate identity concept and related issues;
3. Semi-structured expert interviews with bank representatives to determine differences and similarities of different corporate identity formation based on corporate identity framework by Melewar and Jenkins.
4. Analysis of research results and conclusion regarding possible reasons that explain differences of corporate identity formation for the surveyed commercial banks.

Therefore, this research should reflect what do actually commercial bank representatives consider to be the core of their organizations, what importance do they attribute to corporate communications and integrated marketing management, and what are key factors that differentiate them from other banks.

The corporate identity framework by Melewar and Jenkins was chosen to be the most relevant theoretical model to describe the corporate identity formation in commercial banking industry, and it also helps to highlight specific factors that contribute to the relative importance of either corporate identity sub construct or dimension.

The structure of the paper is as follows. The next chapters provide the literature overview on corporate identity concept and overview of research methodology, followed by survey findings. Finally, analysis of survey results concludes the paper.



Literature overview

As noted by Melewar and Jenkins [1], there have been introduced and developed various definitions over time to describe the essence of the corporate identity and each of them relates to different mix of the organizational structure elements and management approach practice – starting from Dowling's [3] statement in 1986 for corporate identity to be "what an organization is", until more recent definitions, e.g. by Balmer and Soenen, [4] who assume corporate identity to be "mix as being composed of the mind, soul, and voice. The mind consists of managerial vision, corporate philosophy, strategy, performance, brand architecture, nature of corporate ownership, and organizational history. The soul consists of the subjective elements including the distinct values, mix of sub-cultures, employee affinities, and internal images. The 'voice' is the total corporate communication and consists of its uncontrolled communication, controllable communication, symbolism, employee and corporate behavior, and indirect external/third party communication". This also relates to definition by Ollins [5] who assumes corporate identity management to be "the explicit management of all the ways in which the organization presents itself through experiences and perceptions to all its audiences".

More recent research papers regarding corporate identity relate to cross-disciplinary examination of the identity concept and thus conclude that corporate identity should be analyzed broader than simple marketing concept. For instance, Cornelissen, Haslam, and Balmer [6] explore issues of social, organizational and corporate identity indicating differences in the form and focus of research into these three topics. According to them, the social identity work generally examines issues of cognitive process and structure; organizational identity research tends to address the patterning of shared meanings; studies of corporate identity tend to focus on products that communicate a specific image. Nonetheless, across these areas there is general consensus that collective identities are (a) made viable by their positivity and distinctiveness, (b) fluid, (c) a basis for shared perceptions and action, (d) strategically created and managed, (e) qualitatively different from individual identities and (f) the basis for material outcomes and products.

Karaosmanoglu and Melewar [7] provide a research agenda to examine the relationship between corporate communication, identity and image and present a conceptual framework for further empirical testing.

In contrast, Bouchikhi and Kimberly [8] argue that "visible elements of a firm are held together by a set of shared beliefs – sometimes implicit, sometimes explicit – that define its essence. This set of shared beliefs, called I-dimension, gives the visible elements of the firm coherence and puts boundaries around how much change is possible without altering its essence". They interpret corporate identity through I-dimension that "resides in multiple anchors, such as core business, knowledge base, nationality, operating philosophy, a legendary founder, a governance structure, or combinations of these". According to Bouchikhi and Kimberly, "any aspect that key stakeholders (employees, owners, suppliers, customers, bankers, shareholders) view as core, enduring, and distinctive about an organization is part of its identity."

To conclude, despite the existence of various corporate identity definitions, the literature review reflects that corporate identity formation framework by Melewar and Jenkins is the most relevant theoretical model for the analysis of commercial bank corporate identity due to its



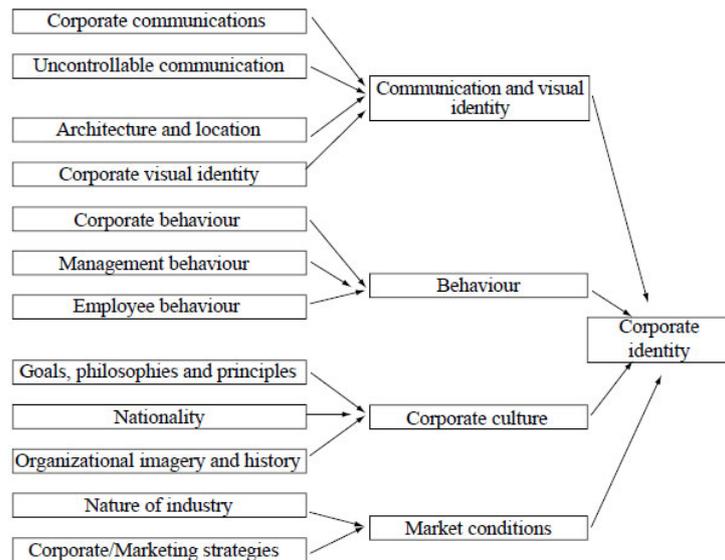
comprehensive mature bringing together various marketing management and organizational management perspectives that all contribute to formation of the corporate identity.

Corporate Identity Framework

According to Melewar and Jenkins [1], corporate identity is made of several sub-constructs, which contribute to formation of corporate identity of any organization. These general sub constructs are:

- communication and visual identity;
- behavior;
- corporate culture;
- market conditions.

See Figure 1 for Corporate Identity Model.



Source: Melewar and Jenkins (2002). Corporate Identity Model

Figure 1. Corporate Identity Model by Melewar and Jenkins [1]

Each of these sub constructs or dimensions joins several groups of factors relating to the formation of the specific sub construct:

1) Communication and visual identity includes:

- Corporate communications – any communications solutions and activities, internal and external, which are managed and implemented by the bank employees. According to Melewar and Jenkins [1], “corporate communication encompasses management communication, marketing communication, and organizational communication. Of the three, management communication is the most important,



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as it is the primary means by which top level managers disseminate the goals and objectives of the organization to internal stakeholders.” (p. 82).

- Uncontrollable communication – this factor relates to the communication between bank employees and the outsiders - external parties or stakeholders. Moreover, taking into account the increasing availability of the Internet and changing media consumption patterns, this factor would include also online communication in social networks and media, gossip, opinions and communication by any external parties within the Internet environment.
 - Architecture and location – this relates to the physical location of the office building and the office premises.
 - Corporate visual identity – visual identity guidelines and their implementation in daily communication, media, and working environment, both internal and external.
- 2) Behavior includes:
- Corporate behaviour – any actions by company in general;
 - Management behaviour – top management behaviour;
 - Employee behaviour – any behaviour reflected by company employees.
 - As noted by Melewar and Jenkins [1], “the most problematic area of classification appears to be corporate communication and behavior... Behavior, in a sense, is the non-verbal, intangible aspect to communication. Behavior includes actions on the part of the organization and its employees.” (p. 81).
- 3) Corporate culture includes:
- Goals, philosophies and principles – besides overall business principles of “how things are being done around here” this factors relates to company philosophy – mission, vision, values, and credo.
 - Nationality – origin of the initial company emergence; also can relate to the geographic location of company headquarters, nationality of majority shareholders. As shares of the commercial banks surveyed in this research are not traded in stock exchange, this factor would mainly relate to the nationality of majority shareholders.
 - Organizational imagery and history.
- 4) Market conditions:
- Nature of industry – as noted by Morison [9] and cited by Melewar and Jenkins [1], “studies of corporate identity in the banking industry illustrate the difficulty in projecting an individual identity when the generic industry identity remains so strong”. (p.85).
 - Corporate/marketing strategies implemented by the company.

The main advantage of this model is that it brings together the most commonly used and researched factors to describe the formation of corporate identity from the marketing management (communications, visual identity), organizational management (corporate culture, behaviour), and general strategic management (market conditions) perspectives.

It is regarded as benchmark model for corporate identity analysis by many researchers due to its comprehensive nature and generic nature that includes various managerial areas.



Methodology

Expert methods are the research method mainly used with aim of drawing out informed opinion and elicitation of knowledge. There exist several kinds of expert methods, like Delphi method, expert panels, brainstorming, road mapping, scenario analysis, SWOT analysis, and others.

The research method used in this paper to obtain the necessary data was the interviewing of experts by using semi-structured survey (see Appendix 1) which consists of generally open questions related to corporate identity sub constructs and general marketing communications issues. The survey was prepared as semi-structured to provide authors with general interview structure, but also allow experts to provide insights on the issues brought up by survey questions and to comment on those corporate identity formation factors, which possibly are not included in framework by Melewar and Jenkins.

In total, there were 4 communications managers interviewed, all four representing the middle management level employees, who are regularly involved into and provide support during the strategic decision making processes by the top management representatives regarding corporate communications issues and integrated marketing solutions in general that are actual and relevant for the entire organization.

The opinions of the interviewed experts can be regarded to express the official and true opinion of the commercial banks due to the fact that the respective employees are directly related to the management of corporate communications and development of any integrated marketing communications solutions. In addition, the actual involvement of the experts in daily marketing issue management together with the scope of responsibilities and duties managed by the surveyed experts eliminated need to review and evaluate their responses with other management representatives as their opinions can be regarded the most realistic and applicable for the respective commercial bank from the marketing management point of view.

The survey answers and overall results were interpreted by applying them to corporate identity framework model by Melewar and Jenkins. Each of the model sub constructs was discussed during the semi-structured interview to assess its relative importance to the overall corporate strategy of the bank, its marketing strategy, as well as the operations management in respect to corporate communications and marketing management.

The graphical interpretation of results was applied, using column graph with 4 degree scale axis (values - none, low, medium, high) to highlight the differences in the relative importance of various corporate identity sub constructs mix.

Value "None" was assigned in case none of factors is relevant for the respective bank and correspondingly entire sub construct or dimension itself reflects no major importance to the identity of the respective commercial bank.

"Low" importance was assigned in case only one factor was relevant and applicable for the respective bank, making entire dimension only partially relevant and important for the formation of the bank's identity.

"Medium" importance was assigned in case two or three factors of the respective sub construct were relevant but they were not distinguished as strategic priorities for the bank.



“High” importance value would be assigned to the sub construct, which is relevant for bank from the strategic point of view and acknowledged by the top management as strategically important and thus providing competitive advantage. In this case factors included in the respective sub construct would be relevant for the respective commercial bank.

The analysis of the obtained primary research data from expert survey was complemented by analysis of the secondary research data available on the public websites of the surveyed commercial banks.

Survey Results

The survey of the commercial bank representatives showed that there exist common corporate identity dimensions that leave impact on and are shaping any commercial bank industry participant’s identity, while the relative importance of other factors has unique combination in comparison with other commercial banks.

The common most important factor for all banks is the market conditions factor, which can be explained by both, the nature of the industry and its dynamics, and the similarities of the corporate strategies implemented by these banks. As noted by Melewar and Jenkins (2002) and Morison (1997), the generic banking industry identity is so strong that it is sometimes difficult to distinguish between industry and individual bank identity, therefore, making this dimension highly important for all researched banks.

The figures in the chapter further reflect relative importance of the corporate identity dimensions for each individual bank to describe the unique mix of factors in the corporate identity formation followed by brief comments from interviews that relate to respective corporate identity dimensions of the researched banks.

SWEDBANK

Communication and visual ID	HIGH importance
Behaviour	HIGH importance
Corporate culture	LOW importance
Market conditions	HIGH importance

Figure 2. Corporate identity mix of Swedbank

Source: own study.

- Swedbank is the biggest banking market player, and its dynamics are greatly influenced by market conditions, and correspondingly the customer perception and expectations are shaped by general industry dynamics. Therefore, it can be assumed that most of customer associations and notion of the general banking industry identity is associated with the identity of Swedbank and vice versa.



- Swedbank is the leader in the internet payments/e-banking by 98,2% of payments being processed online.
- Visible and well developed visual identity, not only in advertising but also on service/branch level and the environment branding.
- Swedbank office building “Sauls Akmens” and its architecture is also strongly associated as a corporate identity element and is frequently used in corporate communication activities.
- High focus on employee behaviour through customer satisfaction and service excellence, focus on expert opinion leading on top management behaviour level. Corporate activities (e.g. sponsorship activities, communication projects) are clearly aligned with corporate strategy.
- Swedbank management board representatives are doing regular branch visits to maintain connection with their operational staff and lower level management representatives to obtain the real insights about bank’s performance. Therefore this also supports importance of behaviour dimension to Swedbank identity formation.
- Conflict between changes in corporate strategy and corporate culture – after re-branding from Hansabanka to Swedbank it was not clearly communicated to customers that the bank has changed their business strategy from providing low cost banking retail services to provision of the financial advisory and the subsequent introduction of the new values of the bank along with changing market environment and escalation of the worldwide economic crisis in 2008.
- Despite the existence of pre-defined mission and vision statements from the mother bank - Swedbank Group, and activities implemented by communications department to explain values to its employees, the corporate culture dimension should be considered of medium importance as there still exists gap between perception of the corporate culture by internal (Swedbank employees) and external stakeholders.

SEB

Communication and visual ID	MEDIUM importance
Behaviour	MEDIUM importance
Corporate culture	HIGH importance
Market conditions	HIGH importance

Figure 3. Corporate identity mix of SEB Banka

Source: own study.

- SEB Banka identity is mostly shaped by market conditions – it puts more focus on business processes and direct long-term relationships with customers rather than communication and general image building. Still, consistent marketing and corporate communications are used to attract new customers and promote products, but this goes in line with general corporate and business strategy.



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- There is well developed and coherently integrated visual identity in communications activities as well as on the branch level.
- Bank has aligned corporate culture and adapted employee mission statement “to be the most trusted bank in post-crisis period”, which reflects intention of the bank to align the mindset of all employees with general corporate and business strategy taking into account the changes that have happened in market and business environment in general. This also reflects strategic decision of the Latvian bank to adapt general mission statement of mother-bank SEB Group to the Latvian environment and thus highlight importance of this dimension in the formation of overall bank identity.
- Employee behavior unclear as from one side there are few middle and top management communicating in mass media as financial experts, but from the other side, bank seems not to have explicit behaviour standards. However, the behaviour dimension is strongly influenced by the corporate culture dimension that reflects very clear standard and benchmark in terms of treating bank’s customers.

DnB Nord

Communication and visual ID	MEDIUM importance
Behaviour	MEDIUM importance
Corporate culture	LOW importance
Market conditions	HIGH importance

Figure 4. Corporate identity mix of DnB Nord

Source: own study.

- DnB Nord strategy is to focus on business processes and transparent relationships with their customers. Bank has also clearly defined risky and unwanted customer segments (gambling, non-transparent Internet business enterprises);
- Coherent and managed reaction to volatile and changing market situation during the recent economic crisis confirmed bank’s timely risk management losses during economic crisis.
- Bank has an original visual identity and maintains regular communication in mass media, but the overall image can be evaluated as rather conservative. Communication and visual identity can be considered to have medium importance to DnB Nord as this is niche bank and it is not trying to achieve leading position in terms of brand awareness. In fact, its corporate and marketing communications are targeted to specific target audience in order to achieve intended business goals.
- DnB Nord have opened their new office building in the district, which is considered as evolving business district where majority of financial services providers are about to locate their representative offices. Therefore, it is important for DnB Nord to be associated and perceived as one of leading banking industry players also in terms of office location.



- Behaviour dimension is considered to be of medium importance for the bank as from one side DnB Nord bank does not have explicit standards of ordinary employee behaviour, while from other side the corporate behaviour is expressed through several corporate communications activities and top management behaviour is expressed through presence in media as financial experts. The missing element to consider behaviour as highly important dimension in corporate identity formation is employee behaviour as there is no unified policy, nor explicit focus on continuous service quality improvements. Even though bank admits having developed internal sales management system, this relates more to the tools available for achievement of the intended business goals.
- DnB Nord has unclear (not defined) mission, vision and values, and it can be explained due to frequent re-branding and identity changes caused by frequent mergers and shareholder structure dynamics. Therefore, corporate culture dimension has been evaluated to be of low importance for DnB Nord bank.

NORDEA

Communication and visual ID	HIGH importance
Behaviour	MEDIUM importance
Corporate culture	HIGH importance
Market conditions	HIGH importance

Figure 5. Corporate identity mix of Nordea

Source: own study.

- Nordea has always been considered as a conservative bank with strong corporate culture and values. Aggressive market penetration in the early 2000s was implemented using active communication solutions.
- There is quite high focus on mass communications, active sponsorship (sports, culture), product and corporate brand visibility, supported by respective campaigns.
- Nordea uses its office building “Nordea house” in corporate communications activities as a unique element of its corporate identity.
- Bank emphasizes that one of the key values underlying its approach towards relationships with customers is transparency.
- Employee behaviour dimension is less visible, but it is definitely supported by strong internal culture and clearly stated mission and vision statements, list of dominating values. Moreover, bank maintains active corporate communications with external stakeholders through various PR and investor relations activities. Top management representatives and department specialists are actively communicating in mass media as financial experts and thus strengthen the image of Nordea as an opinion leader in banking sector and macroeconomics field in general.



Conclusions

Banking industry has always had quite strong image of generally conservative industry with clearly defined management principles and focus on money management as core of its existence. The survey of bank representatives confirmed that the recent economic crisis and the burst of real estate bubble in U.S. and Europe has left similarly strong impact on all Latvian banks, thus, making market conditions to be the strongest factor that has shaped bank corporate identity in Latvia in recent years. Losses were different for each individual bank as some of them were preparing for the worst case scenario and did quite well during crisis due to timely risk management (e.g. DnB Nord, SEB Banka), while others made significant losses while trying to maintain market leader status (e.g. Swedbank). However, it still confirms the importance of corporate strategy and general banking industry conditions as extremely important factor shaping individual bank identity within the volatile market.

Research showed that corporate identity of all four banks reflect the four corporate identity dimension in their overall corporate identity with differences in the significance and relative contribution of each factor to the formation of the overall bank identity.

Corporate communications and visual identity can be regarded as the second most important sub construct to form corporate identity due to the fact that all four leading banks do implement integrated communications to generate their corporate and product brand awareness. Important to note, that all banks confirmed one corporate brand strategy for the entire product/services group, which is a strategic move from the promotion of separate daughter company brands (e.g. Swedbank and Swedbank Leasing) to single brand strategy which in practice implies that customer entering bank does receive all services from a single provider – a bank.

Corporate culture was concluded to be the most volatile corporate identity factor due to differences in its significance for different banks. For instance, frequent re-branding of DnB Nord bank has caused a situation when bank has no clearly stated mission and vision statements resulting in poor corporate culture, while their close competitors, Nordea bank, confirm that their activities are clearly values-based and the entire range of Nordea business activities in Latvia is aligned with their mother-bank values.

Finally, behaviour was found to be also important factor in corporate identity formation as part of overall strategy for some banks. For instance, Swedbank has included employee behaviour in their overall strategy with aim to maintain the leader status in banking service provision both, from services provision perspective in branches and also from PR perspective by promoting their top and divisional managers in mass media as the financial experts whose opinion and behaviour should be regarded in respect to Swedbank overall business.

Future research could focus on the commercial bank brand building analysis by surveying customers of the respective banks followed by processing of similarities and differences between what is communicated by the bank (their intended positioning) and what do customers actually perceive as their identity and image.



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Appendix 1

SURVEY

1) Overall bank's business strategy

- a. What is the bank's target audience, and what segment (s) bank aims to work with? What are the preferred customers and how they coincide with the existing customer base?
- b. What has changed in the bank's corporate business strategy due to the recent economic crisis?
- c. How is it investigated whether the bank's customers receive the desired services and services (expected vs. actually received)?

2) Employees

- a. How the management explains the bank's values, vision, and mission to employees?
- b. Is there a tagline / slogan that best describes the desired attitude of staff towards clients?
- c. How does the bank manage top management image and promote their publicity?

3) Customer Service and Reputation

- a. What are the major changes in the reputation assessment of post-crisis period? What customers are more likely to be disappointed with?
- b. What is the Bank's strategy for problem-solving with so-called bad customers?



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- c. Are there any group of customers / industry, which bank is not serving at all?
- d. What is the bank's sponsorship strategy? Are there any areas, which are not supported according to bank guidelines?
- e. What studies and measurement is bank using for the reputation evaluation?

4) The visual identity, promotional communications

- a. Is bank using several brands of products in serving various customer segments?
- b. What was the basis of visual identity and brand change? Is the change is proved and if the yes / no, why?
- c. What is more important in the advertising communication – corporate brand awareness or promoting specific bank products? Why?
- d. Is it is possible to distinguish between corporate identity and image reputation of your bank? What do you think generally makes up your bank's corporate identity?



SIGNIFICANCE OF SMALL AND MEDIUM SIZE ENTERPRISES IN THE WORLD ECONOMY AND MAJOR PROBLEMS THAT THEY EXPERIENCE IN ACCOUNTING AND REPORTING

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Keywords: small and medium sized enterprises, international accounting standards, accounting and reporting, classifications.

Abstract

SME's are vital for the growth of any economy in the world. They occupy a large proportion among the total amount of enterprises taken together. They also provide for employment to a vast majority of people and thereby impart entrepreneurial and innovative skills.

SME's are defined in different countries and regions various ways. Some term them in different terms such as Small and Medium sized businesses. Others define them in relation to the number of employees employed by them. But the basic definition of a SME remains quite the same all over the world and it is defined by its number of employees, turnover and the size of its Balance sheet.

SME's are put into classifications according to the category they belong to and size. The classifications are as follows.

1. Partner enterprises
2. Autonomous Enterprises
3. Linked enterprises.

Ofcourse the categories are revised and updated at intervals so that they are relevant to the times.

The EU has given the EU a new definition to promote new enterprises and innovation, improve access to capital and prevent misuse of the SME status.

The development of the SME's have been rapid in most countries of the world and accordingly have been defined in those countries according to their size and importance.

In the UK SME's have been defined for staistical purposes. In the US the definition of small business is set by a government department called the small business administration size standards office. In Asia it is based on the size of the capital and labour employed.

Generally all SME's face common problems. These problems genrally relate to accounting and reporting. These are the major problems faced by the SME's, especially because the accounting and reporting requirements of most countries are usually set and prepared to meet the reuirements of large and medium sized industries. Even some of the international



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requirements are generally for bid organisations. Also qualified accounting firms are more inclined to cater to the needs of the large and medium sized organisations.

Besides, entrepreneurs who venture in to SME type of organisations are usually not very educated and lack the quality management skills to handle these problems of accounting and reporting.

Ofcourse, there have been certain changes to the legislations of various countries to allow the SME's to receive more advise and education on these matters and other allied problems.

SME's have a very bright future due to their flexibility and their cost efficiency. They certainly have proved to be of immense importance and use in society and vital for any economy.

Environmentally too they have proved to be of significance though not in a very big way. Most economies have realised their worth and are in favour of them in a big way.

Aim and objectives of the research. The aim is to coorelate the vatrious International Accounting Standards with the different accounting and financial regulations and rules the SME's have to abide by. The IAS should as a tool to assist them in their functioning to smoothen and improvise their working bring about efficiency and increase in productivity. The IAS should be applied to the SME's to help them reduce their tax burden and help coordinate the activities of the SME's. The IAS should be applied so that the financial and accounting reporting should be made simpler and understandable.

Introduction

Small- and medium-sized enterprises (SME) are an important ingredient for stable and equitable growth in any national economy. Yet despite specific global efforts to strengthen the SME sector, these businesses face a number of stifling financial and regulatory barriers. In EU micro, small and medium-sized enterprises are socially and economically important, since they represent 99% of all enterprises and provide around 65 million jobs and contribute to entrepreneurship and innovation.

1. Definition of SME

Small and medium enterprises or SMEs, also called small and medium-sized enterprises and small and medium-sized businesses or small and medium businesses or SMBs are companies whose headcount or turnover falls below certain limits.

The abbreviation SME occurs commonly in the European Union and in international organizations, such as the World Bank, the United Nations and the WTO. The term small and medium-sized businesses or SMBs has become more standard in a few other countries.

EU Member States traditionally had their own definition of what constitutes an SME, for example the traditional definition in Germany had a limit of 500 employees, while, for example, in Belgium it could have been 100. But now the EU has started to standardize the concept. Its current definition categorizes companies with fewer than 50 employees as "small", and those with fewer than 250 as "medium". By contrast, in the United States, when small business is defined by the number of employees, it often refers to those with less than 100 employees,



while medium-sized business often refers to those with less than 500 employees. However, the most widely used American definition of micro-business by the number of employees is the same of that of European Union: less than 10 employees [1]

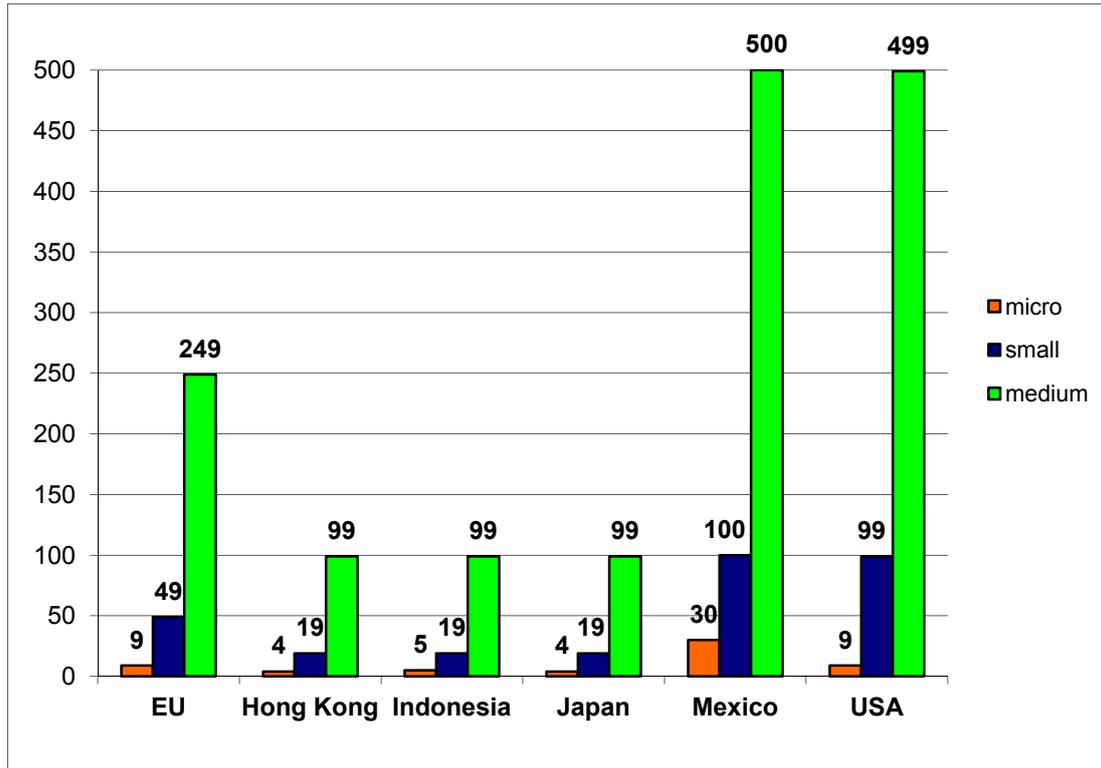


Figure 1. Comparison of maximal number of employees in SME in some countries [2]

In general, statistical definitions of an SME use one or more of three defining measurements:

- number of employees;
- turnover;
- size of the balance sheet.

2. Definition of SME in EU Depending on Their Category

Micro, small and medium-sized enterprises are socially and economically important, since they represent 99% of all enterprises in the EU and provide around 65 million jobs and contribute to entrepreneurship and innovation. However, they face particular difficulties, which the EU and national legislation try to redress by granting various advantages to SMEs. A legally secure and user-friendly definition is necessary in order to avoid distortions in the Single Market.



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EU definition of micro, small and medium-sized enterprises is provided in Commission Recommendation 2003/361/EC [3].

Companies are classified according to their category (autonomous, partner or linked) and size (micro, small or medium), as defined below:

PARTNER ENTERPRISES

My enterprise holds at least 25%, but no more than 50% in another and/or another holds at least 25%, but no more than 50%, in mine.

AUTONOMOUS ENTERPRISES*

My enterprise holds less than 25% (capital or voting rights) in another and/or another holds less than 25% in mine.

LINKED ENTERPRISES

My enterprise holds more than 50% of the shareholders' or members' voting rights in another and/or another holds more than 50% in mine.

Table 1

Classification of SMEs in EU

Enterprise category	Headcount	Turnover	or	Balance sheet total
Medium-sized	< 250	< € 50 million		< € 43 million
Small	< 50	< € 10 million		< € 10 million
Micro	< 10	< € 2 million		< € 2 million

Depending on the category in which the enterprise fits, some or all of the headcount and financial data from other partner or linked enterprises may need to be counted when calculating whether the SME criteria are met.

The revision ensures that enterprises, which are part of a larger grouping and could therefore benefit from a stronger economic backing than genuine SMEs, do not benefit from SME support schemes. The increase of the financial ceilings is designed to take into account subsequent price and productivity increases since 1996, however the headcount ceilings remain fixed.

On 6 May 2003 the Commission adopted a new Recommendation 2003/361/EC regarding the SME definition [5], which replaced Recommendation 96/280/EC as from 1 January 2005 [6]. The revision takes account of the economic developments since 1996 and the lessons drawn from the application of the definition. It increases legal certainty, while reducing possibilities of its abuse, particularly with regard to state aid, Structural Funds and the Research and Development Framework Programme [7].

The new definition, effective since 1 January 2005, reflects economic developments since 1996 and a growing awareness of the many hurdles confronting SMEs.

* Note: there are exceptions for certain types of investors. See Article 3(2)(D) of Annex of the Commission Recommendation 2003/361/EC [4].



3. The Aim of New Definition in EU

The new definition aims to:

- promote micro enterprises;
- improve access to capital;
- prevent abuses of SME status;
- promote innovation;
- improve access to research and development.

The thresholds for the number of employees have remained the same, but changes were made to the financial thresholds in an attempt to ensure that enterprises that are part of a larger grouping cannot benefit from SME support schemes.

More than larger firms, which at least have the option of handling many of their needs in-house, SMEs rely on other firms or institutions for services such as staff training, and marketing.

Three broad groups of SMEs can be distinguished, according to their relationships with other firms:

- those that are sub-contractors;
- members of clusters;
- those that are fairly independent.

SME clustering is common throughout the world. Enterprises often develop in a cluster or bunch together, especially when operating in the same or related industrial sectors, to increase their competitive advantage through co-operative endeavors.

4. SMEs Development in UK [8]

In UK the following definition is applied to SME for statistical purposes:

- micro firm: 0-9 employees;
- small firm: 0-49 employees (includes micro);
- medium firm: 50-249 employees;
- large firm: over 250 employees.

In 2004, the DTI estimated that of the 4.3 million business enterprises in the UK, 99.9% were small to medium sized.

At the start of 2004, SMEs accounted for:

- more than half (58%) of all UK employment (small enterprises accounting for 46.8%; medium-sized enterprises accounting for 11.7%);
- more than half (51.3%) of the UK's estimated business turnover of £2,400 billion (small enterprises accounting for 37%; medium-sized enterprises accounting for 14.3%) [9].

Statistics for 2006 published by the DTI Small Business Service (SBS) Statistics Unit show that out of 4.5 million businesses in the UK, 99.3% were small firms with fewer than 50 employees, and 0.6%, were medium firms with 50-249 employees [10].



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In the UK, sections 382 and 465 of the Companies Act 2006 define a SME for the purpose of accounting requirements. According to this a small company is one that has a turnover of not more than £5.6 million, a balance sheet total of not more than £2.8 million and not more than 50 employees. A medium-sized company has a turnover of not more than £22.8 million, a balance sheet total of not more than £11.4 million and not more than 250 employees. It is worth noting that even within the UK this definition is not universally applied.

5. SMEs in USA

In the USA, the definition of small business is set by a government department called the Small Business Administration (SBA) Size Standards Office. The SBA uses the term “size standards” to indicate the largest a concern can be in order to still be considered a small business, and therefore able to benefit from small business targeted funding. The concern cannot be dominant in its field, on a national basis. It must also be independently owned and operated. Unlike the UK and the European Union which have simple definitions applied to all industries, the US has chosen to set size standards for each individual NAICS coded industry. This variation is intended to better reflect industry differences. The most common size standards are

- 500 employees for most manufacturing and mining industries;
- 100 employees for wholesale trade industries;
- \$6 million of annual receipts for most retail and service industries;
- \$28.5 million of annual receipts for most general & heavy construction industries;
- \$12 million of receipts for all special trade contractors;
- \$0.75 million of receipts for most agricultural industries.

Approximately one quarter of industries have a size standard that is different to those listed above. The most recent scheme was originally produced in 2002, but has had amendments integrated on a rolling basis [11].

6. SMEs in Asia

The SME sector creates most of the employment in the Asia-Pacific region and is the backbone of regional economic growth. Almost 95 percent of enterprises in the Asia-Pacific region are SMEs [12]. They are a key driver of national economies. Today, outsourcing has emerged as one of the fastest growing business strategies amongst large companies and multinational companies. Increasingly, these companies outsource the supply and management of non-core activities to SMEs, mainly in the area of manufacturing. This outsourcing trend among large companies and multinational companies has created opportunities for SMEs to become suppliers. In order to take advantage of these opportunities, SMEs need to be part of the globally integrated production system of the multinational companies. Hence, opportunities in the Asian region are abundant for companies to participate in the global outsourcing, provided the requisite requirements are met.

In general, Asia as a region, offers an expanding and vibrant market, with China, India and Indonesia alone accounting for more than two billion people. Increased regional



cooperation will allow Asian countries to complement each other by specializing in a particular sector or segment.

Regarding definition of SME, for example, in India, any industrial undertaking with fixed assets less than 10 million Rupees (around 173 000 Euro) is classed as small-scale, which is very small comparing to other countries and therefore Indian small-scale companies have difficulties to compete in international markets.

7. Significance of SMEs in Latvia

Since Latvia is EU member country, the same EU criteria for SMEs are applied in Latvia. SMEs in Latvia form a large share in national economy and have important role in GDP generation and employment. In 2002 in Latvia there were 42549 economically active enterprises, and out of that number 42275 or more than 99% were SMEs. 42.5% of SMEs were operating in branch of services (trade), but in production only 15%. In SMEs are employed 69.9% of country's total private sector employees producing 63.2% of GDP.

According to provisional data, there were 66 810 economically active enterprises and commercial companies in Latvia in 2007, of which more than 99.4% fell in the category of SMEs. The distribution of economically active SMEs in Latvia according to their size is similar to the one in the EU member states: micro enterprises – 76.9%, small enterprises – 18.7%, medium-sized enterprises – 3.8%, large enterprises – 0.6%. 69.9% of private sector employees in the country are employed in SMEs, which create 63.2% of GDP.

Important indicator characterizing economic activity is the number of economically active enterprises and commercial companies per 1000 inhabitants. This indicator in Latvia has grown constantly over the last 7 years from 17 in 2001 to 29 in 2007. One of indices of development of SMEs is its number per 1000 residents. In Latvia this indice in 2004 was 18.14, which is considerably less than EU average of 51[13].

Statistical data of the recent years indicates positive trends in growth of the number of newly established enterprises. According to the statistical data calculated by the "Lursoft" in co-operation with the Register of Enterprises of the Republic of Latvia, 14 185 enterprises and commercial companies were registered in 2007, which is the biggest number of newly registered entities conducting commercial activity in the last 13 years. It is by 21.24% more than in 2006 (11 700).

Nevertheless, promoting establishment of newly founded enterprises is not sufficient to ensure sustainable development. In order to ensure the rise of competitiveness, these newly established enterprises have to be viable. Statistical data shows that the total number of enterprises increases by approximately half of the growth of the number of newly established enterprises, hence indirectly indicating problems in regard to their viability.

On January 27, 2004, the Cabinet of Ministers approved the Basic Guidelines of the Small and Medium-Sized Enterprises' Development Policy in Latvia. This document lays down the basic principles of activity of the government, long-term objectives and tasks, as well as the main directions of the SME development policy. The goal of the Basic Guidelines is to ensure promotion of favourable environment for business activity, spur initiative of entrepreneurs and lessen the total risk, prevent obstacles to business activity,



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and foster stability and efficiency of the financial system and capital market in order to improve competitiveness of enterprises in the market. The Basic Guidelines foresee implementation of a policy based on the best practices of companies of the developed countries in accordance with the activities outlined in the European Charter for Small Enterprises, at the same time also taking into account the specifics of SME development problems in Latvia. For implementation of the Basic Guidelines, the Cabinet of Ministers approved the Programme on Development of Small and Medium-Sized Enterprises of Latvia in 2004-2006 on May 25, 2004.

Taking into account that 2006 was the last year for implementation of the Programme on Development of Small and Medium-Sized Enterprises of Latvia for 2004-2006 and of the National Programme of Innovation 2003-2006, and in accordance with the EC practice to review the entrepreneurial, innovation and industrial development policy planning together, the Ministry of Economics has worked out a new Programme for Promotion of Business Competitiveness and Innovation in 2007-2013.

The programme comprises set-ups and action policy of business competitiveness promotion, innovative activity and industrial development, describing the vision of competitiveness promotion as well as development of innovation and industry for the next 7 years. Main goals of the programme are: to provide favourable conditions for development of business; promote increase of capacity and efficiency of the National Innovation System; achieve substantial growth of competitiveness and productivity in industry, fostering increased volumes of manufacturing products with a high value added.

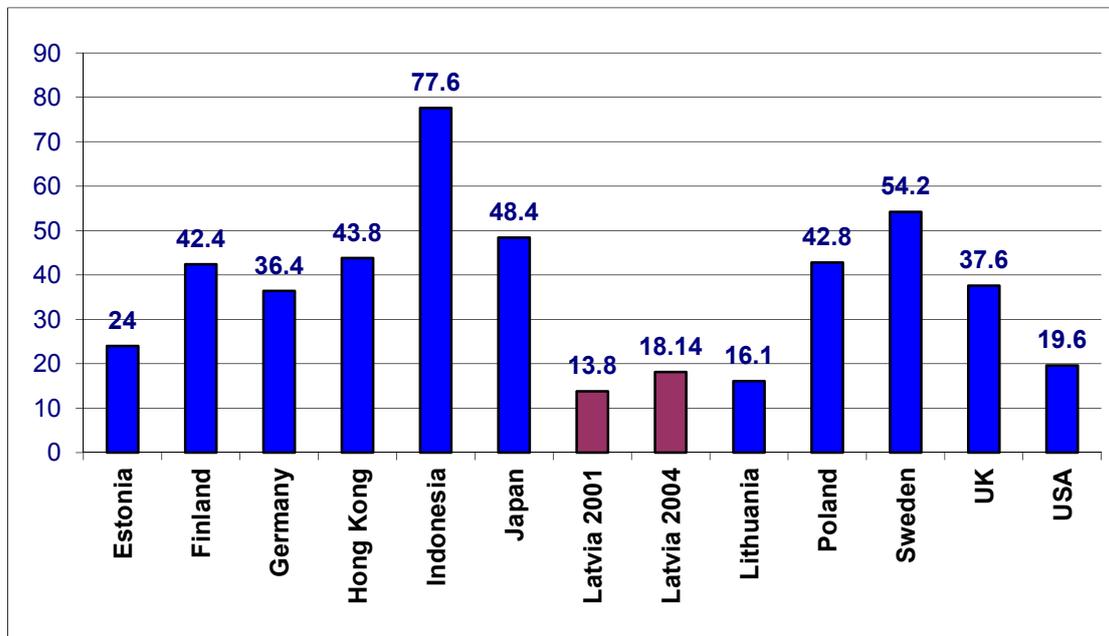


Figure 2. SMEs per 1000 inhabitants in some countries [15]



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The programme defines specified measures to be carried out for improvement of business environment, promotion of availability of finances, development of new entrepreneurship initiatives and fostering their competitiveness, promoting awareness of society on the role of innovation in competitiveness promotion, for contribution to co-operation of industrial, educational and science sectors, transfer and commercialisation of knowledge, as well as for promotion of development of industries and raising their productivity.

The measures reflected in the action plan for implementation of the programme are financed in the framework of the budget of the Ministry of Economics and other involved ministries in 2007. In the period of 2008-2013, the action plan includes programmes co-financed from the EU Structural Funds, activities planned in the framework of the budget of the Ministry of Economics and other involved ministries, as well as the necessary additional budget. The action plan does not include the measures that are included in action plans for implementation of other programmes. Management, co-ordination, supervision and assessment of implementation of the programme will be carried out by the Ministry of Economics.

The number of SMEs in Latvia is permanently increasing and according to data of the Ministry of Economics [14] in Latvia in 2006 from total of more than 55 600 economically active companies almost 55 280 or 99.4% corresponded to definition of SME. Out of these number micro enterprises (max number of employees 9) are 74.9%, small (max number of employees 49) – 20.9% and medium size (max number of employees 249) – 4.2%.

8. Common Problems of SME in Accounting and Reporting

2007 annual session of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR) of UNCTAD, which was held in Geneva from 3 to 5 July, focused on the accounting needs of SMEs [16]. Experts agreed that the major problem is lack of meaningful financial information on SMEs, as many of them do not keep proper financial records and accounts.

One major problem lays in the fact that existing international and some national accounting and reporting requirements have been intended primarily to meet the accounting and reporting needs of large, listed companies. In most economies, the SME sector is the least well placed to implement those requirements. In some countries weak accounting infrastructure, inadequate information systems and lack of a sufficient number of fully qualified accountants are exacerbating the problem.

The experts also recognized that SME entrepreneurs fear that transparent reporting would expose them to excessive taxation and are therefore very reluctant to maintain proper accounting records and generate meaningful financial information. Furthermore, many entrepreneurs may not be convinced of the usefulness of accounting and financial reporting requirements for control and decision-making purposes. Many lack basic education in this area and fail to see that accurate accounting information would enable them to manage their firms better, access finance more easily, and assist them in computing their taxes properly.

The experts agreed on essential characteristics that a financial accounting and reporting framework should have to alleviate the problems that SMEs face. Such a framework needs to be simple, understandable, user-friendly and take into consideration the environment in which



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SMEs operate. It should be capable of generating useful management information. It needs to be flexible enough to accommodate the growth of the business and increase the potential of those SMEs that may expand to use International Accounting Standards.

Conclusions

- Although their significance is difficult to measure, it is clear that small and medium-sized enterprises (SMEs) are the mainstay of most economies, particularly in terms of employment and overall development impacts;
- Although their individual social and environmental impacts are small, the cumulative impacts of SMEs are highly significant, offering the potential for significant progress towards sustainable development;
- There are major problems in accounting for SMEs. The existing transparency and disclosure mechanisms, including the international accounting framework, are intended primarily to meet the accounting and reporting needs of large, listed enterprises. However, transparency and disclosure are not any less important for SMEs if they are to compete, grow and access finance and partners. In almost all countries, the majority of enterprises are small or medium-sized. Since accounting and reporting regulations are not usually specifically designed for them, SMEs are required to conduct their accounting and reporting in accordance with regulations developed for large companies. In most cases, they are not well positioned to do so. SMEs lack expertise, infrastructure and other resources to implement them successfully. When SMEs prepare their financial reports in accordance with regulations that are not intended for them, the result is financial reports that are not useful for better internal management.

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CONTEMPORARY ERGONOMICS AND BUSINESS

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Abstract

Introduction. The purpose of this research is to examine changing conception and use of ergonomics as it interacts with the relationship between the employee and the organization, as presented within scholarly and industry literature dating 1990 – present.

The Research Questions driving this inquiry are as follows:

1. What is the relationship between ergonomics and business productivity success, as reflected in scholarly and industry literature dated 1990 – present?
2. How has the conception of ergonomics and the theoretical framework surrounding it changed in the period 1990 – present, as reflected in scholarly and industry literature?
3. Finally, how do the changes identified in response to research question #2 relate to more generalized changes in the conception of the workplace and employee/employer relationships?

Methods. The methodology followed is an original thematic and textual analysis on existing literature dealing with the value of ergonomics in the workplace, particularly as it relates to morale and productivity and/or success of the business venture. The focus is not only the results of the existing studies, but also an analysis of their thematic framework and the ways in which ergonomics are viewed. Scholarly articles dating 1990 – present are selected and analyzed.

Results. Ergonomic measures do lead to improved business outcomes, and success is manifested in various degrees and types. The conception of the role of ergonomics does appear to have changed in the period 1990- present, based on the articles surveyed. At the beginning of this period, ergonomics was viewed principally within the framework of risk prevention. Some authors expressed dissatisfaction with this framework. Subsequently, a new understanding of ergonomics as an integral component of a participatory workplace systems has emerged. It is hoped that the benefits of newer theoretical frameworks regarding ergonomics can subsequently be implemented and expanded upon for an ongoing improvement in results.

Introduction

Ergonomics is commonly defined as the arrangement of a workplace environment so as to promote health of the employees in that workplace. A more formal definition, from the International Ergonomics Association, defines the concept as follows [1]:



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Ergonomics ... is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance.

With its consciousness of the place of the individual within an integrated system, as described above, it is natural and imperative that ergonomic concerns exist on both an individual and a macro level. That is, ergonomics may relate to the arrangement of an individual workspace – for example, the height of the table and chair, the placement of the keyboard and computer monitor, and so on – or it may, conversely, relate to the arrangement of overall systems in a workplace. Of course, ergonomic concerns exist in industrial as well as office settings, though the specific accommodations that are made in each setting are different. In an industrial setting, the primary concern may be risk reduction and preventing injuries. The same risks are not present in all workplace settings. However, the common factor seems to be the potential of ergonomics to increase employee wellbeing, which can ultimately affect both organizational culture and success in terms of productivity.

Ergonomics is a relatively young science. Although the term was coined and became common in certain industries during the WWII era [2], the average person has been aware of ergonomics only in the past two or three decades. Even during this short history, however, there has been considerable development in the way the term is used and thought about. Generally speaking, it can be observed that ergonomics has a broader application and effect than what was originally conceived of. Whereas, originally, the emphasis was on decreasing risk in the workplace and preventing specific disorders, ergonomics has, more recently, become a concept that is closely and specifically related to the employer's ability and obligation to provide a safe, healthy workplace that is conducive to the overall health, wellness and wellbeing (both physical and psychological) of all members of the organization. There is also a distinction between classical and cognitive ergonomics, the latter term seeking to transcend the dualism between mind and body, and considering "how work affects the mind... [and] how the mind affects work" [3].

Moreover, a concurrent and ongoing evolution in the way that employees are viewed and managed has contributed to the evolution in the way we see ergonomics. Whereas the initial aims of ergonomics, to reduce injuries, had a modest effect on business productivity and success, I believe that the evolving model, in which ergonomics is a component of an overall healthy workplace, has the potential to increase business success on a broader and more comprehensive scale.

The purpose of this research is to examine changing conception and use of ergonomics as it interacts with the relationship between the employee and the organization, as presented within scholarly and industry literature dating 1990 – present. Through defining this evolution, it is hoped that the benefits of newer theoretical frameworks regarding ergonomics can subsequently be implemented and expanded upon for an ongoing improvement in results.

The Research Questions driving this inquiry are as follows:

1. What is the relationship between ergonomics and business productivity success, as reflected in scholarly and industry literature dated 1990 – present?



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2. How has the conception of ergonomics and the theoretical framework surrounding it changed in the period 1990 – present, as reflected in scholarly and industry literature?
3. Finally, how do the changes identified in response to research question #2 relate to more generalized changes in the conception of the workplace and employee/employer relationships?

Methods

The methodology followed is an original thematic and textual analysis on existing literature dealing with the value of ergonomics in the workplace, particularly as it relates to morale and productivity and/or success of the business venture. The focus is not only the results of the existing studies, but also an analysis of their thematic framework and the ways in which ergonomics are viewed. As discussed in the introduction, my hypothesis is that there has been an evolution in the ways in which ergonomics are viewed, and that this evolution is ultimately leading us toward increased success in the use of ergonomics to boost success in the workplace. Implicit in this focus is a recommendation that the ‘newer model’ or framework within which ergonomics is viewed, although it is still emerging, should be adopted universally as our context in which related issues are to be examined. Doing so will maximize the potential of ergonomics to improve the culture of the workplace and thereby increase productivity.

The methodology, therefore, is three-fold. First, scholarly articles and books dealing directly with the ability of ergonomics to increase productivity in the workplace were located. These scholarly works date from 1990 to the present, a period of just over 20 years. The earlier articles are from the period of time when ergonomics was just starting to become a concern and a ‘buzzword’ for employers.

Second, the content of the articles was assessed and analyzed. Two types of assessment are employed. First, as most of the articles present empirical information and findings about the efficacy of ergonomics to increase productivity, those results are noted. Moreover, the context within which each examination takes place, where relevant, is noted, as this has an impact on both the results and the discourse that is used to describe them.

Furthermore, the theoretical framework and the terms in which ergonomics are discussed in each scholarly work are closely examined. These terms, as well as the results, reveal the ways in which ergonomics is regarded, how it is studied, and what expectations are present with regard to its use. In a very real sense, discourse influences research, which in turn influences and informs practice. Themes in the literature are identified and discussed in the “Result” section, followed by a general statement and analysis regarding the evolution of the study of ergonomics and how it affects business success and practice.

Result

Findings

The earlier articles included in this study reveal a desire – in some cases a struggle – to define and refine relevant terms. For example, Hendrick [4] discusses the historical



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development of ergonomics in organizational design and management, implying that ergonomics already has a substantial though poorly defined history, and that common understanding of it needs to improve [4]. Eklund [5], using existing studies, assesses the overlap between ergonomics and various measures of performance in business. These measures include product design, ISO standard adherence, continuous improvement and Total Quality Management standards. The author concludes that “ergonomics and quality overlap substantially”, indicating that ergonomics has a positive impact on quality according to the measures listed above [5]. Specifically, Eklund [5] notes that “quality deficiencies, human errors and ergonomics problems often have the same cause, which in many cases can be traced to the design of work, workplace and environment e.g. noise, light, postures, loads, pace and work content”. Therefore, he concludes, improving this one factor, ergonomics, has the potential to augment performance through the improvement of quality.

Lanoie and Tavenas [6] present a practical example and evidence regarding the efficacy of ergonomics – a cost-benefit analysis of a participatory ergonomics program in a Quebec City warehouse. The conclusion was that the program did, indeed, augment profits for the company through accident reduction, and the accompanying reduction of direct and indirect costs [6]. The model of ergonomics presented in this research is a common one for the period in which the article was written. Ergonomics was conceptualized as a remedy to prevent accident and injury, rather than a more comprehensive or holistic benefit to the wellbeing of the organization and all its members. In this limited capacity ergonomics is consistently found to be effective.

Levine incorporates a discussion of ergonomics in his 1995 book entitled *Reinventing the Workplace: How Business and Employees Can Both Win*. The accident-prevention model is transcended in this book, and Levine [7] refers to increased worker participation and satisfaction. Ergonomics is viewed as a value-added enterprise [7]. The author notes, furthermore, that initiatives in favour of a healthier workplace often come from the workers and should not be viewed as any sort of threat to the management, but as an opportunity for them to work together. Overall, the book demonstrates that that level of cooperation between the individual employee and the organization was a fairly new concept and seen as a way forward for American companies. Ergonomics was an integral part of this evolution.

Adler, Godolfas and Levin [8] discuss the implementation of ergonomics at NUMMI (New United Motors Manufacturing Inc.), the Toyota plant in California. Prior to the period of time studied, the plant had been cited for bad ergonomics and made some changes. The article identifies employee involvement and expectations as a factor on both the company's commitment to investing in ergonomic systems, and the employee morale and health of the environment and culture overall. This article shows how engaged employees really do have a strong voice; simply stated, it can become very costly for employees to ignore them [8]. While the theoretical framing of ergonomics in this particular article may appear to have negative rather than positive connotations – the implication being that companies will suffer repercussion for not implementing appropriate ergonomics features – the information in this article may be interpreted in a very positive light, as well, with regard to the integrity and unity of the workplace, and the as yet untapped possibilities to enhance wellbeing. The power and empowerment of the employees can have very positive connotations and effects. The article implies that the drive toward implementing ergonomic measures comes from the employees, but that the opportunity to create a healthier work environment has unforeseen benefits.



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Genaidy, Karwowski and Christensen [9] discuss the principles of ergonomics across a broad range of workplaces and management styles. The study is intended as a baseline for a “new comprehensive methodology of work system performance optimization”, one which includes various factors previously discussed, but not previously brought together. The authors themselves seek to transcend the previous conceptions and practices of health and safety promotion in the workplace, bringing together various factors in a comprehensive approach that they call “the business ergonomics approach”, an approach which, according to the authors, has a great potential to increase employee health and wellbeing in the short term, and productivity in the long term. The benefits would be sustained rather than immediate. The authors, moreover, point out the shortcomings of previous systems, which took more of a piecemeal approach to improving health, safety and wellbeing in the workplace. This article was written roughly in the middle of the period studied (1990 to present). Clearly, the authors’ observations regarding the shortcomings of previous methods of conceptualizing ergonomics and the introduction of a more integrated method indicate that the concept and practice were evolving. Moreover, Genaidy et al [9] contribute to the findings that ergonomics does positively affect the health and wellbeing of an organization. The authors note that this takes place on both an individual and a group basis [9].

Moray [10] argues for a more global definition and conception of ergonomics, one that is “open to new disciplines, particularly those in the social sciences”. In this way, one can transcend discussions of the mechanics of ergonomic methods and discuss its broader social values. Moray [10] articulates what other authors hint at – the notion that ergonomics may have broader applications for the health of an organization or industry, and the interaction of individuals within that setting. Haines et al [11], also, note that there is a need for increased clarity in the field of participatory ergonomics, because existing studies allow for “little generic advice or guidance”.

An emerging consciousness of the individual as an integral part of the community is apparent in the literature from around the turn of the century. For instance, Engstrom [12] discusses the relevance of ergonomics within 'activity theory', a concept that is “... driven by communal motives that are often difficult to articulate for individual participants” [12]. For this reason, the author states, “... new forms of work organization increasingly require negotiated 'knotworking' across boundaries. Correspondingly, expansive learning increasingly involves horizontal widening of collective expertise by means of debating, negotiating and hybridizing different perspectives and conceptualizations” [12]. Ergonomics is a component of this ‘expansive learning’, and is therefore no longer being conceptualized as a simple measure used to solve physical problems or remove risk of injury. Rather, ergonomic measures are viewed as a component of participatory, community-wide learning and implementation of standards.

Changes that positively impact the health of an organization can also manifest outward to affect the health and performance of an industry. Evidence shows that ergonomic innovations in and of themselves may initiate transformation. Gemser and Leenders [13] examine empirical data coming from two manufacturing industries in Holland, the home furnishings industry and the precision instruments industry, across multiple organizations. The organizations were ranked according to whether they had invested heavily in industrial design (incorporating ergonomic principles) or whether they had invested little or nothing in such design. Roughly half of the sample group was placed in each of the two categories (24 in one group, 23 in the



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other). The researchers found that the firm's integration of industrial design features had a significant positive correlation with company performance. Interestingly, they also found that this positive effect was most pronounced when the changes involved were "relatively new for the industry" [13]. There are no significant differences with regard to this effect across the two industries studied. In fact, the authors found that innovation in design gave the company a positive edge regardless of the state of development of design in the industry. of industry evolution [13].

The benefit of design and ergonomic improvements are framed not merely a matter of direct cause and effect, but the result of a conglomeration of effects. Ergonomics may be one strand in an overall network of effects that all contribute toward the improved outcomes. It is an integrated strand – cannot, nor is it expected to stand on its own, but as one factor among several, both a cause and an effect all at once. This is why it is difficult to directly measure the effect of ergonomics on workplace productivity and why such effects may be underestimated, precipitating an effort to expand the frameworks within which ergonomics is studied.

However, the move to expand these conceptual frameworks has not been universal. For example, Neumann [14] notes the importance of good ergonomics in any workplace by citing the potential negative effects of poor ergonomics. Although this is a relatively recent article, the conceptualization of ergonomics, initially, is identical to the older discourse surrounding this subject. Companies run risks by not improving ergonomics, and these risks are framed as the risk of injury and the economic cost to individuals, companies and society in general.

Subsequently, however, Neumann [14] takes a holistic view of the organization by investigating and describing the channels through which ergonomic measures and improvement can be implemented within an organization. The author notes that „The process remains slow and is vulnerable so long as the manager is navigating alone”, but that “... Integrating ergonomics into early development stages implies changing roles for groups and individuals in the organization” [14]. It is apparent from this statement that the author feels that ergonomics has a role in widespread organizational transformation.

A recent article by Dula and Neumann [15] promotes the importance of investing in ergonomic systems in a fully integrated approach. The authors encourage managers to regard the benefits of ergonomics across multiple aspects of the organization and its functioning. The authors note: “Managers usually associate ergonomics with occupational health and safety and related legislation, not with business performance” [15]. However, this article implies that such thinking is outdated, and that benefit can be maximized through a more holistic view which incorporates business outcomes. Investing in ergonomic systems is or can be costly; however, the authors note that a systemic view of the organization, of which ergonomics is a part, is also the key to building a healthy and successful organization [15].

Discussion

The initial questions framing this discussion were as follows:

1. What is the relationship between ergonomics and business productivity success, as reflected in scholarly and industry literature dated 1990 – present?
2. How has the conception of ergonomics and the theoretical framework surrounding it changed in the period 1990 – present, as reflected in scholarly and industry literature?



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3. Finally, how do the changes identified in response to research question #2 relate to more generalized changes in the conception of the workplace and employee/employer relationships?

It has become evident, through the preceding analysis, that the answers to the first question are largely predicated upon the second and even the third. That is to say, the level of success of ergonomics in improving success and productivity in the workplace depends largely upon how ergonomics is conceptualized, thought about, and examined. That having been said, it is evident from all the literature that improving ergonomics does indeed lead to increased success in the workplace. Beyond that simple answer, however, it is evident that the success is manifested in various degrees and types, depending on the type of workplace, the existing expectations, the types of ergonomic measures put in place, and, finally, the definition of success. There are few studies which can directly link ergonomics to a 'dollar amount', but there are ample studies which speak of improved organizational culture and relationships between employees and employers, all of which are, clearly, essential to success. These measures lead to decreased absenteeism and decreased turnover through attrition, for example.

In comparing the discourse regarding ergonomics in the older and more recent articles, we can see how this view has evolved. The concern is not limited to individual health or injury prevention, although those are important factors. Indeed, Dula and Neumann [15] caution the reader not to lose sight of health and safety concerns in the effort to build a more comprehensive and participatory model of the importance of ergonomics. However, there is ample evidence from this more recent literature indicating that an effort is being made to re-conceptualize the role of ergonomics within a participatory organizational culture and practice. These efforts follow the observations of several authors, around the turn of the millennium, that current definitions and frameworks were inadequate. Eklund [5] stated, "The field of ergonomics... would benefit from developing a stronger emphasis on methodologies and structures for improvement processes". Reflection on the changing interactions between the individual and the organizations, and a holistic approach to ergonomic implementation, should inform these new methodologies and structures.

Conclusions and Recommendations

Given the clear relationship between an integration of ergonomics into the basic structure, design, procedures, and protocols of business, on the one hand, and the improvement of individual employee performance, the lowering of overall risk reduction, and an increase in organizational success on the other, it makes sense that ergonomics be involved at every level of the workplace, regardless of the type of business. It also makes sense, upon reviewing the literature, that ergonomics become a concern of both employees and employers, as a way to ensure that the needs of both parties are addressed.

How to achieve this, however, is a more challenging question. Certainly, one could call for additional research into the benefits ergonomics as a way to encourage business leaders to take them into account. Such research could investigate, as well, the reconceptualization of ergonomics, so that it is clear how said concept can fit into any given workplace model, and not just into the relatively tangential category of "getting a better chair for the secretary." Such



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research might well focus upon definitions of ergonomics, as ill-defined (and too-abstract) concepts are far more difficult to “sell” to business leaders who are, by and large, too concerned with the nuts and bolts of daily existence to worry about issues they can easily dismiss as tangential, or “luxury” items.

Beyond the traditional call for research would be a recommendation that leaders in the ergonomics field appeal to purveyors of Total Quality Management products in an attempt to encourage them to integrate ergonomics into their quality-management systems. If the ISO standards included guidelines on ergonomic excellence for a variety of types of business, for example, this would go a long way in ensuring that workplaces were designed for the maximum health and well-being of employees. Given, as well, that so many businesses look to various TQM models and programs as a way to improve their functionality, success, and profitability, this would send a strong message about the importance of ergonomics.

Another approach to increasing the awareness of ergonomics in the workplace would be for ergonomics consultants and businesses to band together and create their own system of “Ergonomics Excellence” that could become the standard in that field. While it is the case that all places of business are different, it is also the case that there are some similarities among, say, factories that manufacture automobile parts, as well as similarities among other “categories” of businesses. Generalized standards could be established for each type of industry/business, with an accompanying accreditation process that would evaluate and assist particular businesses in achieving ergonomic excellence. During the process of accreditation, more specialized recommendations would be given so as to tailor the application of ergonomics to each individual situation.

A final recommendation would be for ergonomics experts to meet with business schools – both deans and instructors – so as to push for the inclusion of ergonomics in business school curricula. Certainly, this has been done with some success in the area of business ethics, especially since the collected scandals of the past decade or so; and there is no reason to assume that it would not be successful in this case as well. When students of business learn from the “ground floor,” as it were, that ergonomics are an important consideration of their future business endeavors, the concept will become integrated into not only their careers, but will inevitably spread throughout the business world. This, of course, is the ultimate goal: that ergonomics become an integral part of industry, and not the after-thought that it all too often tends to be in today's business world.

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DECISION MAKING IN BUSINESS BETWEEN THE POLES OF MORALITY AND ECONOMIC CONSTRAINT

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Abstract

Is there a relationship between business and ethics resp. ethical behaviour? And if so, how can this be handled?

This paper aims to introduce a number of ideas concerning moral / ethical aspects and behaviour applied to (decision making in) business. Therefore, first of all, the question if business and ethics have to be seen as an irrational relationship will be discussed. This happens including emphasizing a number of relevant (historical) examples.

In addition, after knowing about (some) advantages and constraints which might be (a) result and / or prerequisite of more or less ethical behaviour in business so called cognitive models of Thinking and Morality will be introduced.

1. Introduction

“The business of business is business” (Milton Friedman) vs. “Think Global, Act Noble” (Otto Lamotte); those two statements obviously demonstrate the poles of possible behavior in business.

Milton Friedman’s often quoted statement “the business of business is business” usually is understood as doing business without caring about ethical obligations.

In contrast to this Otto Lamotte’s statement “Acting Global, dealing Noble” implies that ethical behavior in business is obligatory probably the lute of business.

On the other hand, is it really that simple? Not likely!

A rapidly changing and highly complex business world requires a differentiated way of viewing things, also and – probably – especially with regard to ethical behavior in business.

Karl Homann and Christoph Lütge point out, companies are increasingly confronted with moral demands. According to them this happens due to the fact that the public more and more understands characteristics of the social world as the result of human decisions and less as a destiny. [1, p. 93]



It would be far beyond this paper to give “ultimate” answers to ethical questions, human beings are concerned with (almost) since the development of economic communities and societies. But this paper aims to highlight or at least mention some aspects and if possible to have a slightly closer look to them.

2. Business and Ethics – an Irrational Relationship?

“For the economy the relation to morality is cleared – at a first glance – methodically:

1. Economic actors decide rationally, on account of her preferences and restrictions
2. Morality is a restriction.

The – costlier – rest is an interpretation of the situation of the decision.” [2, p. 163]

In a preference / restriction-scheme morality can be looked as an external influence on individual and rational actors. The intention of a rational decision aims to choose the best result. Restrictions (usually) deliver suboptimal results.

Against this background the implied course of action could be, morality has to be minimized, so that the best results can be achieved.

Even if the (latest) developments within the Global Economy might support the assumption that minimizing resp. eliminating moral behavior in business have been or still is the predominant way of acting it seems to be worth to mention a second assumption as well.

Morality is seen as a restriction. Then “morality must deliver itself a contribution to the optimization of the action possibilities”. [2, p. 163]

In this case the approach has to be to integrate moral into business (behavior).

Against this background G.S. Becker’s approach for the development of a new rational model of behavior in the economic theory can be mentioned.

Becker wants to extend the range of application of the economics to be able to integrate non-monetary influence on "rational choice". According to this the economy has to be developed in the direction of a general behavioral theory which also integrates moral action.

“The economic approach is clearly not restricted to material goods and wants, nor even to the market sector.” [3, p. 6]

Later on in this essay Becker gives the following (broad) definition of the term economic approach: “Indeed, I have come to the position that the economic approach is a comprehensive one that is applicable to all human behavior, be it behavior involving money prices or imputed shadow prices, repeated or infrequent decisions, large or minor decisions, emotional or mechanical ends, rich or poor persons, men or women, adults or children, brilliant or stupid persons, patients or therapists, businessmen or politicians, teachers or students. The applications of the economic approach so conceived are as extensive as the scope of economics in the definition given earlier that emphasizes scarce means and competing ends. It is an appropriate approach to go with such a broad and unqualified definition, and with the statement by Shaw that begins this essay.” [3, p. 8] George Bernhard Shaw’s statement quoted by Becker at the beginning of his essay says: Economy is the art of making the most of life.

Becker points out that – from his point of view – the idea of the economic approach has been used by Adam Smith and Jeremy Bentham already. [3, p. 8]



Becker wants to master this expansion methodically not about a theory of the preference change, but calculate social influence as a restriction of the individual behavior. According to Becker the influence of moral can be measured by traditional schemes of price- and income-effects. [cf. 2, p. 163-164]

However, on the one hand, morality in business can be understood – consciously or unconsciously – as irrational behavior. On the other hand such “irrational behavior” is used from individuals, groups and societies – more or less – since ever. The question might be: Why?

3. Some Examples for Ethical Behavior Resp. Ethical Rules in History

If moral in business is seen as irrational behavior than the history of business is full of irrational behavior, due to the fact that (business-)people more or less since ever dealt by keeping – at least some – moral aspects in consideration.

To demonstrate this it might be enough to mention only a few examples which were developed within the Christian-occidental cultural sphere. Similar “Golden Rules” certainly were developed in other cultural spheres all over the world, simply due to the fact that they create the framework to make societies working.

As a first example the so called cardinal virtues according to the Greek philosopher Platon (*428/427 before Christ, + 348/427 before Christ) can be mentioned. Within his dialogue “Politeia” he introduced and discussed the so called cardinal virtues, Wisdom, Justice, Bravery and Temperance. [cf. 4] Even if it can be assumed that those cardinal virtues – more or less – were known in the city-state of Athens before already.

The four cardinal virtues can be seen as an early example and a kind of framework which – by keeping them in mind in any situation – enables the individual person to interact successfully with others. As a result out of this, cardinal virtues can be seen as a guideline to organize the cohabitation as a society.

One positive effect of knowing about the cardinal virtues might be the attempt of moral resp. ethical behavior in business as well as in daily life. On the other hand it has to be pointed out clearly that ethical behavior (almost always) occurs as dilemma situation. This happens, especially, due to the fact that the terms Wisdom, Justice, Bravery and Temperance – and especially their application – offer a wide range of interpretation.

Later on in the history of the Western World the four existing cardinal virtues were complemented by (the) three outstanding Christian virtues Faith, Love and Hope. Pope Gregor I. (*540 AD, + 604 AD) added them. [cf. 5]

Those – now – seven – four secular and three theological – virtues offered an opportunity to affect the people’s life. They offered an instrument to urge people to live a virtuous life. [cf. 6]

Subsequently in the history of Western Societies – also against the background of an increasing secularization – other examples for guiding single people, groups and/or societies with regard to ethical behavior can be mentioned.

One of the – maybe – best known examples is Immanuel Kant’s so called “Categorical Imperative” (“Golden Rule”). It says “Handle nur nach derjenigen Maxime, durch die Du zugleich wollen kannst, dass sie ein allgemeines Gesetz werde.” (Kant, 1788, translated into English: “Act along a guideline, based on which you wish that it should become a general law”). [cf. 7]



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For Immanuel Kant ethical behaviour has to be understood as an individual obligation. Due to the fact that it is seen as an individual obligation every single person has to fulfil, a society in its entirety can exist.

The development of the so called Hansa resp. German Hansa (Hansa Teutonica) gives an example for a (business) combine, sharing (at least) some fundamental ethical values / rules.

The Hansa existed between the 12th and the 17th century. When it was in full bloom almost 300 cities in Northern Europe belong to it. Aim of the Hansa basically was to look after the rights of traders, belonging to this “club”. [cf. 8]

The underlying ethical values – which had to be accepted by all members – were outlined in several publications, e.g. “Practica della Mercatura” (1340). The terms “Ehrbarer Kaufmann” (“respectable trader”) and “Kaufmannstugenden” (“traders virtues”) were known and accepted as the terms for following some fundamental ethical standards resp. obligations.

“By analogy with (the) seven Christian mortal sins the respectable businessman stands for:

- Sense of responsibility towards employees
- Sense of responsibility towards customers and suppliers
- Sense of responsibility towards investors
- Sense of responsibility towards competitors
- Sense of responsibility towards the consumer
- Sense of responsibility towards the general public and
- Sense of responsibility towards polity.” [9]

The hint with regard to the seven mortal sins demonstrates that – even if it is a mere business economic community – it behaves ethical and is strongly influenced by the notion of the Christian-occidental image of humanity.

“At the beginning of the 19th century Scotland turned out as true engine of progress. In the ambitious industrial town Edinburgh, at that time one of the most important financial metropolises of Europe, the biggest thinkers of the clarification lived door in door: Lord Kame, David Hume, William Robertson, Adam Ferguson, John Home and above all Adam Smith...The Scottish thinkers argued with questions which move us also even today: social justice, mutual interests, dynamism and sense of the wealth, the causes of wars, individuality and public spirit. Their most important knowledge consisted in the fact that self-interest and altruism, morality and cooperation, economy and social environment must be no contradictions, but are complementary at a higher level.” [10, p. 95-96]

In his book „The Theory of Moral Sentiments“ Adam Smith mentions the term “universal goodwill” which (probably) could be translated as altruism and/or co-humanity. In any case it can be seen as ethical behavior if he points out: “Though our good services can apply in effective manner only very seldom to a bigger circle of people than on that of our own country, nevertheless, our good will is limited by no borders, but can enclose the infinity of the universe. We cannot form the image of an innocent and feeling being whose blessedness we would not feel desirable, or against his misfortune we, if we introduce ourselves the same quite clearly, would not have a certain dislike. [11, p. 381-382]

As an example for the approach of ethical behavior in business in modern times the concept of the “Socially Responsible Market Economy” (SRME) should be mentioned. This concept was implemented in Germany after the end of World War II.



“In 1949, the parliamentary council of post-war Germany passed the constitution for the Federal Republic of Germany, further on known as the ‘Grundgesetz’. Ever since this constitution, the Grundgesetz, has been regarded as one of the most freedom-oriented and socially balanced basic law in the Western hemisphere, elaborately and deliberately guaranteeing human rights on the one hand and social justice on the other hand. In particular, as far as the economic constitution of the newly founded republic is concerned, articles 14 and 15 of the Grundgesetz demonstrate the will of the founding fathers to a) rely on the forces of a free market economy and b) take care of social welfare and justice for all citizens in the sense of ‘human dignity’” [12]

The “founding fathers” of the Socially Responsible Market Economy (SRME), e.g. Walter Eucken, Wilhelm Roepke, Alexander Ruestow, Alfred Mueller-Armack and (especially) Ludwig Erhard, developed an economic framework, based on the notion of economic freedom and social balance. The overall goal of this economic constitution is to enable, respect and guarantee human dignity at any time and for everybody.

“Alexander Ruestow regarded the antique Greek philosopher Isrid, Parmenides and Heraklit as well as the representatives of the 1800’s enlightenment as his “intellectual forefathers”. In Ruestow’s mind, only a freedom-oriented and human dignity-based societal system may achieve a sustainable equilibrium between the both poles ‘reign’ and ‘freedom’.” [12]

Finally, also Amartya Sen should be mentioned. He developed and explains his “Theory of justice” within his book “The Idea of Justice”. Following his notion the permanent search for (social) justice can be seen as a desirable approach for reaching a (more) ethical behavior in business and society. He justifies the relevance of his idea by saying “Even if social justice is for a very long time in the discussion, has the issue during the European Enlightenment in the eighteenth and nineteenth century, stimulated by the political climate of change in Europe and America, taken special recovery.” [13, p. 33]

It might be easy to find additional examples for ethical resp. moral approaches and behavior in societies and business relations. The important question (again) might be: Why do individuals, groups and societies behave ethical resp. moral in business?

4. Advantages and Constraints of Ethical / Moral Behavior in Business

“Ach der Tugend schöne Werke, / Gerne möcht ich sie erwischen. / Doch ich merke, doch ich merke, / Immer kommt mir was dazwischen.“ [10, p. 206]

This ironical statement "Oh beautiful works of virtue, / With pleasure I would like to get them./, Nevertheless, I notice, however, I notice, / Always something interferes to me." given by the German poet Wilhelm Busch in the 19th century points out that moral (behavior) only will work if it is seen as self-commitment.

In this case – maybe – the term “self-commitment” could be interpreted as “expected benefit” also.

“Who does not keep to the ethical principles, at short notice can achieve maybe economic success. He can hold this success, however, not lasting. One can summarize this into the easy formula: Who wants to be successful long-term and therefore seriously, that acts respectably. Not necessarily only because he is moral or altruistic, but because he also wants to be in business tomorrow!” [9]



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According to Lamotte ethical /moral behavior can be one crucial factor for companies to survive in business for a long(er) time. Surviving in the market – first of all – must be seen as the major task and success for any entrepreneur.

Taking Lamotte's statement into consideration for an organization – as a member of a society in which it is embedded – ethical / moral behavior would support the advantage of enabling, establishing and keeping good relationships with (hopefully all) stakeholders, i.e. customers, suppliers, employees, competitors, unions, Government, pressure groups.

Even if it seems to be acceptable that ethical/moral behavior is seen as (possible) advantage for organizations on the other hand (of course) constraints exist as well.

(Almost) every organization has to survive in (highly) competitive markets. Therefore, as a matter of fact, every organization has to handle a number of constraints.

In this paper it should be distinguished between potentially internal and external constraints companies could be affected of.

As mentioned before, organizations have a number of stakeholders (i.e. customers, employees, suppliers, Government, pressure groups, etc.). Basically constraints can occur because of resp. due to the relationship with each stakeholder.

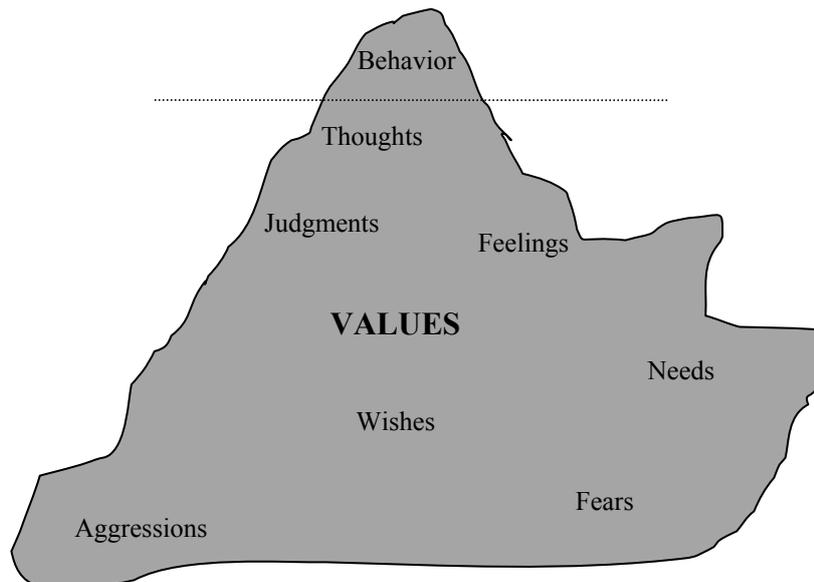


Figure 1. Moral Behaviour [10, p. 207]

So called external constraints which (might) influence the decision making of a company could be, i.e. cost pressure, order situation, profit expectation, downsizing, delivery conditions, public opinion, etc.. All of them – either single or in sum – might have an influence on decision making in business.

On the other hand the so called internal constraints should be mentioned as well. In this case the term internal constraints should be understood as constraints a single person (employee of a company) has to deal with due to his individuality resp. his socialization.



Matthias Horx uses the term “moral iceberg” when he speaks about moral behavior. The Figure 1 demonstrates what he means by using this term.

Matthias Horx points out that the (actual) observable behavior of any human being is an expression of his/her conscious and unconscious underlying values including thoughts, judgments, feelings, needs, wishes, aggressions and fears.

Those underlying values, thoughts, judgments, feelings, needs, wishes, aggressions and fears can be seen as the result of the individual socialization every single human being (has to) pass.

The original idea of the “Iceberg model” has been developed by Sigmund Freud (1856 – 1939). It is part of his general theory of the personality.

It can be assumed that the underlying conscious and unconscious values for any human being can be seen as “pool” of restrictions which will influence his actual and visible behavior in business as well as in daily life. Therefore it seems to be useful to find out if it would be possible for a human being to learn about those conscious and unconscious values.

In this context the question would be if human beings can become aware of their conscious and unconscious values, which might constraint them, in a way that enables them to reach a “higher” level of moral / ethical behavior?

To have a closer look to this question it might be helpful to get back to two classical models concerning the development of Thinking and Morality.

First of all Jean Piaget’s three-stage model of moral development should be mentioned. According to Piaget the interactional trial between aptitude and environment leads to a development in steps and on every step the preceding easier structures are differentiated and are integrated anew. [cf. 14]

“Our moral thought is not an innate and fixed property, but is a learnt attribute that changes in our lifetime with personal development. Personal development in turn, is dominated by cognitive development.... Moral development depends on cognitive development. Cognitive development is the result of an increase in cognitive complexity. And Complexity is a universal natural phenomena. [15]

Keeping this in mind Piaget’s theory can be summarized as it is shown in the illustration below.

Table 1

Piaget’s Theory [15]

Heteronomous morality (5-9/10 years)	Autonomous morality (10+ years)
Associated with moral realism and absolutism: Moral knowledge and understanding are objective and absolute. Laws, rules, punishment, right and wrong et. emanate from external sources (God, adults) and obedience is good in itself	Associated with moral relativism: Morality is not a matter of obeying external authorities; rather moral rules grow out of human relationships and we must respect people’s differing points of view.
External responsibility (amount of damage)	Internal responsibility (intentions behind damage)
Expiatory punishment (decreed by authority) Immanent justice	Reciprocity: much reduced belief in immanent justice



Following Piaget’s notion it has to be distinguished between two stages, a so called heteronomous morality on the one hand and a so called autonomous morality on the other hand.

Alberto Ghirardo points out that “heteronomous morality, (is) associated with moral realism (‘being subject to another laws or rules’), and autonomous morality, (is) associated with moral relativism (‘being subject to one’s own laws and rules’).” [15]

However, the stages are not mutually exclusive. It can be assumed that most of the adults have resp. show a combination of both stages.

In addition to the Piaget’s model it seems to be necessary to mention Lawrence Kohlberg and his model as well. He developed a model which includes six stages of moral development grouped on three levels called pre-conventional, conventional and post-conventional.

The Table 2 illustrates Kohlberg’s model of moral development.

Table 2

Kohlberg’s model [15]

Level 1: Pre-conventional	Stage 1 (obedience and punishment driven) What is right and wrong is determined by what is punishable. Moral action is essentially the avoidance of punishment.
	Stage 2 (self-interest driven) What is right and wrong is determined by what brings rewards and what people wants. Other people’s wants and needs come into the picture, but only in a reciprocal sense.
Level 2: Conventional	Stage 3 (interpersonal accord and conformity driven) Being moral is being a good person in your own eyes and those of others. What the majority thinks is right by definition.
	Stage 4 (authority and social order obedience driven) Being good means “doing one’s duty” – showing respect for authority and maintaining the social order. Laws are unquestionably accepted and obeyed.
Level 3: Post-conventional	Stage 5 (social contract driven) Individuals are viewed as holding different opinions and values. Laws are regarded as social contracts rather than rigid dictums. Although laws should be respected, individual rights can sometimes supersede these laws if they become too destructive or restrictive.
	Stage 6 (universal ethical principles driven) Moral action is determined by our inner conscience and may or may not be in agreement with public opinion or society’s laws. Moral reasoning is based on abstract reasoning using universal ethical principles. Ethical actions are not instrumental or a mean to something else: they are an end in themselves.

In comparison with the Piaget model the Kohlberg model might be seen as the more elaborated one due to the fact that it includes more stages of developing morality within a human beings life cycle.

However there is something crucial both models – as so called cognitive models – have in common. The forecast of the cognitive development theory is optimistic. She does not assume that human beings are good, but that they can become good in the course of their cognitive-moral development. [cf. 14]



If this assumption is correct than moral behavior – at least to a certain extent – can be learned and trained. With regard to the moral / ethical behavior in business this would mean that such behavior could be learned either through “real world decision making” and / or through relevant simulations.

In this case organizations could support their employees (decision makers on all levels) in overcoming constraints and developing a better moral / ethical behavior in business and finally in daily life as well.

THE SPIRIT OF CHANGE

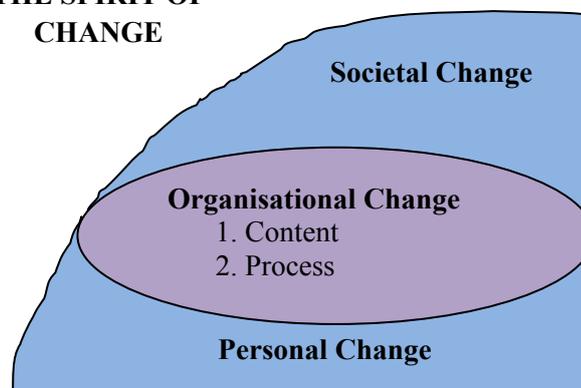


Figure 2. The Spirit of Change [16, 311]

Finally, if it would be possible to change attitudes of decision makers in business on a personal level than this could influence an organization itself and in the end – probably – lead to a societal change as well. This is shown in the illustration below taken from Henry Mintzberg’s book “Managers not MBAs”.

5. Conclusion

This paper aimed to introduce a couple of ideas concerning moral / ethical aspects and behavior applied to (decision making in) business. Therefore, first of all, the question if business and ethics have to be seen as an irrational relationship has been discussed. This happened including emphasizing a number of relevant (historical) examples.

Later on, (some) advantages and constraints have been stressed which can be (a) result and / or prerequisite of more or less ethical behavior in business. Finally, the introduction of so called (classical) cognitive models of Thinking and Morality (Piaget, Kohlberg) followed. The main advantage of those cognitive models can be seen in the assumption that the (moral / ethical) behavior of human beings can be trained and developed and therefore they can reach a “higher” level of moral behavior in business as well as in daily life.

Finally, the question if “the business of business is business” resp. if moral / ethical behavior is / has to be a(n) – immanent – component of business – of course – still exists. It would have been far beyond this paper to give “ultimate” answers to this question. To – probably – find them much more research has to be done in the future.



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THE CONCEPT OF THE SOCIAL DIALOGUE AND SOCIAL PARTNERSHIP: FOCUS ON THE EU

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Keywords: social dialogue, trade unions, legislation, social partnership, employment policy.

Abstract

Social dialogue has similarities and differences in its development trends across countries and world regions. The paper outlines the social dialogue concept as a fundamental pillar of industrial relations. In addition, social partnership and its implementation in the in the EU and other parts of the world will be studied. The major focus of the paper is on social dialog social partnership as well as employment policies in the European Union in general and Latvia, in particular. The paper tries to determine the role of social partners and trade unions movements in decision -making process related to employment policy in Europe. Trade unions function in the EU New Member States with reference to Latvia is analysed.

On the basis of the main findings, the paper provides conclusions and recommendations.

Introduction

Social dialogue is a relatively new concept and is a fundamental pillar of industrial relations. It has gained significant importance in public debates internationally only in the last decades. An important role in promoting social dialogue has been taken mainly International Labour Organisation (ILO). Social dialogue is grounded in the constitution of ILO and is an integral part of its 'Decent Work Agenda' covering rights at work, employment and social protection. [1] Through its tripartite structure, the ILO has unique access to the world of social dialogue. It provides a forum for a global social dialogue for representatives of workers' and employers' organizations and governments from more than 170 countries. The ILO has also contributed to the implementation of the concept of social dialogue by declaring in its programme of activities for 2000 -2014, the strengthening of social dialogue among ILO member States as one of its strategic objectives to be achieved. [10]

Social dialogue became a fundamental element in the European Social policy, thus the EU could serve as an example of analysis of main trends in the development of social dialog and social partnership at the EU, national and company levels.



1. Regional Dimension of Industrial Relations and Social Dialogue

Social dialogue has similarities and differences in its development trends across countries and world regions. It also takes place at different levels and in different ways. The most significant achievements in this area are in the European Union as social dialogue has become an important element in the process of decision-making already in the middle of the 1980s and since then has been strengthened further in the 1990s, through, amendments at the Maastricht and Amsterdam Treaties. [2, 3] For example, in the Lisbon Treaty stated: ‘The Union recognises and promotes the role of the social partners at its level, taking into account the diversity of national systems. It shall facilitate dialogue between the social partners, respecting their autonomy.’ Article 153 TFEU [5] would also give the Member States the possibility to entrust the social partners with the implementation of a Council decision adopted on ratification of a collective agreement signed at European level. Since then it is essential for EU authorities and for authorities in the Member States to consult with the social partners on legislation issues.

However, it is important to stress existing attempts to established forums for social dialogue at a regional block level and to promote this concept within the members’ countries in some of the regional blocks. One of such examples is Latin America and, in particular, Mercosur countries, that has declared promotion of social dialogue at national and regional levels as one of the main policy objectives. ILO contributed to the strengthening of Social Dialogue processes in Argentina, Brazil, Chile, Ecuador, Mexico and Peru and encouraged mutual recognition of legitimate actors for dialogue, building consensus among them, creating and strengthening diverse democratic structures to deal with a wide range of socio economic issues of common interest. ILO assistance also helped to improve the effectiveness of the existing mechanisms for social dialogue, provided technical support in the creation of new structures, and strengthen the technical capacity of the legitimated participants of social dialogue – the workers’ and employers’ organizations and ministry officials – to be involved actively in institutionalised mechanisms of social dialogue. [15]

In Arab countries attention was given to labour law reform, industrial relations systems and labour administration. At the beginning of 2000 ILO provided training and technical assistance to, for example, Jordan, Oman and Bahrain Governments as well as social partners to promote decent work and sound labour relations. [14]

A number of studies conducted by ILO related to African nations. Positive developments are observed in South Asia where social partners have renewed their efforts to build sound institutions with a growing recognition of the important role of social dialogue in social and economic policy areas. In a number of countries in the region, social dialogue gained an important role as one of the main development policy instrument. These include the involvement of social partners in the poverty reduction strategy programmes for example in Sri Lanka and Nepal. [16]

To understand better concept of social dialogue and its interrelation with trade union movement as major representatives of social partners, a historical profile of the formation and development of trade unions are of prime importance. In addition, trade unions structure, their policies, practices as well as effectiveness – are factors that play a crucial role in the identity and performance of trade unions. Activities of trade unions are determined by existing trends in



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politics, labour markets and social structures. For better understanding trade unions identities, the following major models of trade unions could be considered:

1. Welfare trade unions- mostly function in France, Italy and Spain.
2. Social partner unionisms, when trade unions are aimed at harmonisation of employees and social partners' positions. Such unions are in Scandinavian countries as well as in the Netherlands, Germany and Austria.
3. Business trade unions, that represents employees' interests. The best examples of that type of unions could be found in North America.
4. Trade union movement in which a state plays a decisive role in shaping the parameters of trade unions practice. This particular model function in most of the EU New Member States.

During recent years the role of trade unions in many countries is becoming less important and visible. To different degrees all unions in the EU also have seen a decline in their membership, resulting in overall decline in union density. Such a trend could be explained by the following general reasons:

1. *Globalisation and capital mobility* are very powerful in influencing the negotiation process among major actors involved in the economic process and, thus, reducing the effectiveness of trade unions in collective negotiations. The other major concerns in the context of globalisation are related to the loss of employment especially in the formal sector of economies as a result of restructuring or relocation and in formalisation of work - employment is becoming a typical part-time work, casual, intermittent and etc. Despite trade unions could be the main defenders of the traditional work practices, their power to resist decentralisation and deregulation is weakened by strong unemployment trends that have intensified during economic crisis 2008-2010. The process of globalization has underlined the need for greater participation in decision - making policies at all levels, including an international level. Workers' and employers' organisations can bring together representatives from different groups of societies and thus to enhance the role of the social partners as they represent broader interests in society.

3. *Foreign investments and Multinational Corporations (MNC)* have a strong impact on a policy of a state, which lowers the influence of trade unions. As the result of globalisation, MNC become major players in relations to global production and labour markets. The ability of capital and MNC to move freely around the globe for profitable returns on investments and use of lower labour costs is a consequence of markets liberalisation. In most cases labour is much less mobile production factor and this gap in the mobility between MNC and workers can negatively influence a social dimension in companies and institutions at national level. MNC continue to work on global management strategies and management decisions, which may have impact on employment opportunities taken at the headquarters of MNC. Trade unions do not have that efficient mechanism for transnational coordination as do MNC.

4. *Trade unions' political participation, involvement in election campaigns, and strong links with political parties* also reduce the importance of the membership in trade unions for current and potential members. Trade unions have not only economic agenda, they are also involved in political life; they are both political and economic actors. The relations between the two roles are complex and contradictory. The balance between them varies in relations to countries and thus requires from the unions to redefine their political identities. Four factors



seem of particular importance in explaining these distinctive patterns: ideology, opportunity structures, organisational capacity and contextual challenges. [13]

2. Social Dialogue and Employment Policy in the EU

Social dialogue is a fundamental element in the European Union social policy. The European Union recognises social dialogue as one of the pillars of the European social model, and a tool of social cohesion. [7, 9, 26] The European social partners use a very narrow definition, since they reserve the notion of social dialogue for their bipartite, autonomous work. Whenever European public authorities are involved, the social partners prefer to speak of tripartite concentration. The involvement of the social partners at the European level is organised around three different types of activities:

- *tripartite consultation*, the exchanges between the social partners and the European public authorities;
- *consultation of the social partners*, which covers the activities of the consultative committees and the official consultations;
- *the European social dialogue*, the bipartite work of the social partners, based on Articles 153 and 154 of the Treaty on the functioning of the European Union (TFEU) [4].

The social dialogue was always an issue of academic and political debate. In the EU Member States the collaboration between state and social partners is an important connecting link between industrial relations and government policy. It provides the means of attuning collective bargaining to national economic and social policy and, conversely, opens up all aspects of that policy to possible influence by the social partners. Accordingly, two subsystems of social partnership can be differentiated: bipartite consultations and negotiations between the social partners, and tripartite consultation and concerted policy-making between the social partners and the state. Bipartite social partnership encompasses three arenas: 1) the informal practice of negotiations and discussions at cross-sector level; 2) the collective bargaining system, focused on the sectoral level and representing the core institution of bipartite social partnership; Tripartite social partnership relates to all social and economic policy issues which in formal terms fall within the purview of state powers and responsibilities.

The process of launching and further development of social dialogue in the EU has three main stages:

I. (1985-1991). In 1985, with the launch of a bipartite social dialogue the bipartite activities resulted in the adoption of resolutions, declarations and joint opinions, without any binding force. The bipartite dialogue takes place at cross-industry level and within sectoral social dialogue committees. As a result of their representativeness, European social partners have the right to be consulted by the Commission, and may decide to negotiate binding agreements. Another important event that strengthened Social Dialogue was the Single European Act adopted in 1986.

II. (1992-1999). In 1991 an agreement between the social partners was adopted, which was subsequently integrated into the protocol on social policy and annexed to the Maastricht Treaty. In 1997, the agreement of 1991 was incorporated into the Amsterdam Treaty.



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III. (1999-2005). In December 2001 the European social partners presented a joint contribution to the Laeken European Council. [9] This last phase has been characterised by greater independence and autonomy for the social dialogue.

To tackle the unemployment and to pursue active labour market policies need a fundamental change and further implementation of the European Union's strategy for jobs and smart, sustainable and inclusive growth (Europe 2020) [4] and European Employment Strategy (EES). The EES was launched in 1997 to encourage the exchange of information and joint discussions by all Member States with the involvement of social partners, the European Parliament, European Economic and Social Committee, and the Committee of Regions in the Social Dialogue. The EES is intended as the main instrument to provide, through the open method of coordination, direction and coordinate the employment policy priorities supported by the Member States at European level. Employment policy in the European Union incorporates labour law and occupational health and safety, as well as gender mainstreaming. It is also sets standards and objectives in these areas, as well as laying down the principles of anti-discrimination policy. The European Union has no powers to harmonise the numerous – and in some cases very different – systems of social protection and employment policies in the Member States. Instead, its role is to coordinate these systems to protect the main principles of the Common Market. The European Social Charter articulates a number of fundamental rights in such areas as collective bargaining, protection from unjustified dismissal, health and safety at work, etc [7, 18].

It is important to stress that collective bargaining is the process through which the social partners arrive at an agreement that regulates both terms and conditions of employment and labour relations. [20] Collective bargaining plays significant role in labour market governance. A collective bargaining coverage rate is an indicator of the degree to which wages and working conditions are regulated by collective agreements. For example, centralized collective bargaining structures tend to be associated with high coverage rates. In countries, which extend the terms of a collective agreement to enterprises and workers who may not be parties to the agreement coverage rates tends to be higher than in the other.

At the company-level, social dialogue was implemented in the EU by the adoption in 1994 of the European Works Councils Directive revised in 2009 [10] as the result of constructive negotiations on promotion fairer economic development through a collaborative effort to increase productivity and enhance conditions of work. According to the Commission's definition, *cross-industry social dialogue* "covers the whole economy and labour market" and its "purpose is to promote dialogue between trade unions and employers' organisations in key areas common to all fields of employment and social affairs". The existence of the Social Dialogue Committee (SDC) is central to this process. Founded in 1992, the Committee brings together employee representatives (ETUC, Eurocadres and the European Federation of Executives and Managerial Staff) and employer bodies (BUSINESSEUROPE, UEAPME and CEEP) to discuss key employment-related issues [26].

European integration context influenced development of new forms of partnership at European, national, and company levels. In the European labour movement, the involvement of social partners and in particular, trade unions within these institutions, provides the basis for the redefinition of trade unions' strategy and identity. One of the major influential factors is intensified international competition and domestic economic insecurity. [17] There are,



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however, some signs of resistance starting to develop within the European labour movement that challenge both the underlying acceptance of neo-liberalism and the strategy of social partnership. These development take the form of a transnational „social movement unionism” that links diverse groups and networks in opposition to neo-liberal concept in the context of growing globalisation. It particularly concern the representatives of national employers’ organisations representing small enterprises, including the craft sector consider that the specific role of SMEs in the European labour market, their contribution to recovery, growth and job creation should become a more transversal issue of European social dialogue.

3. Identity of Trade Union Movement in Latvia as a New Member State in the EU

In this paper an example of Latvia as a country representing a New Member State of the EU in analysed. The evolution of trade unions identity in Latvia is rooted in the transformation process from the socialist system to a market economy system and reflects responses to social and political changes that the country has undergone during its last 20 years of independence. As the result, trade unions in Latvia are in transition from the model in which a state plays a dominant role to a model of social partner unionism, which is in common in other countries that were formerly part of the Soviet Union’s trade union system. Decentralisation in 1991 left basic trade union organisations maintaining the one-workplace-one-union principle. Trade Unions in Latvia remain dominant within the trade union landscape, maintain the same organizing principles, namely branch unions, which adds up to a large measure of continuity. In contrast to unions’ structure, unions’ membership has changed dramatically. Trade union membership in Latvia declined dramatically since the early 1990s. Overall, currently only around 16% of employees are members of trade unions.

The legal labour relations system in the country was based on the Labour Code adopted in 1972 and when Latvia regained independence in 1991. As the result a labour law reform was badly needed, which was launched in 1990s. The new Labour Law in Latvia is in force since 1 June 2002. The major part in this reform process was implementation of the rules stemming from international laws, in particular – EU laws. Despite the fact that Latvian legislation does not give an explicit definition of the term ‘employer-employee relationship’, a number of international agreements on human rights, welfare, and social protection have been signed and to regulate labour relations. Freedom of association and collective bargaining are at the basis of social justice and democracy. They form the core of fundamental principles and rights at work, as stipulated in a number of the International Labour Organization’s Conventions that Latvia has ratified (C 87 “Convention Concerning Freedom of Association and Protection of the Right to Organise” (adopted in 1948, revised in 1990), C 98 “The Right to Organise and Collective Bargaining” 1990), (C154 “Collective Bargaining Convention” (1981) C 144 “Convention Concerning Tripartite Consultations to Promote the Implementation of International Labour Standards” (adopted in 1949; revised in 1994). The Law “On Trade Unions” was adopted on 13 December 1990. The Law provides that trade unions may be formed on the basis of professional, branch, territorial or other principles. Employers shall also be entitled to form associations. The most widespread patterns in practice are the branch, undertaking and professional trade unions. The Law insures the right to join a union or also not joining or



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withdrawing from a union (so-called negative right). According to the Law, law, collective agreements and other types of agreements shall govern property and financial relations between trade unions and the employer. In most cases the relations of a trade union and employer are regulated by collective agreements.

As a result of the labour law reform a new framework for national consultation was established. The status of a social partner and a social dialogue are regulated by the law “On Employers’ Organisations and their Associations” (29 April 1999), and the law “On Collective Labour Agreements” (26 March 1999). These legal documents are in line with EU principles on social dialogue and social partnerships. In addition, the trilateral consultation mechanism between government representatives, the largest employers’ and trade union organisations – the Latvian Employers’ Confederation and the Free Trade Union Federation of Latvia was launched. The National Tripartite Co-operation Council and its institutions – the Sub-council for Vocational Education and Employment, the Sub-council for Labour Matters, and the Social Insurance Sub-council aimed at promoting cooperation between the social partners at national level. This institutionalization of the social dialogue helps to find a framework for agreements between all social partners in solving social and economic problems. Such framework also increases responsibility of social partners in decision-making process. Starting from 1996, the Free Trade Union Federation of Latvia and the Latvian Employers' Confederation are obliged to annually sign a bilateral social partnership agreement. The agreement allows both institutions to agree, for example, on the conditions related to level of the minimum salary level. Furthermore, labour disputes are regulated by the Labour Code of Latvia (1 January 2001), the law “On Collective Labour Agreements” (26 March 1999), the law “On Strikes” (23 April 1998), the Civil Procedure Law (1 March 1999) and the law “On Labour Protection” (4 May 1993).

Latvia accepted and implemented in full the *aquis communautaire* in the area of social policy and employment before its accession to the EU on 1 January 2003. During the process of accession negotiations, the position of Latvia on social protection and employment policy has been developed as the result of a mutual agreement between the government and the social partners – Free Trade Union Federation of Latvia and the Latvian Employers’ Confederation. In addition, the accession period required the design and implementation of the National Employment Plan (2004) that was launched in line with the Single National Economy Strategy (2004-2006). The Ministry of Welfare has issued two important strategy documents: the “Conception of the Development of labour protection from 2007-2010” and “The Programme for Development of Labour Protection from 2007-2010”. Unfortunately, this process was not always systematic, as it was frequently demand-driven.

All of the abovementioned reasons for lowering the attractiveness of trade unions and the need for defining trade unions identity could be seen in Latvia. However, in addition to the explanations above, structural transformation of the economic and political system in the country as well as in the organisational changes in the national economy strongly influenced this trend. The lack of a strong tradition of trade union activity following the experience of state socialism is another reason for the decline in membership.

Trade unions and membership in them are often considered as being a part the socialist past, although in that period they were unable to perform their most important tasks- providing collective representation and organising collective actions. At the same time the reasons for trade union decline are not only the result of changes in the union environment, one should take



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into account also the strategic choices made by the unions themselves. In Latvia at the national level, one union confederation dominates. There is a single central trade union organisation – the Free Trade Union Federation of Latvia (LBAS).

One of the important elements in employee-employer relations is collective agreement. In Latvia currently collective agreements cover around 20% of all employees, however, coverage is higher in the public services at around 55% in health and 90% in the electricity sector [20, 21].

Collective bargaining takes place mainly at the local, company level and in the public sector. There are some sectoral agreements, particularly in the public sector and various civil service and public companies – for example, energy and water suppliers and forestry. However, higher-level collective agreements are rather policy documents, dealing with issues in social partnership, than collective bargaining on employment conditions. The principal level of collective bargaining is at the company level. The framework for collective bargaining was set out in Latvia in laws passed in 1998-1999 as well as during the negotiations on the accession to the EU. According to the available information the Latvian bargaining coverage is at the lower end of the scale.

In general, employees in Latvia have opted for individual strategies rather than collective strategies to improve their economic situation. This trend weakens employees' collective identity.

1. Trade unions members' collective identity and participation are proportional to their feelings of importance in their organisation.
2. The interviews' results illustrated that the interviewees considered skilled leadership fundamental to trade unions' success. And once the members of the organisation see concrete policy results by means of their participation, they will have more reasons to participate.
3. Trade union leaders rose up through the union hierarchy mostly through their cultural capital and expertise.
4. Overall the involvement of trade unions as well as the other social partners is not strong enough, despite some examples in which unions' voices were heard.

However, the position of the Latvian Free Trade Union Federation in the current economic situation has become more visible and stronger than in the past. Trade union leaders have criticised both tax changes and sectoral support measures and made their own proposals (together with other social partners), some of which have been accepted by the government. Trade union resistance prevented the introduction of some measures.

4. Social Partnership, Social Dialogue and Employment Policy

The recent economic crisis of 2008-2010 highlighted an urgent need to develop new policy responses to help provide social stability in the European Union and alleviate social hardship. Although labour markets deteriorated in the EU, unemployment has hit harder some countries than others. It is important to stress, that the countries with most rigid labour market regulations have suffered the sharpest surge in unemployment numbers, indicating this is an important condition that should be considered alongside stimulus programmes. The European



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Commission Draft Joint Employment Report (JER)” 2009/2010 Report [6] reaches the conclusion that socio economic inequalities have increased in Europe. It argues that “a combination of factors (including economic restructuring associated with the move towards a knowledge economy, labour market change and redistributive policies of welfare states) account for these increases in inequality in the last two to three decades.

One of the key issues is the development of effective employment policy at the level of the EU as well as at the level of nation states and to ensure internal flexibility as the core to labour market stabilisation.

The EU's response to unemployment and poverty was an integrated employment policy that again combined subsidiarity with social partnership. The Employment Chapter of the 1997 Amsterdam Treaty [1] enshrined the neo-liberal notion of “employability” as the main component of social development and economic growth in the EU. Employability involves subordinating social and welfare systems to the demands of the labour market. EU Member States should compile annual employment plans to demonstrate how the principle of subsidiary is applied to national conditions of the countries. As the result, the contradiction between the European social protection systems and labour markets often refer to principles of flexicurity. These arrangements have been supported by trade unions and non-governmental organizations at European, national, and company levels.

A constructive social dialogue and decisive responses from all social partners are required to provide synergy between social and economic development, effective employment policy and a safety net for the future. A flexicurity approach [13] was established to conciliate employers' and workers' needs, flexibility and security, by ensuring the worker safe transitions inside the labour market, while maintaining and improving competitiveness of the companies and also preserving the European Social Model. Based on consultations with the Member States, international organisations, social partners and the academic community, the European Commission has suggested „pathways” and „common principles” in order to achieve flexicurity. [23] In the Integrated Guidelines, Member States are asked to promote flexibility combined with employment security – ‘flexicurity’ – and reduce labour market segmentation, having due regard to the role of social analysis and dialogue over choice is the foundation for the flexicurity approach and the introduction of flexicurity principles. The viability of these choices is largely dependent on the willingness and the ability of social partners to engage and define dialogue in setting up national employment policy. Flexicurity comprises activities aimed at promoting labour market flexibility and employment security by mutual interaction. It is necessary to ensure that labour legislation and agreements are sufficiently flexible and correspond to the interests of both parties – the employers and the employees. In the case of necessity, active labour market policy must efficiently facilitate the transfer from one workplace to another or from the status of an unemployed person to employment. A number of EU countries have attempted to battle labour market rigidity at the time of the economic crises in 2008-2009. For example, Germany introduced work-sharing schemes, under which wages are compensated for shorter hours. Such schemes appear to be successful in upholding both employment and incomes in the more affluent states. It should be noted, however, that such programs are difficult to replicate in less prosperous countries. Among the three Baltic States, only Estonia has enhanced flexibility of labour market by introducing a new Employment Contracts Act, effective 1 July 2009, which shortened the lay-off notice and reduced severance



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payments. The new Act also allows distressed employers to cut salaries to the minimum wage for up to 3 months, and reduces bureaucratic barriers (for example, eliminating the need to gain the approval of a labour inspector when terminating employment contracts, or establishing part-time working hours) [22, 24].

The Spring European Council of 2009 recommends that Latvia enact an integrated flexicurity approach, to intensify efforts to increase labour supply and productivity by reinforcing activation measures and enhancing the responsiveness of education and training systems to labour market needs. To promote implementation of flexicurity principles in Latvia, on May 15, 2009, the Saeima adopted amendments to the Labour Law, which are also related to the flexibility and security in the context of employment relations [11].

The need to put into practice the aims of the Lisbon Strategy and principles of flexicurity in Latvia requires ensuring effective social dialogue between the Employers' Confederation of Latvia, the Free Trade Union Federation and the government. Development of such a trend still is not included in national programmes on a large scale and does not have strong government support. [25] Several measures have been implemented in recent years for the improvement of the social dialogue, both on the national and local levels. For example, with the help of European Social Fund financing, the social partners involved in employment partnership, include the Employers' Confederation of Latvia and the Free Trade Union Federation of Latvia, local governments and the Latvian Association of Local and Regional Governments. This partnership ensures social dialogue at the local and regional level and increases participation opportunities of social partners in the decision-making process and provision of public services. In addition, the partnership facilitates quality improvement of public services provided by non-governmental organisations.

A constructive social dialogue and decisive response from all social partners are required to provide synergies between social and economic development, effective employment policy and a safety net for the future.

Conclusions and Recommendations

1. Social dialogue has similarities and differences in its development trends across countries and world regions. Nevertheless this concept is not widely accepted internationally. The most significant achievements in this area are in the European Union, as social dialogue has become an important element in the process of decision-making. An important role in promoting social dialogue has been taken by international institutions mainly ILO.
2. During recent years the role of trade unions in many countries is becoming less important and visible. To different degrees all unions in the EU also have seen a decline in their membership, resulting in overall decline in union density.
3. An assessment of trade liberalisation impacts on further economic and welfare development in light of the serious recession is needed in the EU. Trade unions are likely to reconsider support in general to neo-liberal policies and neo-liberal governments. There are, some signs of resistance starting to develop within the European labour movement that challenge both the underlying acceptance of neo-liberalism and the strategy of social partnership. These development take the form of a transnational „social movement unionism” that links diverse



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groups and networks in opposition to neo-liberal concept in the context of growing globalisation. It particularly concerns the representatives of national employers' organisations representing small enterprises, including the craft sector consider that the specific role of SMEs in the European labour market, their contribution to recovery, growth and job creation should become a more transversal issue of European social dialogue.

4. The results of this study show that the trade union movement has a relatively short history in the EU New Member States. Latvia, for example, followed the legacy of transformation to a market economy as a result of regained independence. The trade unions in Latvia are in a transition process from the model in which the state plays a dominant role to a model of social partner unionism.
5. Involvement of trade unions as well as other social partners in social dialogue and decision-making in Latvia is not strong enough, despite some examples in which unions' voices were heard. However, the position of Latvian Free Trade Union Federation in the current economic situation has become more visible and stronger than in the past. This could have possible impact on future economic development in the country with more emphasis on social issues.
6. A constructive social dialogue and decisive response from all social partners over choices in development of a national employment policy is required. Improved governance, transparency and involvement of stakeholders in social dialogue are essential to strengthen the links between economic development and effective employment policies.
7. There is urgent need for implementation of flexicurity principles in the labour market.
8. Further strengthening the capacity as well as competence of social dialogue structures and institutions are required.

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CRITICAL FACTORS OF SUPPLY CHAIN MANAGEMENT AND STRATEGIES IN THE FOOD INDUSTRIES – DEVELOPMENT OF A DECISION SUPPORT SYSTEM FOR STRATEGIC MANAGEMENT OF AGRICULTURAL RAW MATERIAL CULTURE

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Keywords: Organizations and Markets inside Ecological Revolution.

Abstract

Procurement of goods is increasingly becoming a central theme of our daily life. With the growth of world population and the climate change of our time the subject is omnipresent.

Currently food is often traded through agencies and historically marketplaces. Sometimes it seems that there is no regulation by the lack of market expertise and international regulative. But it is vital that the distribution and price control is placed under supervision. Such Claims as required by various organizations.

Creation of an optimization model with the result of a decision aid for possible introduction of restrictions and for a recognizable impact on the food trade!

What factors should consult organizations such as WHO, FAO, etc. in order to decide possible sanctions in world trade and what action or non action for an optimal distribution, etc. must be taken.

This model should be created to explain the scarcity degree of agricultural resource and thus legitimize any penalties or not.

In the top metalevel is the “Metaziel” of sufficient supply, broken down to the lowest metalevel to the optimization of the profits by producers and suppliers.

These limitations are to be used to address a global issue of food allocation, while creating an optimization model for decisions by restrictions of large organizations.

Optimization model as a result. Decision support for possible introduction of restrictions or rejections and thus detectable effect on the food trade in relation to:

- Efficiencies;
- Equities;
- Profits;
- Distributions.



Introduction – Markets and Organisations inside the Ecological Revolution

“No Single date can be pinpointed as the beginning of serious thinking about how organizations work and how they should be structured and managed. One can trace writings about management and organizations as far back as the known origins of commerce. A lot can be learned from the early organization of the Muslims, Hebrews, Greeks and Romans. If we take the time, we could make the case that much of what we know about organization theory has its origins in ancient and medieval times. After all, it was Aristotle who first wrote of the importance of culture to management systems; it was Taymiyyah who used the scientific method to outline the principles of administration within the framework of Islam, and Machiavelli who gave the world the definitive analysis of the use of power.”^[1]

When talking about food markets (supply and demand) meet different types of organizations:

- Provider;
- Demander;
- Markets;
- Dealer;
- Regulators;
- Legislature.

This project aims to develop a model that combines all these interests and ensure fair distribution, without having to regulate the price. This is the most important criterion that you know how much of a raw material is available, because it controls the supply and demand and hence the price.

Therefore, an optimization and management tool for that decision makers in organizations should be created, so they can get an overview of the IST situation.^[2]

Statement of the Problem – The Battle of the Organizations and Individuals for the Agricultural Resources

Every day new horror stories let us scare up...

The number of people on this earth is increasing, but on the other hand raw materials, especially food, are distributed unequally. ^[3]

A lot of people don't get any of them, or the prices where you still can get them are growing and growing and growing... ^[4]

¹ Jay M. Shafritz and J. S. Ott, *Classics of organization theory*, 3rd (Pacific Grove, CA: Brooks/Cole Pub. Co., 1992).

² Adam Smith and Edwin Cannan, *The wealth of nations: Adam Smith; introduction by Alan B. Krueger; edited, with notes and marginal summary, by Edwin Cannan*, Bantam classic (New York, N.Y: Bantam Classic, 2003).

³ Alexander Sarris, Piero Conforti and Adam Prakash, “The use of organized commodity markets to manage food import price instability and risk,” *Agricultural Economics* 42, no. 1 (2011).

⁴ “Warnung vor globaler Nahrungsmittelkrise – news.ORF.at,” <http://orf.at/stories/2008198/2008197/> (accessed May 8, 2011).



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So we all believe...

If humans do not have enough to eat or drink, they would become “uncontrollable”. It can not be that many countries are not available to global goods. [⁵]

With the delivery of food and beverage people will face survival. It may not be that the levy of a few controls and is impeded from profiteering. [⁶]

A lot of documentations, broadcasts and articles of various media and papers are documenting this. [⁷]

So some people and organisations go a further step with their allowances...

A uniform and controlled release must be created; otherwise we face a growing problem. A shortage of plans for other developments, people can do in the back. If the people do not eat or drink enough, they also do not need further plans and lose ambitions and his ideals and standards. [⁸]

The UN Food and Agriculture Organization (FAO) in early June 2010 in their semi-annual “Food Outlook” recognizes that the cost of food imports are rising, particularly in the poorest countries. This now threatens a famine in Africa, because the poorest countries pay more and more for imports. More particularly, the financial burden on food imports as calculated by the UN organization in the world this year to amount to about \$ 100 billion (81.8 billion euros). [⁹]

In return, however, new debts are created to import the daily needs for the people. In particular, the ten million people in the eastern Sahel in West Africa, according to the UN World Food Programme (WFP), are facing a period of starvation. Already, more than one billion people suffer from hunger and malnutrition. Therefore, on a three-day “Conference on Nutrition”, FAO, with representatives from the 192 member states in November 2009 set to a five-point plan against hunger. [¹⁰]

But there are not only reasons of force majeure, such as crop failures and weather conditions, but also political miscalculations and bad decisions, as well as illegal price fixing for ever higher prices. [¹¹]

But the increase in biofuels demand raises prices for cereals and rice. More and more people can afford less and less food. A food crisis is imminent, thus expanding the common social life more and more threatened.

⁵ “Warnung vor globaler Nahrungsmittelkrise – news.ORF.at,” <http://orf.at/stories/2008198/2008197/> (accessed May 8, 2011).

⁶ Lorenzo Cotula, *Land grab or development opportunity?* (IIEE, 2009).

⁷ “China heizt Kampf um Rohstoffe an – news.ORF.at,” <http://orf.at/stories/2033509/2033507/> (accessed May 8, 2011).

⁸ “Yes We Will! | WFP | United Nations World Food Programme – Fighting Hunger Worldwide,” <http://www.wfp.org/stories/Bangkok-09-yes-we-will> (accessed May 8, 2011).

⁹ OECD Publishing, *OECD-FAO Agricultural Outlook 2010* (Paris: Organisation for Economic Co-operation and Development, 2010).

¹⁰ OECD Publishing, *OECD-FAO Agricultural Outlook 2010* (Paris: Organisation for Economic Co-operation and Development, 2010).

¹¹ Bjørn Lomborg, *Cool it!: Warum wir trotz Klimawandels einen kühlen Kopf bewahren sollten*, 1st ed. (München: Pantheon, 2009)



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In countries like Egypt the meat prices have risen by 50% and threatens riot. And an end to price increases is not clear, as the Food and Agriculture Organisation (FAO) points out. But the fault lies not only in the interests of environmental conditions, but increasingly in the wrong policy.

Price of rice doubled!

Other countries in Africa are worse affected by the rising prices. Thus, the price of a kilogram of rice in Mauritania, West Africa, doubled in the last three months. At the same time in Zimbabwe, the price of corn increased by 59 percent and in neighbouring Mozambique by 57 percent. In the Democratic Republic of Congo, a portion of fish a year ago cost 10 dollars (8.3 Euros), today it is 25 dollars (20.8 Euros). For a 25-kilogram bag of rice, people must now pay 30 dollars - not for many financially viable. The policy is completely overwhelmed with the demand increase in the consumer society and the related allocation problems. [¹²]

But what is the truth...

Famous critics, such as Bjorn Lomborg, criticize these negative attitudes and campaigns. [¹³]

In addition to individual Traders there are many other winners by rising commodity prices. Therefore, many welcome this development because the higher commodity prices have also reached to a certain extent of producers. A lot of people (Indians, Chinese, ...) can afford more than ever before. [¹⁴]

Many questions are open now...

Do we lose control over our food supply chain and is there no future for food for all?

Do always get less people something to eat in the future?

Or is that only a horror scene, because with fear its easy to earn money...

True to the motto: "If people have fears, they can be controlled better."

In my dissertation, these developments should be considered from the historical view and compared with current developments. How do these current food stock and different organizations function and who controls them, who are the profiteers and who's ambition?

Through case studies the theme food should be evaluated and restructured in this work. [¹⁵]

Solution and answers should be found...

Creation of an optimization model with the result of a decision aid for possible introduction of restrictions and for a recognizable impact on the food trade! What factors should consult organizations such as WHO, FAO, etc. in order to decide possible sanctions in world trade and what action or non action for an optimal distribution, etc. must be taken. This model should be created to explain the scarcity degree of agricultural resource and thus legitimize any

¹² "Reis und Fleisch bald unerschwinglich," http://news1.orf.at/100608-52129/?href=http%3A%2F%2Fnews1.orf.at%2F100608-52129%2F52130txt_story.html (accessed May 8, 2011).

¹³ Bjorn Lomborg, *Apocalypse no!:* *Wie sich die menschlichen Lebensgrundlagen wirklich entwickeln*, 1st ed. (Lüneburg: Zu Klampen, 2002)

¹⁴ "Entwicklungsländer holen auf – Arzt und Patient – derStandard.at > Gesundheit," <http://derstandard.at/1288660105435/Fettsucht-Entwicklungslaender-holen-auf> (accessed May 8, 2011).

¹⁵ Josef Zelger and Martin Maier, *GABEK: Verarbeitung und Darstellung von Wissen* (Innsbruck: StudienVerlag, 1999).



penalties or not. In the top metalevel is the “Metaziel” of sufficient supply, broken down to the lowest metalevel to the optimization of the profits by producers and suppliers; These limitations are to be used to address a global issue of food allocation, while creating an optimization model for decisions by restrictions of large organizations.

Literature Review

The media circulate a ready-made image and it will be frequently published just more of the negative aspects. This will illustrate the following items.

An article by Eva Obermüller shows clearly that too free access to trade can lead to problems: “Free market led to hunger in Africa. Trade liberalization has, despite the best intentions, brought in some African countries more harm than good. According to a new study the free market led to a decline in food production and to more poverty and hunger”. Furthermore, the lead author claims that in many regions of the earth higher prices lead to unrest, as people there spend most of their money for food; mainly affected are the West African countries.

Often there are states that had in recent years increasingly relied on imports and therefore a dependency is created. As long as prices were low, problems arise, but in recent years as commodity prices have increased, this situation was to fall. The high prices led to shortages and riots, often with unfortunately, more and more dead.^[16]

But which statements and views lead us now to the right conclusion when we bring together all these observations and studies?

This question, if food is really scarce, or whether the scarcity is given as a false front in order to generate more profit, or if such higher prices now are really for the producers of goods and whether the actual situation is much worse than it was in the past, will explore this thesis.

Methodology

Procurement of goods is increasingly becoming a central theme of our daily life. With the growth of world population and the climate change of our time the subject is omnipresent.

Currently food is often traded through agencies and historically marketplaces. Sometimes it seems that there is no regulation by the lack of market expertise and international regulative. But it is vital that the distribution and price control is placed under supervision. Such Claims as required by various organizations.

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¹⁶ “Freier Markt führte in Afrika zu Hunger – science.ORF.at,” <http://science.orf.at/stories/1639401/> (accessed May 8, 2011).



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These limitations are to be used to address a global issue of food allocation, while creating an optimization model for decisions by restrictions of large organizations.

Optimization model as a result: Development of a decision support system for strategic management in organizations of agricultural raw material culture!

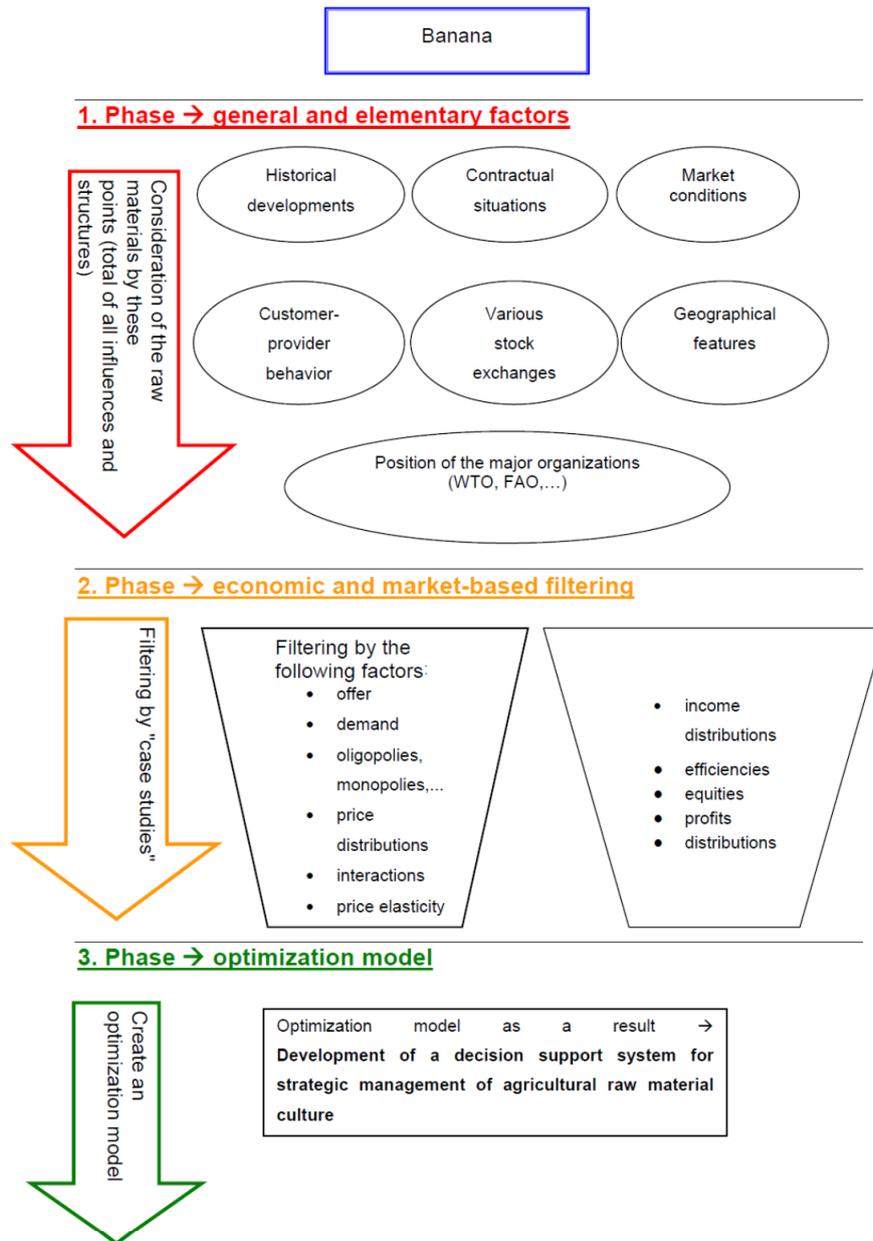


Figure 1. Optimization model



Conclusions

Technical results

We pursue further the issues on which markets are the above foods offered and work these structures and systems?

By which these factors are influenced and how and what factors developed these forms of trade?

In this study, all information should be collected on the basis of case studies and compared to obtain an objective picture of the situation.

This work is considered under the following questions: How do the food markets, the allocation and the system of organizations of their property work?

With the following secondary questions:

- What factors control these markets and organizations?
- Is intervention by public institutions and organizations like the WTO in the future necessary?

Personal results

This would be another step in my life, I have to go to learn more about food and its distribution and the involved organizations; I would like to develop myself more and more in the field of international food allocation and organizations and distribution of goods. An area whose future relevance will increase and my activity can be a good contribution to the socio-political responsibility.

Accepting responsibility and to shape the future in a positive way, for me personally it would be very important.

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EXCISE TAX POLICY FOR ALCOHOL AND CIGARETTES IN LATVIA, ITS IMPACT ON STATE REVENUES AND THE LAFFER CURVE

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Keywords: Laffer curve, excise tax, state revenues, alcoholic beverages, cigarettes.

Abstract

According to the economic relationship, called the Laffer curve, beyond a certain rate of taxation, the increase in tax rate leads to decrease in the State revenues. Latvian alcohol and tobacco markets are the brightest examples of inefficient tax policy, completely reflecting the concept of the Laffer curve.

With aim to boost State revenues, the excise tax rates for alcoholic beverages (especially strong alcohol) and cigarettes were raised considerably. However, the increase in excise tax in combination with the economic recession and the following decrease in purchasing power led to increase in illegal sales and growth in contraband from the CIS countries (mostly Russia and Belarus). Sales volumes in legal alcohol market decreased by 36% in terms of DAL (from 7.4 m DAL in 2007 to 4.7 m DAL in 2010) and by 64% in terms of absolute alcohol (from 1.58 m DAL a/a in 2007 to 1.01 m DAL a/a in 2010). As a result, State revenues from the excise tax for alcoholic beverages (excluding beer) dropped from its maximum of 91 million LVL in 2008 to 77 million LVL in 2010.



In terms of cigarettes, the increase in excise tax was even more significant. By joining the European Union (EU) in 2004, Latvia agreed to undertake the harmonization process of excise tax rates and increase the national excise tax rates to the minimal required level of the EU. Even though the harmonization process has to be finalized only by 2018, cigarette market faced several noticeable tax increases already during 2007-2009. Since 2004 the average price of cigarette pack has quadrupled, thus creating a very advantageous environment for cigarette smugglers. Share of illegal cigarette market has grown from 5% in 2005 to more than 50% in 2010, therefore causing State revenues from cigarettes to drop dramatically as well.

The paper aims to analyze the impact of the increase in excise tax rates on the State revenues by using the Laffer curve concept.

The analysis reveals a strong relationship between excise tax rates, illegal market and state revenues. It was concluded that considerable and frequent tax increases led to significant drop in legal sales and decrease in State revenues from the excise tax.

The results can be used to improve excise tax system and effectiveness in Latvia to increase the competitiveness of legal manufacturers and to boost State revenues.

Introduction

According to the Laffer theory, introduced in 1974, there is an inverse relationship between tax rates and state revenues. According to this concept, gradual increase of tax rates first leads to growth in state revenues [1]. After reaching a certain rate of taxation, further tax increases, on the contrary, lead to reduction of total sum of taxes collected until these drop to zero.

The key idea of the Laffer's theory is that increase in tax rates not always leads to increase in state revenues. High tax burden may negatively impact entrepreneurial activities and investment flows. For that reason state government should carefully estimate the level of tax rates and consider the possibility of tax reductions, as this may become a positive impulse for economic development [2].

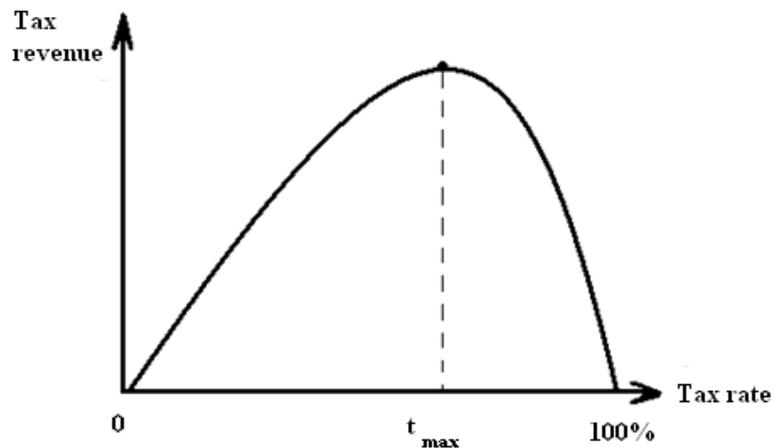


Figure 1. Laffer curve [3]



The key argument behind the Laffer curve is that in case of zero tax rate, state revenues equals zero, and in case of 100% tax rate, state revenue will be equal to zero as well, as private sector will not be interested in operating on a non-profit basis. As a result, a downward-sloping U-curve appears, there t_{max} reflects an optimal tax rate, which assures state budget maximum tax revenues.

According to Laffer, the higher are tax rates, the higher is tax avoidance among individuals, as individual's aspiration to work is set mainly by the level of after-tax revenue. For that reason, when a certain level of income is reached, individuals are no longer interested to work more, as additional input is no longer justified by higher revenues. As far as tax rate exceeds its optimal level, entrepreneurial activity and motivation to work reduces, therefore the reported pre-tax income tends to shrink as well [4]. Tax evasion, in its turn, boosts shadow economy – e.g. in case of alcohol and tobacco market, it increases share of illegally produced and illicit contraband products. The following part of the paper will reveal the impact of recent excise tax increases on Latvian alcohol and cigarette markets.

Changes in Excise Tax for Strong Alcohol and Its Impact on State Revenues

In the economics recession period State revenues in most of all countries started to decrease. In order to avoid this trend and assure an additional income to State budget, the government of Latvia made a decision to increase excise tax rates for strong alcohol and tobacco. In 2009 excise tax for strong alcohol were increased twice in February and July of 2009 for a total amount of 260 LVL per 100l absolute alcohol (a/a) or 41% [5].

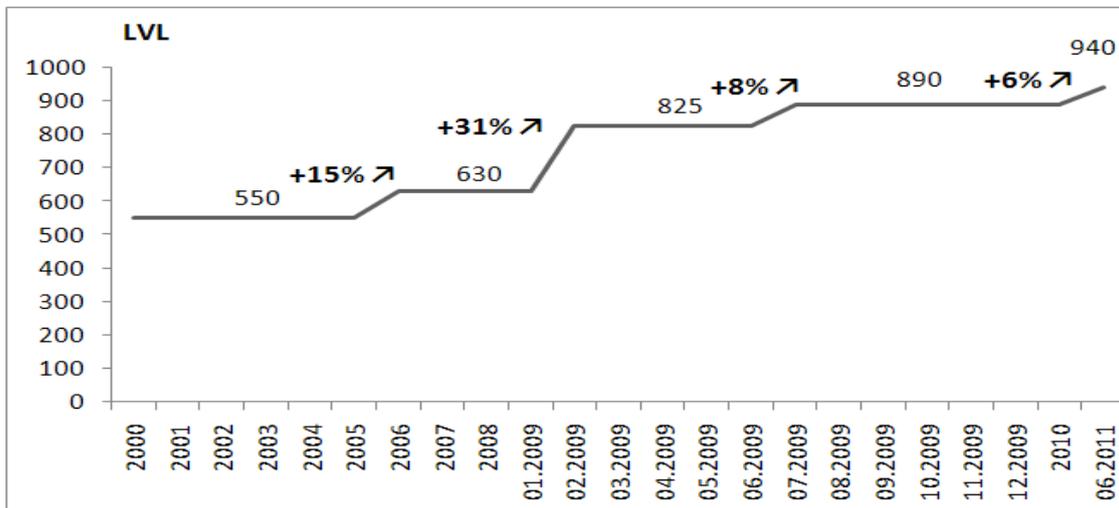


Figure 2. Changes in Excise tax rate for strong alcohol (per 100l a/a), 2000-2011 [6; 7]

940 LVL per 100 a/a is 3.76 LVL ($940 \cdot 0.4 / 100$) per 1l 40% alcohol volume bottle, plus VAT 22% 4.59 LVL, all together summing to approximately 70% of vodka's (the most popular non-beer alcoholic drink in Latvia) final retail selling price in shop. This led to changes in



consumption and increase in illegal alcohol share since taxation is an issue worldwide [8; 9]. An additional negative impact is competitive advantage that grey market players gain versus legal ones and this has a distortive effect in the open market [10; 11]. As a result state revenues decreased from 90.9 mln LVL in 2008 to 77.3 mln in 2010.

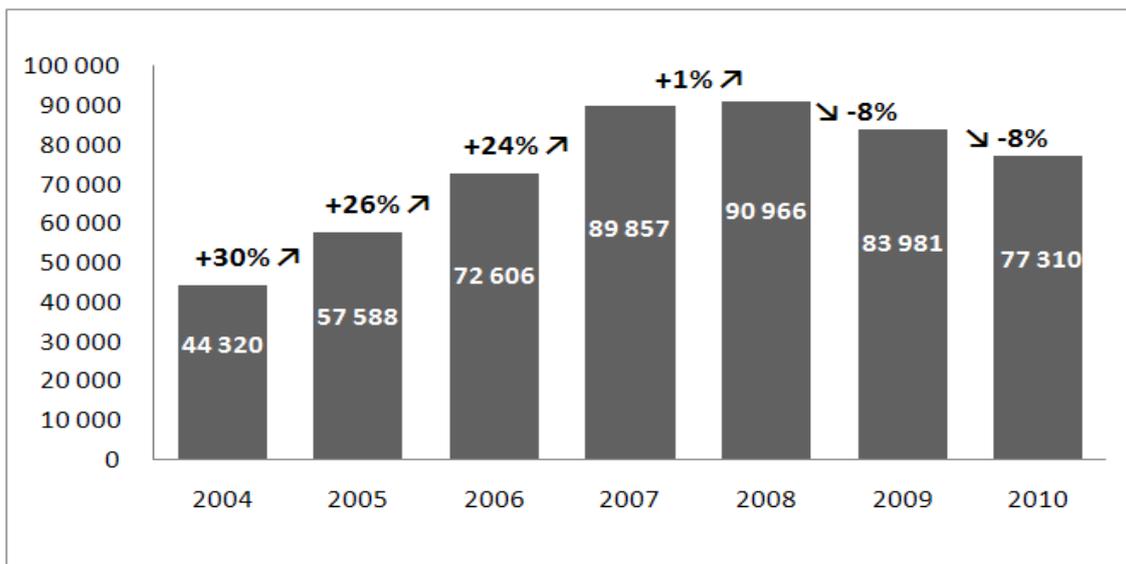


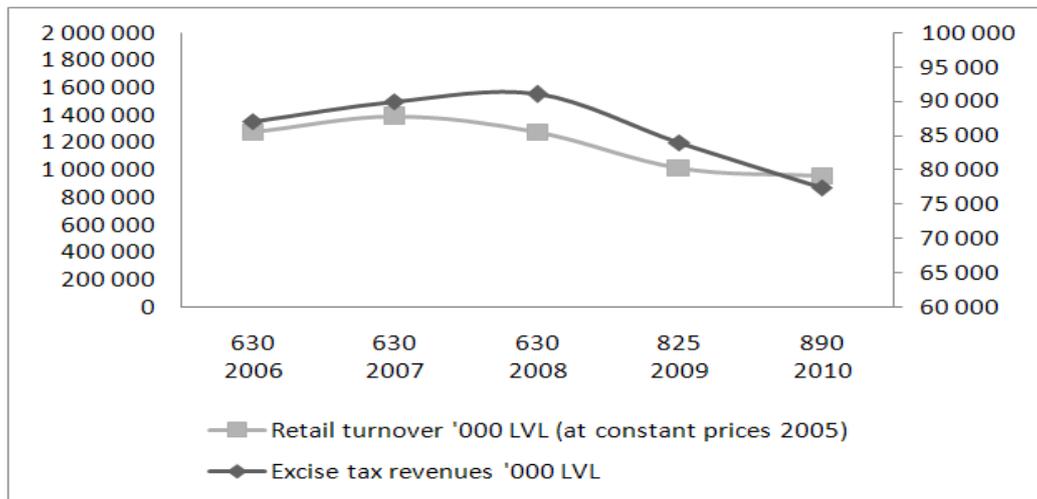
Figure 3. Changes in State revenues from excise tax (excluding beer) in thousands LVL, 2004-2010 [12]

The situation in Latvian alcoholic beverage market is a typical example when an increase in taxes does not give the planned effect, because market players are looking for new ways to decrease their expenses. Many manufacturers switched from spirit to beer base in the production of alcoholic cocktails in order to pay lower taxes, because excise tax rates for beer (in comparison with other alcohol types) are much more favourable. Consumers, in their turn, switched to cheaper products, including illegal ones. The border with Russia and Belarus also contributed a lot to thriving illicit alcohol market. Drinking habits in Latvia and these two countries are very similar already since Soviet times. At the same time, prices of vodka, brandy and other strong spirit drinks in these countries are much lower than in Latvia, thus creating attractive profit opportunities for smugglers.

Figure 4 shows, that while the excise tax rate for strong alcohol was stable, the excise tax revenues were slightly rising. Even in 2008, when the retail trade turnover in constant prices started to decrease, excise tax revenues were still increasing. Afterwards, in 2009, when excise tax rate increased, state revenues started to decline, but the overall trend was quite similar to the retail turnover trend. Taking into account the fact that excise tax rate was risen twice in 2009, it is not possible to tell the exact optimal excise rate, but the curve shows that the last increase to 890 LVL was strictly above it. In its analysis (2011), Association of Latvian alcohol producers and distributors has estimated optimal tax rate at the level of 750-800 [14] and it is very close to



the figures that could be estimated from the chart above (~650-850). According to World Health Organization (WHO), the total global alcohol consumption has not changes in last 60 years [15]. This information supports the findings of the most analysts of the Latvian alcohol market about increasing share of illegal alcohol market [5; 14; 16].



* Y2009 consists of two increases in excise tax rate (February 1 to 825 LVL, July 1 to 890 LVL per 100l a/a)

Figure 4. Changes in Excise tax rate for strong alcohol per 100l a/a, retail turnover and state revenues from excise tax, 2006-2010 [6; 12; 13]

Excise Tax for Tobacco Products in Latvia and Its Recent Developments

In 1st of May 2004 Latvia became a part of the European Union (EU). Due to that Latvia had to introduce several directives aimed at harmonising the structures of the excise duty on tobacco products as part of the internal market of the European Union (EU). By introducing these directives, the manufactured tobacco products in the EU will neither distort competition nor obstruct free movement within the EU [18]. Harmonization process in Latvia was conducted according to [18]:

- Council Directive 92/79/EEC of 19 October 1992 on the approximation of taxes on cigarettes;
- Council Directive 92/80/EEC of 19 October 1992 on the approximation of taxes on manufactured tobacco other than cigarettes;
- Council Directive 95/59/EC of 27 November 1995 on taxes other than turnover taxes which affect the consumption of manufactured tobacco.

Council Directive 92/79/EEC, established an overall minimum excise duty for cigarettes as part of the internal market of the European Union (EU). EU countries were granted some flexibility to adjust the incidence of the overall minimum excise duty in line with certain



changes. The Directive laid down minimum consumption taxes on cigarettes, as defined by Directive 72/464/EEC, i.e. [19]:

- a specific excise duty per unit of product;
- a proportional excise duty calculated on the basis of the weighted average retail selling price (WAP);
- VAT proportional to the retail selling price.

During the time when Latvian State Tobacco Monitoring Programme for 2006-2010 was implemented, excise tax rates for cigarettes underwent the following changes (see Table 1).

Table 1

Changes in excise tax rates for cigarettes in Latvia, 2004-2010 [20]

	2004	2005	Jan 1, 2006	Jan 1, 2007	July 1, 2007	Jan 1, 2008	Jan 1, 2009	Jan 1, 2010
Specific tax, LVL per 1000 sticks	6.3	6.9	7.6	8.4	10.0	17.8	22.5	22.5**
Ad valorem tax, % from MRP*	6.1%	10.5%	14.8%	19.2%	25%	32.2%	34.5%	34.5%

* MRP – maximal retail price

** but not less than LVL 48 per 1000 sticks

The Results of Latvia's State Tobacco Monitoring Programme for 2006-2010

Impact on Average Retail Price of the Cigarette Pack

Rapid growth of excise tax rates, as well as an increase of VAT rate from 18% to 21% in 2009, caused cigarette price to grow significantly. According to Latvian State Revenue Service data, the price of most demanded cigarette pack since 2004 grew more than 4 times (see Figure 5).

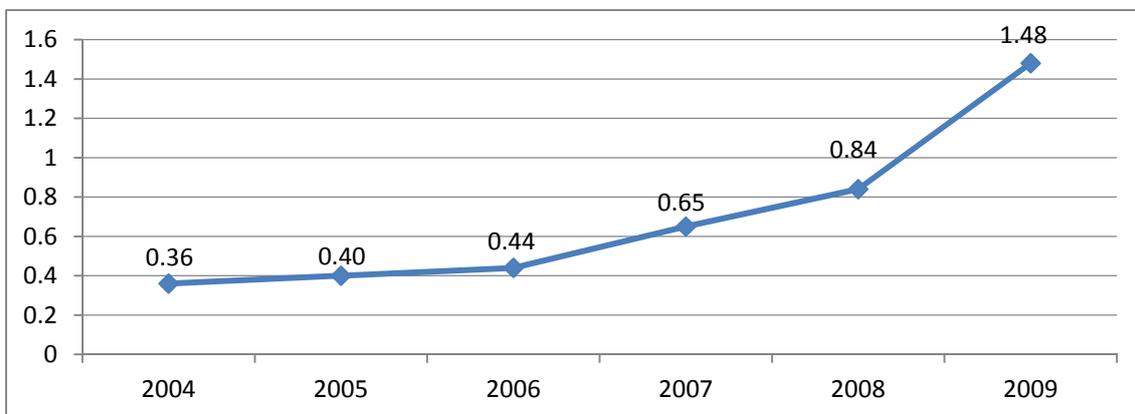


Figure 5. The average price of the most demanded pack of cigarettes LVL, 2004-2009 [7]



Impact on Legal Cigarette Market

Rapid growth of cigarette price in combination with economic decline in Latvia, followed by significant drop in purchasing power had a negative impact on legal sales (see Table 2). In order to economize, Latvians often opted for cheaper illicit alternatives, being smuggled mainly from neighbouring countries Russia and Belarus [21].

Table 2

Cigarette sales in Latvia, 2005-2010 (thousand units) [21]

	2005	2006	2007	2008	2009	2010
Legal sales	4 692	4 754	3 324	3 870	2 294	1 772
Illicit trade	247	358	1 750	956	2 075	2 033
Actual consumption	4 939	5 112	5 074	4 825	3 469	3 804
Penetration of illicit trade, %	5.0	7.0	34.5	19.8	47.5	53.4

According to Euromonitor International, share of illicit market grew from 5% in 2005 to more than 53% in 2010.

Impact on State Revenues from Excise Tax

In 2010, tax revenues from tobacco were LVL 92.03 million, which was by LVL 21.96 million or 19% less than in 2009 (see Table 3). Cigarettes accounts for more than 97% of the total excise tax revenues charged from tobacco. This allows to conclude that significant drop in sales of legal cigarettes was the main reason of the shrink in state revenues [20].

Table 3

Excise tax rates for cigarettes and State budget revenues, 2005-2010 [20]

	2005	2006	2007*	2008	2009	2010**
Specific tax rate, LVL per 1000 sticks	6.9	7.6	9.2	17.8	22.5	22.5
Ad valorem tax rate, % from MRP***	10.5	14.8	22.1	32.2	34.5	34.5
Excise tax revenues from cigarettes, LVL million	43.13	56.89	73.83	143.10	113.35	89.88

* average annualized rate (till July 1, specific tax rate was 8.4%, ad valorem – 19.2%, after July 1, specific rate – 10%, ad valorem – 25%)

** but not less than LVL 48 per 1000 sticks

*** Maximal Retail Price

Figures 6 and 7 illustrate changes in State revenues, applying the concept of Laffer's curve.

Figure 6 and Figure 7 illustrate that already since 2008 increases of excise tax rates do not contribute to growth of state revenues but, on the contrary, cause them to fall dramatically after each tax increase. This allows to assume, that optimal tax rate, providing the largest State



income, as it is covered in Laffer's concept, has already been exceeded and any further excise tax increases will cause State income to continue falling.

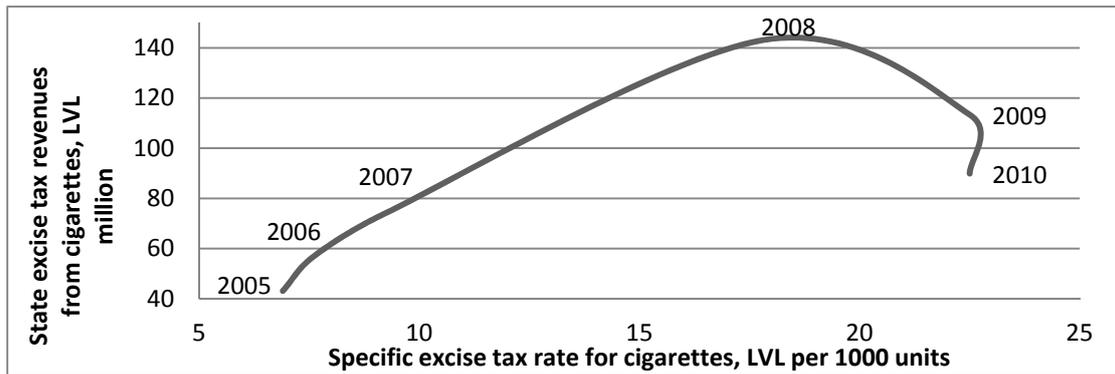


Figure 6. Changes in specific excise tax rate for cigarettes and respective changes in State income, 2005-2010, million LVL [20]

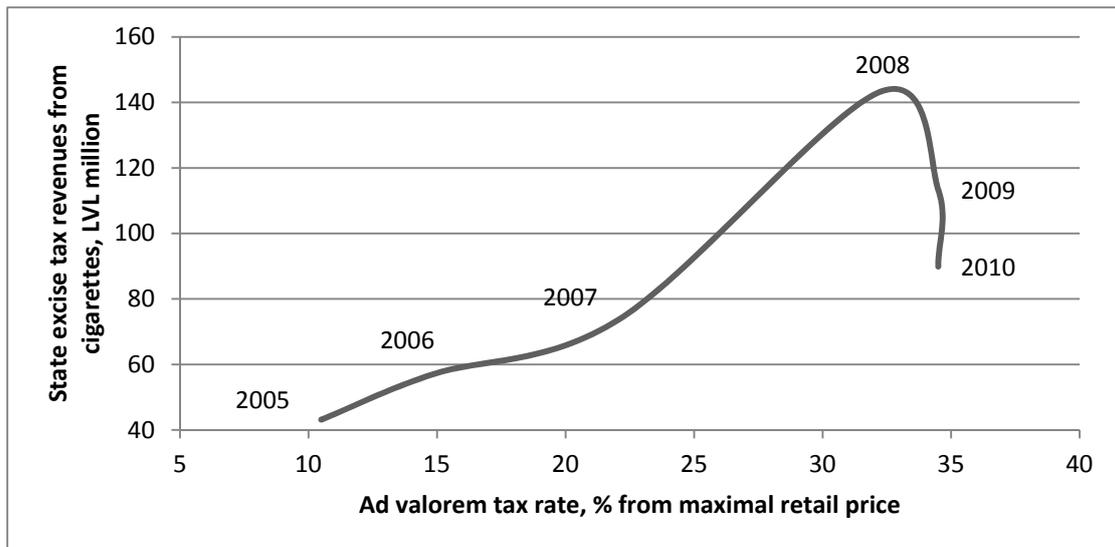


Figure 7. Changes in ad valorem excise tax rate for cigarettes and respective changes in State income, 2005-2010, million LVL [20]

Conclusions and Suggestions

- The increase of tax rates does not necessary lead to growing state revenue, as too high tax rates contribute to increasing tax avoidance and cause shadow economy to thrive which, in its turn, decreases State revenues. Latvian case of rapid excise tax increases for alcoholic beverages and tobacco, and the following decline in the respective state revenues from it, is a typical example of the Laffer concept.



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- Despite the fact that excise tax rates were increased by 41% for strong alcohol (2008-2010), respective Latvian state budget revenues in 2010 decreased by 15%, comparing to 2008. The decrease in excise tax revenues was much higher than decrease in total retail turnover, despite the fact that previously both trends were similar. Increasing illegal market and its rising dominance over the legal market is the main reason of this deviation.
- As a result of still ongoing process of cigarette excise tax harmonization, which Latvia had to undertake after joining the EU, specific excise tax rate for cigarettes since 2006 tripled while ad valorem rate more than doubled. Respective state revenues, on the contrary, in 2010 were 37% below 2008, when tax rates reached their optimal value.
- In order to reach the planned state budget revenues, tax increases have to be supported by stricter legislation and more effective complex of border monitoring, controlling and other activities aimed at preventing the thrive of illicit market. However, spending on these activities, on the contrary was reduced in Latvia which, in combination with tax increases, declining purchasing power and low overall tax paying culture of the Latvian population, created very attractive opportunities for smugglers.
- Lack of activities aimed at fighting illegal market had a negative effect on the competitiveness of legal producers. Latvia is one of the world leaders in production of strong alcoholic beverages per capita, and thrive of illicit market significantly hinders the competitiveness of local manufacturers. British American Tobacco Latvia Ltd., which was the only local cigarette manufacturer in Latvia, had to cease cigarette production and close its factory in 2009, dismissing more than 220 employees, as its economy brands could no longer resist increasing competition from illegal cigarettes' side.
- In case of alcoholic drinks, our estimations show that tax reduction would contribute to the growth of state revenues. An optimal excise tax rate for strong alcoholic drinks would be approximately 650-850 LVL per 100l a/a, that's at least 10% below the current rate (940 LVL).
- In case of cigarettes, tax increases, although obligatory for new EU members, were implemented at much quicker pace than Directives actually required, showing significant hikes during the review period. According to paper results, it would be reasonable for Latvian government to avoid rapid excise tax increases in the future, and approach minimal excise tax level, set by EU, gradually, reaching the EU target by 2018. At the same time, set of activities in order to combat illicit sales is required. Finally, during the forthcoming years, until situation in tobacco stabilizes, an increase of excise tax rates for cigarettes definitely cannot be considered as a source for boosting state revenues.

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THE EVOLUTION OF MILITARY KEYNESIANISM AND ITS USE IN THE DEFENSE POLICY OF A STATE

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Abstract

In this paper author analyzes such aspect of modern defense policy as Military Keynesianism, which is based on the theory of John Maynard Keynes, who has emphasized the role of a state in the regulation of economic processes.

The aim of the paper is by analyzing the evolution of military Keynesianism, to define the potential trends of its use in the modern defense policy of a small state, which is mainly dependent on imported military goods. To achieve the aim, author has analyzed the evolution of military Keynesianism from the Second World War till the War on Terror, as well as defined the military and socioeconomic objectives of the small state defense policy in the framework of military Keynesianism. Also author has examined the possibility of implementation of this concept without the direct involvement of state defense budgetary funds.

Introduction

Under the influence of the global financial crisis the “general theory” of John Maynard Keynes has regained its popularity among policy makers in the USA and Europe. Unlike classical liberal theories, Keynesianism emphasizes the involvement of a state into some economical processes. One of the mechanisms that could be used by state to influence its economy is defense policy. In this case the increase of defense activities can support some sectors of national economy in direct or indirect way. In the framework of defense economy the direct or indirect stimulation of the civil sector can be performed by increase of defense budget spending or by implementation of closer cooperation between defense and civil sector.

Both stimulation activities mentioned above can be viewed in the context of military Keynesianism. To understand the fields of modern implementation of military Keynesianism better it is necessary to look into the origins of this theory and its evolution. Therefore the aim of this paper is by analyzing the evolution of military Keynesianism, to define the potential trends of its use in the modern defense policy of a small state.



To achieve the aim, author will analyze the evolution of military Keynesianism from the Second World War till the War on Terror, as well as define the military and socioeconomic objectives of the small state defense policy in the framework of military Keynesianism. Also author will examine the possibility of implementation of this concept without the direct involvement of state defense budgetary funds.

1. The Evolution of Military Keynesianism

The development of military Keynesianism as official policy began in the USA after the Second World War. The basis for this policy has been found in the famous publication of John Maynard Keynes “The General Theory of Employment, Interest and Money”. According to the Keynesian theory, the main target of the government in the condition of economic crisis or recession is the stimulation of employment [1]. To achieve this target government should concentrate its economic policy on:

1. Stimulation of consumption;
2. Increase of government investments;
3. Regulation of the rate of interest.

Another economic concept, which has stimulated the evolution of military Keynesianism and Keynesian theory itself, is the concept of economic (business) cycle. The development of this concept was stimulated by two major world economic depressions in XIX and XX century, i.e. the Long Depression (1873 – 1896) [2] and the Great depression (1929 – 1939) [3]. By the long-term analysis of world economic data many economists such as Joseph Kitchin [4], Nikolai Kondratieff [5], John Maynard Keynes [1], Joseph Alois Schumpeter [6] came to the conclusion that world economy’s development fluctuates between periods of relatively rapid economic growth, and periods of relative stagnation or decline. Therefore according to the concept the economic depressions are inevitable. In its turn the Keynesian theory states that government can mitigate the consequences of economic downturn by involvement into some economic processes.

The evolution of military Keynesianism began in interwar period of the XX century. The idea [7] of the military Keynesianism was formulated by Polish economist Michal Kalecki who has paid attention to the development of business in Nazi Germany [8]. In the 1930s German government supported enterprises that were involved in production of military material and equipment, using the financial resources of defense budget and work supply bills. Central and local government agencies used these bills to pay the firms involved in different public projects. Kalecki stated that in this way additional purchasing power was created, effective demand was increased and production rose [8]. As a result the strong military industrial base was created to support the future warfare. The main cause of rapid changes in the structure of national economy of Nazi Germany was the existence of totalitarianism. Therefore government had a strong control on economical processes and could rebuild national economy according to the needs of German war machine. Author considers that although the concept of military Keynesianism was formulated by M. Kalecki in 1935 (before “the general theory”), the main economic principles of this theory were defined by J.M. Keynes. It is very important to mention that Keynes has never advocated the increase of defense spending as the prime source of stimulation of consumption or government investments. Because of his moral principles Keynes considered that increase of war expenditures “...has only been allowed to serve the purposes



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of war and destruction [9]”. Nevertheless after the Second World War this technique has been integrated into the official US defense policy [10] to achieve the target of “general theory” that has been mentioned above.

Author can divide the evolution of military Keynesianism into three periods:

1. *Initial government activities without integration of military Keynesianism in government defense policy;*
2. *The official defense policy during the Cold War;*
3. *The undeclared defense policy of military Keynesianism.*

During the interwar period of the XX century the only example of military Keynesianism can be found in Germany, where Nazi government combined deficit spending with the development of war economy [7]. During the same time US producers of military goods didn't get the notable support from government. Although US government maintained the minimum capacity of its defense industry for the future mobilization by such means as: 1) the initial standardization of military equipment and allocation of the production between different contractors; 2) notification of contractors about the planned scale of production for the future mobilization; 3) implementation of simplified contracting procedures during the mobilization process. All these activities have led to the success of mobilization process in the USA during the Second World War, when the production of military goods was much higher than during the First World War [11]. By 1944 US military spending reached 40% of GDP and averaged 20% of GDP during the 1940s, which coincided with a massive economic boom [12]. In the case of Nazi Germany in 1930s the full implementation of military Keynesianism into the official policy of a state was limited by the treaty of Versailles. In its turn the US government activities were connected only with the process of mobilization. Nevertheless the support of business upswing in Nazi Germany and the US government mobilization activities can be defined as **initial government activities without integration of military Keynesianism in government defense policy.**

Immediately after the Second World War the US government initiated the demobilization process within which most of military contracts were terminated [11]. In the same time the US government believed that significant reduction in defense spending may cause unemployment as well as decrease in the scale of production. In their turn these processes may become a new depression causes. In order to prevent a new economic downturn, the US government has decided to maintain the appropriate level of defense spending and military production. Jonathan Nitzan and Shimshon Bichler [12] believe that the US defense policy after the Second World War was based upon the document NSC 68 “United States Objectives and Programs for national Security”, which was approved on April 14, 1950. In accordance with this document the US government has planned systematic increase of defense spending on an annual basis [10] to counter the threats of the cold war and stimulate economic development. Till the end of the cold war the US government has used the following techniques:

- Purchase of domestic goods by the defense sector;
- Shift of resources from the productive sector to the non-productive sector within the national defense industrial base;
- Raising of defense budget funds in order to support the defense industrial base (infrastructure development, procurement and acquisition of military equipment from local contractors) [13].



For the first time the US defense policy based on principles of military Keynesianism was implemented during the Korean War. As a result defense spending tripled, unemployment decreased and Federal budget revenues increased. Then the official policy of military Keynesianism was implemented during Vietnam War and the administration of President Ronald Reagan in the 1980s [14]. Except the USA other countries of the world never declared military Keynesianism as a part of their defense policy. For instance European governments have actively used social spending as a mechanism of regulation of business cycles [7]. In its turn the increase in military spending of USSR as well as countries of Warsaw Pact during the Cold War can't be defined as a policy based on principles of military Keynesianism, because the economy behind the Iron Curtain was strongly centralized (determined by the central government). In this case the increase in military spending doesn't need to have any subordinate economic goals.

In accordance with all mentioned above author can define this period of the evolution of military Keynesianism as **the official defense policy during the Cold War**, which was based on principles of military Keynesianism.

The end of the Cold War has stimulated the notable decrease (-35% from 1986 to 1994 [15]) in world defense spending. For instance, in five years US defense spending fell by 9% from 1989 to 1995 [17]. Therefore the official US policy based on principles of military Keynesianism was discontinued in 1990s.

After terrorist attacks on September 11, 2001 the coalition led by the USA declared the War on Terror. Since that time the US government increases its defense spending on a regular basis. For instance, the US defense expenditures increased by 18% from 2000 to 2002 [16]. In 2008 US defense expenditures reached 621 billion dollars, but during and after Global Financial Crisis the US defense spending continued to rise [16]. Although the recent increase of the US defense spending hasn't stimulated rapid economic growth as it was during Korean War, some researches recognized the features of military Keynesianism in the modern defense policy of the US government [7] [12]. On the other hand from 2001 to 2006 the average increase of defense spending in the 15 "old" member states of the European Union was 3% [17]. Also under the influence of the global financial crisis from 2008 to 2009 the total defense spending of the European Union decreased by 3.5% [18]. Therefore, again the main feature of military Keynesianism – increase of defense spending can be found only in the modern US defense policy. So the last period of evolution of military Keynesianism author can define as the **undeclared defense policy of military Keynesianism**. Although the concept of military Keynesianism often is associated with the level of defense spending, author of this paper wants to pay his attention not only to this feature of the concept, but also to the target and tasks of military Keynesianism that were mentioned above. Therefore the next part of the paper is devoted to the effects of defense spending as well as socio economic goals of defense policy based on concept of cooperation between defense and civil sector.

2. The Effects of Defense Expenditure and Alternative Military Keynesianism

There are three main groups of economic effects of defense expenditure: 1) demand effects; 2) supply effects and 3) security effects. **Demand effects** function through the composition and intensity of expenditure. In this case government stimulates the demand for military goods through the increase in defense spending. Simultaneously, if there is spare capacity of production, increase



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in defense spending stimulates utilization and reduces unemployment of resources. On the other hand increase in defense spending may crowd out other forms of expenditure, such as investment in non-military production and services [19] („guns vs. butter” concept [13]). In their turn **supply effects** depend on factors of production (labor, physical and human capital as well as natural resources) and technology, which together determine potential output. The extensive use of factors of production and technology in military production may reduce the capital, which is available for the civil sector. Although some of resources of the military sector may return to the civil sector. For instance military training may increase the productivity of human capital. Also some products of military research and development process (internet, GPS, off-road vehicles, etc.) may be used in civil sector. Finally **security effects** are connected with security of persons and property from domestic or foreign threats. The increase in defense spending may raise the level of domestic security, which in its turn is essential to the operation of markets and the incentives to invest and innovate. In many countries of the world the low level of security is the main obstacle for economic development. On the other hand the positive security effects of increase in defense spending may be reduced by a rent seeking military industrial complex and arms races or damaging wars [19].

In accordance with all mentioned above author can stress that all effects of defense spending have not only positive, but also negative impact on the economic growth and development. Therefore since the second half of twentieth century many researchers have tried to prove negative or positive impact of defense expenditure. Author won't be able to review all the researches of military spending effects in this paper. Therefore he will use information which has been summarized by other researchers.

In 1995 Todd Sandler and Keith Hartley analyzed 25 researches that were conducted from 1970 to 1993. Almost 60% of researches were devoted to developing countries and only 8 researches dealt with developed countries including the USA. From the eight researches mentioned above only three confirmed the positive impact of defense expenditure, another three confirmed the negative impact and the rest two confirmed unclear impact. Consequently the following common trends have been found:

- Almost all the researches that were based on demand effects showed negative impact on national economy;
- Researches that were based on supply effects showed little positive impact or unclear impact on national economy [20].

Continuing the previous research Keith Hartley has studied 26 researches of defense expenditure impact on national economy that were conducted from 1995 to 2005. Similar to previous analysis results of the researches reflected all the possible impacts of defense spending, i.e. positive, negative or unclear impact. In general, researches haven't confirmed persuasively positive or negative impact [21].

Finally after the analysis of 103 researches in 2009 Paul Dunne came to the conclusion that most likely serious increase in defense expenditure would have negative or unclear impact on national economy [22].

In accordance with all mentioned above author has concluded that modern researches of defense expenditure effects can't prove convincingly positive or negative impact on national economy. Therefore the integration of classical military Keynesianism (based on increase in



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defense spending) in the defense policy of a state is unpredictable. On the other hand there is a possibility to achieve the main target of military Keynesianism without significant increase in defense spending. Despite the first and the second period of evolution of military Keynesianism when defense policy was based on conventional warfare and military spending, the third modern period is influenced by permanent military threats (terrorism and asymmetric warfare) as well as by global financial crises. In this situation under the influence of the permanent military threats the demand for defense increases, but at the same time many countries are forced to reduce their defense spending. Therefore it is necessary to increase the efficiency of available defense budget without implementation of classical military Keynesianism, i.e. increase in defense spending. Instead of significant increase of government spending author offers to use the policy of cooperation between military and civil sector which can be the base for **alternative military Keynesianism**. By author's opinion the policy of cooperation between military and civil sector as well as alternative military Keynesianism could have similar **defense** and **socio economic** goals.

The main **defense goals** could be:

1. To release the military personnel from secondary functions which are not connected with their primary duties (maintenance of infrastructure, catering, field services, etc.);
2. To concentrate the resources of military sector for combat missions by involvement of civil sector into the logistics process during peace time and low intensity conflicts, i.e. peacekeeping;
3. To reduce the costs and increase the quality of functions that were taken by the civil sector, using free competition and economy of scale;
4. To develop the mobilization capacity of civil sector.

In their turn the main **socio economic goals** could be:

1. To reduce the part of defense spending, which is not connected with the combat functions of armed forces;
2. To support of domestic manufacturers of military goods and dual use products;
3. To increase the employment.

The concept of alternative military Keynesianism can be used as a combination of state defense and social policy. In addition the further implementation of this concept will allow to use not only the financial resources of defense budget, but also another sources of state finances (for instance government investments). This will increase the financial capacity of the defense sector without direct involvement of state defense budgetary funds.

Therefore author has modified the definition of military Keynesianism which was given by Muthuchidambaram in 1992: "a deliberate public policy applied by a state, through the use of a *military budget* as a purported tool to counteract cyclical unemployment, to stimulate industries that suffer from the impact of the economic recession and to support R&D and technological innovation and simultaneously to achieve national security [23]".

The new definition could be as follows: alternative military Keynesianism is a deliberate public policy applied by a state, through the use of *the cooperation between defense and civil sector* as a purported tool to counteract cyclical unemployment, to stimulate industries that suffer from the impact of the economic recession and to support R&D and technological innovation and simultaneously to achieve national security.



The exclusion of defense spending (military budget) from the definition gave more flexibility to the concept. In addition the concentration on the socio economic goals broadened this policy from the defense sector to the whole national economy of a state. Finally this concept can be implemented not only by the biggest military spenders such as the USA, but also by smaller states even without properly developed defense industrial base. Therefore in the last part of the paper author will examine main kinds of cooperation between military and civil sector, as well as determine their implementation in the condition of a small state.

3. The Implementation of Alternative Military Keynesianism

In general the cooperation of military and civil sector or alternative military Keynesianism can be conducted in the framework of defense procurement (contracting). Author can distinguish four main kinds of cooperation, which can be used also by small countries:

1. public private partnership (outsourcing);
2. joint projects (participating in regional cooperation);
3. offset deals;
4. special industrial zones (in the framework of regional alliances).

The main incentive of the small country is to preserve the current level of its defense spending or at least reduce the level of defense spending in near future. Another condition for the small state is the participation in regional organization such as European Union, which conducts a unique process of the integration of the European Defense Equipment Market (EDEM) and European Defense Technological and Industrial Base.

The main target of **Public Private Partnership** is to push back the boundaries of the state and cut public spending [24]. In the case of military sector Public Private Partnership is the part of the contracting process. High-performing organizations pay other organizations to perform tasks outside those core competences. In this situation tasks can be delegated to organizations whose own core competences cover the high-performing organization's non-core tasks. Such is the practice of *outsourcing*, when military organization delegates some of its secondary functions (transportation, food service, medical treatment, maintenance, etc.) to the private sector on the contractual basis in order to release the military personnel from performing secondary tasks that can be performed by civilians, and to reduce the costs of supporting military units that can be reached by the economy of scale, using the resources of the private sector companies [25]. Due to its complexity Public Private Partnership demands thorough planning and control of execution. That's why it is necessary to examine Public Private Partnership process as a system of cooperation which is integrated at strategic, operational, and tactical military levels of operation.

In the case of **joint projects** small country may participate in new military good development process together with other members of the regional union. The costs of the project are usually divided between the participants; therefore it is cheaper than development of the project by single country. Different stages of production of the military good also can be divided between participants. Therefore participation in the joint projects may reduce the defense spending of a small country and support its national economy.



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In 2007 EDA conducted the research on the subject of **offsets**. According to this research offsets were defined as “compensations offered by a seller to a buyer. It is applied for so called off-the-shelf procurement, i.e. for already developed systems [26].” Using offsets as a part of defence contracting policy is very challenging for every government. On the one hand it is universal tool which could be used with different contracts and contracting procedures. Also offsets have the certain advantages in the form of profit (compensations) to the national economy. On the other hand implementing offsets as the obligatory requirement for each international contract can limit a competition in the market, because the chosen contractor’s offer can be very expensive in comparison with other bidders, who don’t offer the offsets for their production, furthermore in the long-term perspective the prise of the chosen contractor can exceed the rate of compensation. Therefore, governments should be very careful in implementing of such policy of cooperation with the foreign private sector.

Finally the creation of **special industrial zones** is a way of cooperation between military and civil sector that can go out of the borders of a small state. Using the tax relief for manufacturers of military goods (domestic and foreign enterprises, as well as multinational corporations) and developing infrastructure of its regions, a small state may develop defense industrial clusters, which can support the national economy in the framework of development of regional Defense Technological and Industrial Base. Author believes that this is the most perspective kind of alternative military Keynesianism policy which can be used by a small state. In accordance with the research “Development of Defence and Related Industries in Latvia” that was conducted in 2009 by the Ministry of Defense and the Ministry of Economics of Republic of Latvia the hypothetic tax revenue of Ls 10 000 000 offset deal could reach 10 – 13% (or 37% of added value depending on the branch of national economy). This revenue may be generated by personal income tax, enterprise income tax, and value added tax as well as mandatory social insurance payments [27]. This case could be also connected with the concept of special industrial zones. In both cases (offsets and special industrial zones) military production could be developed in the territory of the small state, using local human resources, which could generate the revenue of the state budget.

In accordance with all mentioned above author can highlight the necessity of the new policy that could respond to increasing demand for defense and reduce costs of military and dual use goods and services. Therefore it is very important to develop cooperation between military and civil sector in the framework of the Keynesian theory. Also it is necessary to conduct empirical research of the concept which was mentioned above.

Conclusions

According to the information mentioned above it is possible to draw following conclusions:

- The evolution of classical military Keynesianism can be divided into three periods. All these periods are connected with military spending, but the last period undeclared defense policy of military Keynesianism is influenced by asymmetrical warfare and global financial crises. Therefore there is a necessity to modify the concept of military Keynesianism, which can’t respond to the modern threats effectively.



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- Modern researches of defense expenditure effects can't prove convincingly positive or negative impact on national economy. Therefore the integration of classical military Keynesianism (based on increase in defense spending) in the defense policy of a state is unpredictable.
- Instead of significant increase of government spending author offers to use the policy of cooperation between military and civil sector which can be the base for alternative military Keynesianism. This concept can be implemented not only by the biggest military spenders such as the USA, but also by smaller states even without properly developed defense industrial base as it was illustrated by the research "Development of Defence and Related Industries in Latvia".
- The concept of alternative military Keynesianism can be used as a combination of state defense and social policy. In addition the further implementation of this concept will allow to use not only the financial resources of defense budget, but also another sources of state finances (for instance government investments). This will increase the financial capacity of the defense sector without direct involvement of state defense budgetary funds.
- There are four main kinds of cooperation, which also can be used by small countries:
 1. Public private partnership (outsourcing);
 2. Joint projects (participating in regional cooperation);
 3. Offset deals
 4. Special industrial zones (in the framework of regional alliances).
- It is necessary to conduct empirical research of the concept of alternative military Keynesianism.

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ORIGINATION OF DUE DILIGENCE AND SCOPE OF ITS APPLICATION

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Abstract

Companies that develop in international public space, with traditional financial analysis, where various financial coefficients from the balance sheet, profit and loss account and cash flow statement are analyzed, remain less and less. In order to assess the financial condition and results of economic activities and its development trends, it is necessary to use different methods of analysis. By using the methods of analysis of due diligence, a wide range of sources of information is used and from the result of the analysis one can obtain both qualitative and quantitative indicators, which are the basis for creditors and potential investors in decision-making.

The aim of the article is to explore the theoretical aspects of due diligence and develop proposals for its use in business environment. The article explores the essence of due diligence and origination of its history, forms of due diligence and major components that are significant for each group of users of analysis. The author examines in detail the procedures of due diligence and reveals the differences from audit procedures. The article is prepared on the basis of foreign scientific and economic literature, publications of scientists and materials of international conferences.

Introduction

Currently, for an enterprise which develops internationally, simple financial analysis, which consists only of financial indices, is not sufficient. To find out the real situation of enterprise, an analysis from various angles is required, not only from the financial one. Therefore the author offers to use *due diligence* analysis, which gives information about the enterprise from various angles and multiple sources.

Many of us have been asked to perform due diligence assignments late in the acquisition cycle. The most important objective is to identify potential risks not apparent from the offering and to verify information provided by sellers or their representatives.



Executives sponsoring potential acquisitions face an uphill battle with their board, shareholders and peers. Merger and acquisition risks include: paying too much, the inability of the companies to combine in a positive manner, inability to manage the combined company, and surprises. Due diligence assignments attempt to quantify the risk and minimize the surprises. One major challenge is managing the buyer's expectations. [1].

What is Due Diligence and History of Its Origin

Due diligence – (literally it means assurance of adequate good faith, diligence), is a versatile investigation and inspection of the financial operation of a company and inspection of its situation in market. This procedure allows finding legal, commercial, financial and operational risks in business.

The term appeared in the USA in thirties of the previous century and it was related to the requirement for adjustment of relationships between investor and issuer in the securities market.

It should be noted that an issuer is a company, which has issued its securities in circulation. It means that development of a company needs funding. For implementation of the planned one, the fixed capital is increased and new shares or stocks are sold, what also means issue of securities in circulation. However, not all business plans are successful, sometimes losses occur. In such cases, investors who have invested money, i.e., bought securities issued in circulation, began to search for the perpetrator. It would not be correct to shift the blame to the merchant, because any business contains elements of success and risk. Therefore many issues, which defend investors' rights, have emerged:

- Was the investor provided with all required information for assessment of investment risks?
- Was this information correct?
- Was there all the most important information provided?
- Was no information hidden and was no investor deceived?

From these questions it can be established that only from questions, which are posed to parties: issuer and investor, there arises a wide area for disputes and legal proceedings [2].

Therefore, to decrease and prevent potential conflict situations between the person who has given the money and the person who received it, in article 11 of the USA Law on Securities of 1933 protection from investors' money requirements against those issuers who have had performed independent inspection and reflected information in issue prospect was determined. From the time, when the respective article in the Law was approved, the identified investigation process in the USA has obtained the name *due diligence*, until then the term was not explicitly determined.

According to the decision of the Terminology Commission of the Latvian Academy of Sciences, appropriate translation for the English term *due diligence* into Latvian was made. The English term has received double translation in Latvian – *pieņacīgā uzmanība (due attention)*, *uzticamības pārbaude (inspection of reliability)*. The respective terms are intended for joint practical usage in official Latvian language, for which agreement was reached between specialists of Legal Bureau of Parliament of the Republic of Latvia, European Integration Bureau, the State Chancellery, the Ministry of Justice of the Republic of Latvia, LU Faculty of Law, Translation and Terminology Centre of the Latvian Academy of Sciences [3].



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From the examination of the opinions of several authors it can be concluded that *due diligence* is directed to versatile inspection of legality and commercial attraction of planned transaction or investment project.

Completeness of information, which arises in the way of *due diligence* inspection, allows investors and business partners to assess all advantages and shortages of cooperation in a more detailed manner.

Due diligence is based on interview data, which is obtained as a result of investigation of internal documents, operative and financial report data, sector specifics and legislation of appropriate field. By analysing the enterprise, it is possible to determine risk zones and to increase attractiveness in the eyes of an investor or potential customer.

Most of the time the term is being used in finances and law. Abbreviated forms are **DueD** and **DDG**. Basically the method consists of totality of information analysis, taken decisions and their usefulness, when getting involved in mutual relationships of business partners [4].

Any kind of information is taken into account while collecting information, regardless of origin of sources. Investigation of obtained information is performed by various specialists separately; afterwards the summary analysis is performed.

Several arguments for the performance of *due diligence* analysis can be mentioned:

Firstly, information that is disclosed by the seller to establish warranties will be the only officially available material for a customer that can be taken into account when making a decision on acquisition of an enterprise.

However, to rely only on warranties and bails is not a good practice. Firstly, the offered protection can be limited or impractical for implementation. Also, in case a seller is openly dishonest, which is not completely known only by accepting warranties and bails without additional investigation, it will be difficult to disclose fraud or other illegalities. *Due diligence* sometimes can identify suspicious actions.

The second true value of *due diligence* is what is best characterized with its comfort factor. Everything in this universe is relative. Services of accountants and lawyers can be expensive, but not in comparison with costs of proceedings. In comparison, in terms of costs the application of *due diligence* is cheaper than legal proceedings, which are implemented in practice. Because of this reason, the majority of customers feel more comfortable by knowing about problems in advance, rather than remaining with an opportunity, although small one, to issue claims of warranty or bail or to start proceedings against a seller after completion of a project.

Due diligence is not simply a tool for discovering black holes. Nor only for provision of useful information in negotiations. It ensures both of these things, but it also should be used as a tool for longer term [5].

Finally, knowledge is power. *Due diligence* provides armament for negotiations with potential seller in both ways, physically and psychologically.

Where and for What Purposes *Due Diligence* Method Is Used Nowadays

Generally, a *due diligence* procedure means performance of comprehensive analysis of a company based on the opinion of financial analysts, auditors and lawyers. In addition, each group of specialists prepares for client detailed report on the situation of an enterprise.



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The aim of a *due diligence* procedure is to avoid and minimize the respective business risks (economical, juridical, tax, political, marketing risks). As one of the most important risks should be mentioned:

- risk of enterprise acquisition (shareholdings) on increased price;
- risk of non-execution of enterprise debtor's liabilities;
- risk of property loss;
- risk of creating losses, incl. intangible assets such as reputation;
- risk of legal proceedings and negative consequences;
- risks of seizure and implementation of other security enforcement measures;
- risk of acknowledgement of transaction as invalid;
- risk of application of recovery mark on property, securities (shares);
- risk of prosecution of tax, administrative and criminal liability;
- risk of occurrence of corporative conflicts (occupation, negative undertaking, legal proceedings);
- risk of intellectual property loss (trademarks, industrial samples, inventions, know-how, commercial ideas, business plan, etc.);
- political risks and risk of loss of administrative resource (amendments of legislation, change of officials, on whom the success of project depends on, prosecution);
- risk of unfair competitors' activity (secret agreement with counterparties, initiated inspection of taxes, operative inspection, pricing policy, lobbying etc.);
- risk of non-obtaining respective permissions, licences, agreements a.o. things, from which the project or transaction depends on [6]

Both parties involved in a transaction (customer and seller) are interested in objective and competent performance of these procedures.

As the most typical situations, which characterise *due diligence*, can be mentioned:

- purchase of operating business;
- restructuring of company;
- optimization of costs;
- increase of company's legal protection;
- expected tax inspection;
- reducing the risks of litigation;
- loss of financial management;
- Involvement of company in new markets [6].

Due diligence – which allows:

- *For proprietor*: to check reliability of data provided by management; to ensure on existence/ non-existence of personal responsibility in company operation; to determine value of his/her business;
- *For investor*: to find weak sides, about which the seller has not been informed; to assess further risks of business operation; to obtain protection from possible negative financial events;



- *For management:* to assess operation of their own accountancy and financial office; to involve tax and financial planning schemes; to obtain recommendations for decrease of financial risks; to improve manageability and transparency of financial risks [7].

Due diligence procedure begins with the moment a customer begins to plan the possible purchase – investment object.

Due diligence procedure takes up from few weeks to the year, depending on structure and amount of business.

Due diligence is obviously only one part of an acquisition or investment exercise. In order to understand where it fits into the overall acquisition process, for convenience, assume the process falls neatly into the four generic categories shown in Figure 1.

Stage 1.	Stage 2.	Stage 3	Stage 4
1. Strategic review	1. Heads of terms	1. Sale and purchase	1. Post-completion
2. Systematic search	2. Due diligence	2. Completion	
3. Approach			

Figure 1. The acquisition process [6]

Stage one is about identifying an acquisition target and making an approach. This can only be done by sensibly following a proper Strategic review in which the acquisition has been identified as a logical strategic tool. If an approach leads to an agreement to take things further, the deal enters the second stage.

The two parties sketch out the broad terms of the deal and the buyer will begin due diligence. Successful due diligence leads to negotiations and, if all goes well, to the completion of the deal. Then the buyer enters stage four, in many ways the most important stage of all, where the acquisition must be bedded in and made to pay its way [6].

If an approach leads to mutual interest, both parties will want to begin serious negotiations. Heads of Agreement/Heads of Terms/Letter of Intent is the document which records an agreement to negotiate the purchase of a business. It is a non-binding agreement which sets out the main points on which the parties to a transaction have agreed and the basis on which they are prepared to proceed.

As far as due diligence is concerned, the critical thing about signing Heads of Agreement is that there is a deal underway. Drawing up the document usually focuses the minds of both parties. The buyer will now have assured the seller of its seriousness, both parties will have decided that there is sufficient agreement between them to continue and both can draw comfort that the deal will proceed because they can indicate a document setting out the fundamental issues. Due diligence can therefore begin.

Due diligence is not simply a tool to unearth black holes. Nor is it just to provide ammunition for the negotiations. It does both of these but should also be used as a tool for the longer term.

Due diligence components:

Due diligence consists of many components, but it would be good to separate the most important of them: commercial, financial and legal due diligence. These are the three main types which will most often be addressed prior to making an acquisition, but other areas may be covered as well.



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The first group consists of financial analysts (**Financial Due Diligence**), their task is to determine fair value of investment object, to determine range of value for customer in different variants of its future usage [7].

There can be determined value of market, investments and liquidation depending on whether there is bought functioning enterprise for complete re-profiling or for being merged with the client. Financial analysts offer the client several value standards, operating with definite range of prices, for taking decision on enterprise acquisition.

Because the majority of enterprises use audited reports, it can seem a little bit surprising that so much time, efforts, concerns and costs are intended for financial *due diligence* (FDD). It has two reasons. Firstly, opposite to common opinion, the accountancy is not a science. It means that even in audited reports are lots of uncertainties, how far the customer is involved:

- all reports are subject to several assessments. Some of them, such as assessment of stocks and depreciation policy, can create large differences in the rate of profitability. Also, the time when incomes are acknowledged can differ, depending on accountancy policy or assessments. As a result, the tendencies of income can be distorted.
- reports can possibly contain several extraordinary incomes or costs which distorts profitability of a business, and which should be excluded from calculations [8].

So, one of the main meanings of auditing reports is confirmation of what is done by accountants.

According to historical information, financial *due diligence* is tended to future. In the framework of financial *due diligence* various methods of economic analysis are applied. As the main ones can be mentioned:

- analysis of dynamics and structure;
- analysis of creditor and debtor debts;
- structural analysis of income;
- analysis of actual costs and operational costs of structure;
- profitability analysis;
- factor analysis:
 - cash flow analysis;
 - analysis of standard registry payments;
 - compliance analysis of financial reports.

A report on the complex assessment of analysed company is the result made by a given group of specialists.

Financial *due diligence* also includes detailed analysis on business specifics, which is obtained from interviews with main specialists of sectors. It is important to emphasise that access to *due diligence* is rather different from procedures of common audit. Because the aim of financial *due diligence* is to explain why the results are what they are, and the analyst has more to do with finding reasons which seem to have negative changes, not like the financial results.

The second group – they are auditors (**Commercial due diligence**) CDD, their aim is performance of financial inspection, expertise of company's operation, as well as determination of possible risks [3].

An Enterprise gains benefit not from past achievements, but from ability to create a profit in future. Commercial *due diligence* CDD is intended for assessment of future achievements.



CDD receives information from published sources, but, what is more important, from speaking with leading specialists in the same market as the target market is. Traditionally, the commercial *due diligence* has three aims:

- Reduction of risk. Price of enterprise purchase is ratio of current profit, but, if the further profit can be endangered, if the enterprise is ready to decline from its aim, then customer should know it, and they should agree on correspondingly lower price.
- Help determine the actual value. Business planning for the future ten years is complicated; it is required for prediction of cash flows. Of course, it cannot be done only by use of previous financial reports.
- Allow better planned integration. Weak integration is the main reason why the benefits cannot be obtained. Commercial *due diligence* checks the target markets and trade activities. In doing so, one can establish strong and weak sides which should be taken as the part of integration process [5].

The income and cost analysis of enterprise structure should be completed at this stage, as well as assessment of internal control system, assessment of fixed assets, financial investments, debts of creditors and debtors, reserves; as well as there is performed analysis of credit contracts and liabilities, terms and provisions of liabilities, amount and reliability analysis for assets and liabilities. The final stage of work – determination of potential risks and benefits, as well as disclosure expression of company's taxes, and liabilities in numerical form.

Table 1

Essential distinctions between terms Audit and Due diligence

	Audit	Due diligence
Aim	To check and show true data	To determine the basic profit, to eliminate doubts on controversial points
Focused on	Past. Independent inspection of data to allow providing warranties in relation to fairness and authenticity of financial information.	Past and Future. To analyse and understand why the data is what they are, and to analyse them. To point attention to the main moments.
Sector	Determined by articles of association	Very often is limited only with main issues.
Availability of information	Unlimited	Can be limited
Data	Testing and verification of original data.	On the base of interview data

Result of auditors' work is report of financial expertise:

Commercial *due diligence* is an investigative process of audit markets of companies. The relation between legal and financial *due diligence* is generally poor. As a discipline, which can give the best available forward-looking information on business to the rights hands, it is required for appropriate *due diligence* process. It depends highly on primary sources to obtain the most of new facts on markets and their participants. In ideal case it should search for immediate transactions for future of competition in merged enterprise [6].

Table 1: The main differences between *audit* and *due diligence*. They have different aim of performable work, availability of sector and information, as well as analysable data and swot point of performable procedures.



The third group of specialists – lawyers (Legal Due Diligence), their task is performance of juridical and legal expertise of company with the aim to determine maximal risks, related with acquisition [5].

Lawyers perform investigation of establishment documents, corporative management documents, the main powers and collegial decisions of management organs. They analyse the main transactions with shares, data on shareholders, their property and non-property rights. They also investigated state regulation in operation of company, the main contracts and property rights of company, labour relations and operation of claims-petitions.

For history of company or group establishment the main aspect is focused on such issues as:

- legal purity of transactions with shares/stocks;
- corporative management;
- kinds of business which correspond to special state regulations;
- justification of property rights to fixed assets, unfinished construction, intangible assets, financial investments;
- rights on intellectual property and other intangible assets;
- debtors' and creditors' debt structure;
- security liabilities;
- personnel management, including relationships with trade union bodies.
- juridical disputes and petitions of counterparties, including analysis of possible prosecution [6].

Legal *due diligence* includes many specializations, as well as several obvious juridical forms, for example, property rights, acceptance to liabilities and discharge from them, and normative issues. The legal firm itself is able to ensure some or all of them. If there are involved also other specialists, lawyers should act in close cooperation with them because it could make important contribution in final agreement. Because of the same reason, even if lawyers ensure all "legal" disciplines, they should cooperate also with other advisors and foreign lawyers where their local consultation is required in cross-border issues. When it comes to reporting, you should ensure they maintain contacts with you during whole time of operation and you should ensure they give summary where the main commercial issues are emphasised. Demand also to show conclusions. Mainly, you should ask and receive opinions.

The result of lawyers' work is report on juridical expertise of company:

The recommendation for the use a due diligence programme is likely to involve a number of different advisers. Even when the target is a business the acquirer knows well, perhaps competing in the same industry and sharing the same distributors, external advice can add a lot of value to a transaction. How much value they add will be heavily influenced by how well due diligence is managed. Planning, coordination and communication are as important as any other input and project management should be given top priority.

Conclusions

1. Initially, the *due diligence* was related to the arrangement requirement of relationships between investor and issuer in security market.



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2. Completeness of information, which occurs in form of *due diligence*, allows for investors and business partners to assess all advantages and shortages of cooperation in more detailed way.
3. *Due diligence* does not have unambiguous translation in Latvian. LZA TK (Terminology Commission of the Latvian Academy of Sciences) accepts – pienācīga uzmanība (due attention), uzticamības pārbaude (inspection of reliability).
4. By investigating *due diligence* from theoretical viewpoint, it can be concluded that it is a tool which allows:
For proprietor: to check reliability of data provided by management; to ensure on existence/ non-existence of personal responsibility in company operation; to determine value of his/her business;
5. *For investor:* to find weak sides, on which the seller has not informed; to assess further risks of business operation; to obtain protection from possible negative financial events;
6. *For management:* to assess operation of their own accountancy and financial office; to involve tax and financial planning schemes; to obtain recommendations for decrease of financial risks; to improve manageability and transparency of financial risks.
7. *Due diligence* it is compliance verification of prepared information. It is process which is important for potential investors, owners of company and also for management.
8. Financial analysts (**Financial Due Diligence**), their task is to determine fair value of investment object, to determine range of value for customer in different variants of its future usage.
9. Auditors (**Commercial due diligence**) CDD, their aim is performance of financial inspection, expertise of company's operation, as well as determination of possible risks.
10. Lawyers (**Legal Due Diligence**), their task is performance of juridical and legal expertise of company with the aim to determine maximal risks, related with acquisition.
11. It is useful to investigate in more detailed manner the elements of *Due diligence* and opportunities of their application in analysis of economic activity of company.

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THE INFLUENCE OF MEDIA CHANNEL ON THE BOOKING BEHAVIOR OF HOTEL GUESTS

– Implications for a Direct Marketing Optimization –

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Abstract

Asking hotel managers, what is the most important factor for guest loyalty; the answers are mainly the hotel product itself or a card program. But what is the role of marketing and communication within the complex construct of CRM for Hotels? It is assumed that a direct correlation exists between the variables communication and booking frequency, but how strong is it?

Today, many practitioners still regard marketing as a kind of art and not a science. This paper is a scientific approach to evaluate the role of communication within CRM for hotels and should give both managers and researchers a base to count on.

Within customer relationship management (CRM) companies use different media channels such as email, mail, text messages or the social web to try to stay in touch with the customers. The goal of the communication is to embed the brand of the communicator in the head of the receiver and to keep the product experience alive.

Over the last years a growing number of marketers have begun respectively have already replaced classic paper mails with online channels like email or Facebook. But different media channels are characterized by different awareness and perception levels. The generated outcome of a marketing campaign is obviously connected to the used channel. The question is how valuable are the different channels and what is the behavioral effect? How do different channels stimulate the buying frequency of the consumer especially for an emotional product like a hotel?

This paper shows the effect of communication channel on the booking behavior of hotel guests. It shows how different media channels have stimulated hotel bookings over a period of two years.



1. Introduction

What is the role of communication within Relationship Marketing for hotels and which channel is the most valuable one? It sounds like a simple question but it is an extremely difficult one to answer. When reviewing the current strategies of the leading hotel companies no universal communication strategy exists. Some companies use the web2.0 extensively others rely on email and again others prefer post mail and finally multi-channel strategies with different channel allocations are in place. But what is right marketing mix for CRM? This paper should provide a fundamental help for marketers in order to implement an efficient customer relationship management and raise questions for further research.

New technologies, globalization and the abundant reservoir of choices to configure a business make managing an ever harder task. [1] Therefore the sustainable increase of customer loyalty is one of the main goals for executives all over the world. Especially in economically difficult times, loyal customers give companies a reliable base to count on.

But most of the businesses lose 15-20% of their customers annually, mostly without knowing it. Based on the research of Sasser and Reichheld (1990) this is critical particularly against the background that companies can boost profits by almost 100% by retaining just 5% more of their customers. [2]

But the question is how to increase loyalty? The most common approach of many hotel chains in the last 20 years was the introduction of a loyalty card program to keep and increase guest loyalty. Hilton Honors, Starwood Preferred Guest, Marriott Rewards or Radisson Goldpoints are some of them. But small and medium enterprises (SME) like individual hotels, which are not part of a larger hotel group, have to rely on direct marketing methods like direct mails or email newsletters to create booking impulses and keep guests loyal.

Communication is an integral part of CRM, but the question is which channels should be used and what is the right frequency in order to keep the brand alive in the head of the consumer, to stimulate buying impulses and increase sales but also not to endanger the relationship by an over-communication through the so called boomerang effect?

2. Theoretical Background: Communication and Relationship Marketing

2.1. Definition of Communication

The word communication is derived from the Latin word “communicare” and stands for connection. The Encyclopedia Britannica defines communication as the exchange of meanings between individuals through a common system of symbols. [3]

The way communication is defined relies on the area where communication is used. Each scientific area has several definitions in place. Communication between parents and children or between managers and employees or for instance between companies and its clients has always different aspects which are reflected in the definitions.

Following Guffey and Almonte communication is the transmission of information and meaning from one individual or group (the sender) to another (the receiver). Communication has as its central objective the transmission of meaning. The process of communication is



successfully only when the receiver understands the intended idea of the sender. [4] For Köck and Ott communication is the exchange of information between two or more people. In their case messages can be verbal and or non-verbal. [5] The last sentence adds a further aspect to communication the aspect of the channel, the way how communication takes place. It is not only the verbal exchange of information communication could also contain signs and noises, can be touchable or non-touchable.

In the definitions above communication is always the exchange of information between a sender and a receiver. In the area of marketing this is slightly different as in many cases communication is only a one-way transfer of a message from the sender to the receiver. Therefore Seeborn describes communication as the exchange of information respectively all forms of information transmission. A sender (communicator) sends a message to a receiver (communicant). [6]

For the area of marketing communications Pepels explains communication as the proposed approach of influencing meanings through the usage of instruments with the intention to influence the meanings of the recipients towards the own goals. [7]

With respect of the topic of CRM I define communication as the efforts of a company to transmit messages to known recipients using non-verbal channels like mail and email in order to influence the behavioral loyalty of the recipients to finally increase sales.

2.2. Customer Relationship Marketing

Communication has a central role within Customer Relationship Management (CRM). Especially in the service industry such as the hotel business managers should recognize that well-structured and valuable communication has a strong effect on consumer perception. A qualitative valuable communication leads to trust, satisfaction and loyalty. [8]

A sub-subject of CRM is the so called Customer Relationship Marketing (also abbreviated with the letters “CRM”) or Relationship Marketing (RM). The subject of Relationship Marketing aroused in the mid 1980’s. It reflects the development from a classic inside-out oriented transaction marketing to a more outside-in oriented relationship marketing. Within relationship marketing not the 4P’s are the starting point, the starting point is the relationship between company and customer. Many practitioners as well as in many publications Customer Relationship Management (CRM) and Customer Relationship Marketing (CRM) are used as a synonym for the subject of keeping customers loyal.

“An organization engaged in proactively creating, developing and maintaining committed, interactive and profitable exchanges with selected customers (partners) overtime is engaged in relationship marketing.” [9]

2.3. The Role of Communication within CRM

Communication is a central aspect of relationship marketing in order to avoid that a customer forgets the product experiences he or she has made so far; communication therefore has important remembering effects [10] in order to obtain the relationship. This brings us to the conclusion that even regular customers need an ongoing penetration with marketing messages to create buying impulses and to reduce the risk of migrating to a competitor.



The goal of communication within CRM is that the brand stays respectively becomes a part of the evoked set of the individual and the communication receiver takes the product into consideration during current or future the buying processes.

2.4. The Communication Process

The central element of communication is influencing. The goal of each communication is to influence meanings, attitudes, expectations or behaviors.

Basically the communication process in marketing covers the question who says what, to whom, over which channel, with what result [11]; or in other words who communicates what, under which conditions, through which communication channel to whom and what is the effect of communication after the decoding of the communication message? [12]

If a communication was successful and the receiver perceived and decoded the message following awareness levels are affected: cognitive level (thinking, learning, knowing), affective level (feeling, wishing, requiring) and conative level (selecting, deciding, doing). [12]

The intended result can be subdivided into economical and psychological goals. Economic aspects are for instance profit, revenue, market share; psychological goals are the reduction of buying barriers, the increase of acceptance of specific products, the creation of interest for a product, image transfer or the creation of buying impulses.

Solely the numeration of communication channels or the different goals explains why it is so difficult to define a universal communication mix for marketing.

2.5. Perception of Messages

In order to get results from a communication the message has to be perceived by the recipient. The perception of a message can happen consciously, unconsciously and selectively. [13]

Each day a person living in an industrialized country is exposed to several thousand advertisements. McKinsey used 2003 in its article "Better Branding" the number of 5,000 advertisement messages a US resident is exposed every single day. [14] Yankelovich (2007), a market research company, estimates that a person living in a city 30 years ago saw up to 2,000 ad messages a day, compared with up to 5,000 today. [15] AFNB a German based institute uses the number of 3,000 messages a day through the channels television, radio, internet, newspapers and magazines, billboards, shop windows etc. If 3,000 or 5,000 thousands the result is the same; an immense amount of messages bombards the consumer in the industrialized world every single day. A communication overload exists.

In 1985 18% of TV users stated that they remember TV commercials recently seen, 2002 the number dropped to 8%. Although advertising budgets increased by 175% between 1990 and 2000. [16]

More channels coming up and more and more advertisements compete for the attention of the consumer. Kroeber-Riel (1993) revealed an information overload through print advertisements of 95% which means only 5% of the messages finally reached the consumer. [17] Yankelovich found out that half of the 4,110 people they surveyed said that they thought marketing and advertising today was out of control and Gretchen Hofmann, executive vice



president of marketing and sales at Universal Orlando Resort says that the landscape is “overly saturated” as companies press harder to make their products stand out. [15]

The dilemma of marketing communication is that many messages on so many different channels try to reach the consumer. But only if the message is perceived by the recipient and the consciousness reflects the input, an output can occur. The output can either be nothing or potentially measurable in a way of an attitudinal change or by behavioral effects such as buying a product or active recommendation to others. The effects can be short, medium or long-lasting.

The consciousness is like a closed system. Impulses from the outside do first not invade the consciousness. Perception happens selective and only if needs are activated. This selection process avoids a communication overload.

Three different disturb signals exist: Selective perception is like a perception filter because of the information overload. The receiver perceives only such information for which the individual has a current need or part of its personality. A further disturb signal is called selective bias – a cut and dried opinion of the receiver of the message leads to the fact that only such information is perceived which fits to the existing opinion. The third disturb signal describes the fact that the receiver only remembers parts of the message. [18]

2.6. Involvement as a Factor of Communication Success

Krugman (1965) introduced the term involvement to the research of advertising effects. He found out that receivers learned marketing messages even if they are not actively searching for information. [19] This was contrary to the SR and SOR models used so far for explaining marketing effects.

Krugman disproved the image of the rational acting consumer, who actively reflects marketing messages. Contrary marketing messages are in many cases only incidentally perceived and only a few information stays in the mind of the receiver. [20]

Krugman stressed out that involvement is not a synonym for attention or interest. For the information process the relevance of the messages plays the significant role for the receiver [20] (see also Kroeber-Riel 1993, 98 p.). “The number of bridging experiences, connections or personal references per minute that the viewer makes between his own life and the stimulus.” [21]

Summarized involvement can be regarded as the relevance and importance something has for the individual. This means not a product involves the consumer; it is the situation, the individual importance of a single product features within a specific situation. [22]

Determinants of involvement are based on the personal situation, the product, the media, the message involvement and the situation. [23]

2.6.1. Media Involvement

For this paper the focus within the involvement determinants is the media involvement for instance if a message is transmitted electronically or by post mail. One aspect why direct and marketing is getting increasingly important for today’s marketers is the fact that mass communication is often not perceived by the target group which means channel-effectiveness is at least questionable.



Although unconscious perception exists as seen above (see Krugman), unconscious perception is characterized by a short-term recognition. The higher the attention respectively the perception level of the individual is the better are the learning and the communication effects. [24]

But what is the contact quality of the different communication channels? Messages on TV, radio, print advertisements, email, post mails or postings on Facebook to mention just a view have different functions in the daily routine and also different psychological effects. Summarized each channel has a specific quality as a message transmitter [25] for the specific purpose and the focused target group.

A hotel is a complex and emotional product and can be characterized as a product with a high involvement. In front of this background what is the role of the most common direct marketing channels e-mail and mail? Both media types touch different senses; get read at different times in the daily routine or different locations to mention a few differentiators. The following table aggregates the differences between the channels email, post mail, Facebook postings and text messages via mobile phones.

Media channel	Location of media consumption	Scheduled time to review	Chance of perception	Needed time to delete	Easiness to perceive message	Touched senses (hearing, sight, touch, smell, and taste)	Easiness to response
Email	Office, Home or everywhere through usage of Smart Phone ++	Mainly unscheduled ++	Medium ++	Low ++	Medium ++	Sight +	Easy +++
Post Mail	Office or Home +++	Scheduled +++	High +++	Medium +++	High +++	Hearing, sight, touch, smell +++	Time consumption, media break +
Facebook (Postings)	Office, Home or everywhere through usage of Smart Phone ++	Mainly unscheduled ++	Low +	Not necessary +	Medium ++	Sight +	Easy +++
Text Messages via mobile phone	Everywhere +	Unscheduled +	High +	Low ++	High +++	Sight +	Easy +++

Figure 1. Comparison of different direct marketing channels (own image)

To evaluate the channels a rating from one “+” sign (lower rating) to three “+++” (higher rating) signs was used; the more plus’s the better. The result of the channel quality evaluation is as follows: email 14 points, post mail 19 points, Facebook 12 points and text messages: 12 points. Based on this rating the channel quality of post mail is regarded as having the highest quality followed by email. Therefore it can be assumed that post mail has the highest chance for perception and creating measurable results.

2.6.2. Involvement and Relationship Marketing (RM)

The focused target group within RM actions is the group of existing customers. Existing customers have some kind of experiences, feelings toward a brand and finally are more or less interested in the company and its products and services. This means existing customers are



involved and therefore more open to marketing messages as people who are not familiar with the product or even do not know the product at all.

The situation that messages are getting perceived even if the consumer is not actively searching for information underlines the role of communication for RM. This leads to the conclusion that for Relationship Marketing even non-actively perceived messages create remembering effects and influences attitudinal and behavioral loyalty in the long run.

Following the theory the perception of marketing messages of existing customers is higher than the perception level of people with no involvement.

3. Analysis of the Influence of the Communication Channel on the Buying Frequency of Hotel Guests

3.1. Hypothesis

Based on the theoretical research the following hypotheses for an ongoing guest communication as part of a customer relationship management strategy were made:

- Communication has a direct influence on the behavioral loyalty of hotel guests.
- Post mail has a higher quality and outcome as email.
- Email is no replacement of post mail.
- A multi-channel penetration is most effective.

Not part of this paper is the communication frequency. This is a subject for further research.

3.2. Data Collection through the CRM Software Dailypoint™

The data was collected through the CRM system dailypoint™. The software is developed and distributed by TS&C, a Munich based company (www.TS-and-C.com). TS&C is one of the leading providers of analytical and communicational CRM software within the hospitality industry and provides with dailypoint™ a software family for marketing experts. Clients are among others Maritim Hotels, InterContinental, Lindner Hotels and Hyatt.

Within dailypoint™ especially the complex topic of data cleansing and campaign management is highly sophisticated, subjects which are prerequisites for this research. Beside the software TS&C provide active support and consulting services in combination with the dailypoint™ software.

3.3. Description of the Research Data

For this paper the data of four first class hotels (one resort and three business hotels) in Germany was taken out of the campaign management of dailypoint™. The data contained the kind of the promotion, the drop date, the receiver of each promotion and the generated bookings. In total 239466 hotel bookings, 139954 customers and 198 marketing actions were included in the analysis. The data was collected between January 1st 2009 and December 31st 2010.

It is important to know that only existing hotel guests were included in this research. Therefore each person included in the several communication actions over the period of two



years showed some kind of involvement with the hotel. The goal was to analyze the result of marketing messages to existing customers to explain the role of communication within CRM.

Within the surveyed period 47559 customers were included in the 198 marketing actions. The recipients were divided into three groups: group A with 17819 customers received only email messages, group B with 24906 customers only post mail and group C received both email messages and post mail included 4834 hotel guests. The 198 marketing promotions included 34 email campaigns and 164 post mail actions.

Promotion Medium	Count	First Drop Date	Last Drop Date
Email	34	05. Feb 09	29. Nov 10
Mail	164	12. Jan 09	27. Dez 10
	198		

Figure 2. Overview of communication actions

3.4. Limitations

There was no influence on the provided content, the frequency, the layout, the target group or anything else associated with the communication strategy, the setup or the distribution of the marketing actions.

3.5. The Analysis

The analysis was done with the SPSS base module during spring 2011. The first step was to investigate if a normal distribution exists. This could be denied. Through a non-parametrical test it was checked if a significant difference existed between the communication channel and the booking behavior.

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Number of bookings is the same across categories of Communication Channel.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Figure 3. Hypothesis Test Summary

As seen above the significance level (Sig.) was .000 and therefore below the threshold level of .05. H0 was rejected that means that the communication channel had a significant influence on the number of bookings made by the recipients of marketing actions. During the further research the question to answer was which channel is the how effective?



To describe the findings within the collected data descriptive statistics was used. The following table shows the average number of bookings for the different channels. The mean for group C (both) is with 4.6909 the highest followed by mail with 2.6230 and email with 1.4842. The mean indicates a qualitative difference between the channel post mail and email which approves the assumptions made in the theoretical part before.

Communication Channel	Mean	Std. Deviation	Valid N (listwise) Unweighted	Weighted
Email	1,4842	2,11743	4990	4990
Mail	2,623	5,21413	15939	15939
Both	4,6909	10,24678	3225	3225
Total	2,6638	5,80678	24154	24154

Figure 1. Group Statistics

Further on through a cross-tab-analysis the correlation between channel and booking frequency was analyzed. With the Chi-Square Test analysis (see Figure: Chi Square Test) it was tested how strong the correlation between the variables “Number of bookings” and “Communication Channel” was.

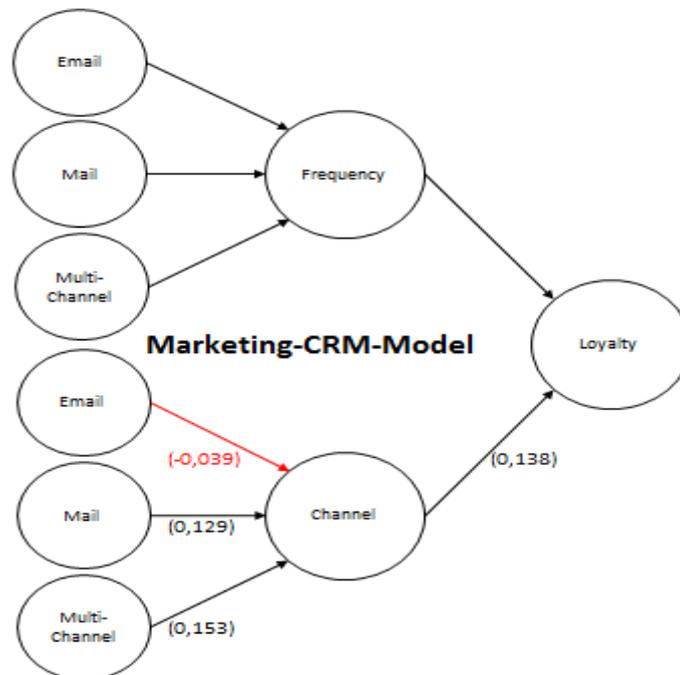


Figure 5. Marketing-CRM-Modell by M. Toedt

The Phi Coefficient revealed a correlation of 13.8% between the variables “Number of Bookings” and “Communication Channel”. This number is relatively low. Only a coefficient of



30% or more indicates a strong correlation. But it can be assumed that this relatively moderate correlation goes up if the analyzed time period would be expanded from the current two to at least three or more years.

Based on the analyses a Marketing-CRM-Model could be developed which shows the strength of the correlation and the direction of the different channels. The strongest influence has a multi-channel strategy with 15.3%, followed by post mail with 12.9%. A surprise was that based on the data included in the research the channel email had no influence on the variable "Number of Bookings".

In order to verify this negative effect of the channel email further research is recommended. The hotels included in the sample data sent only a moderate number of 34 email campaigns over the tested period of 24 months compared to 164 offline mailings. This very low frequency in combination with the weaker channel quality of email should be the reason for this astonishing result.

3.6. For Further Research

For further researches it is recommendable to include only hotels of the same type, either resorts or business hotels. Additionally the data collection period should be expanded to at least 36 months because of the low booking frequency of a hotel product. People book only a few stays during a year in order to analyze the influence of communication on the behavioral loyalty of hotel guests a longer data range is therefore recommendable. Further on only hotels should be included who do more email communications as the hotels included in this research.

4. Conclusion

Since the hotel business is dominated by practitioners the role of communication is widely under-estimated and for many managers not tangible. Therefore one goal of the research was to measure the influence of marketing on the loyalty of hotel guests.

A second aspect of the research was to evaluate the quality of the mainly used media channels email and post mail within marketing. Especially of interest was if the replacement strategy of many companies in favor of email is correct or not.

The research measured correlation of 13.8% between the variables "Number of Bookings" and "Communication Channel". Although the revealed correlation is only moderate, it can be expected that the importance of communication is considerably higher if for instance the analyzed time period would be expended to three or more years. The reason is that the hotel business is characterized by a relatively low booking frequency compared to other products.

The strongest influence on the booking frequency had a multi-channel strategy with 15.3% followed by post mail with 12.9%. Based on the data included in the research the channel email had no influence on the variable "Number of Bookings".

This result compared with the relative low quantity of email campaigns the hotels sent during the test period leads to the conclusion that the channel email needs a much higher frequency to create measurable results compared to post mail. The data analysis also proved the assumption that email is not a replacement for post mail and the effects of communication are different for each channel.



Further research should add the communication frequency in order to create a formula to optimize the communication budget allocation for hotels using a linear optimization model.

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DEVELOPING AN EMPLOYEE SATISFACTION SURVEY FOR THE HUNGARIAN SME SECTOR: CRITICAL ANALYSIS OF THE EXISTING INSTRUMENTS

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Abstract

The assessment of employee satisfaction is a part of many studies and it achieved especially in the 70-s a great importance. Around 30% of the currently used questionnaires were developed and published at this time [1].

The solid interest in this research can be explained by the postulated link between employee satisfaction and productivity factors such as, reduction of absenteeism, increase productivity and other factors, which is needed for longstanding success of a company [2].

To identify the actual state of employee satisfaction in a company and achieve the target state of employee satisfaction, the aim of the research in this field must be the operationalization of employee satisfaction [3].

While extending the research to this topic the following questions arise: Is it possible to determine employee satisfaction reliable and clearly with the existing measuring instruments at all? The following paper presents the most important instruments to operationalize employee satisfaction and gives a recommendation which factors should be considered to design and develop an employee satisfaction survey.

Introduction

In the current economic situation the long term success of an enterprise primarily depends on its innovation and productivity. The most critical aspects when it comes to these two factors contributing to the enterprise's success are its employees on the one hand. The increase in productivity on the other hand is, besides modern technology, closely related to the adjustment of each employee as well. It is almost self-evident that an employee who identifies himself with the enterprise works for it much more productive and innovative than an employee who merely keeps looking at the clock and waits for the work day to come to an end. Experts in applied sciences have recognized also, that the growth of small businesses, defined as SME's, determines the economy in Hungary. Many industrial trends, including technology, virtual offices, and unsecured job environment, eventually support and activate dreams of owners of



small and middle sized businesses and enterprises [4]. In literature the majority of studies further indicate that structured interview increases objectivity and validity compared to non-structured interview. Unfortunately findings from the past literature are primarily based on middle or large sizes of organizations. These findings or conclusions may or may not be applicable to small and middle sized Hungarian businesses. For small and middle sized Hungarian businesses whose interview formats tend to be informal or non-structured, the effect of interview, regardless structured or unstructured, remain as a myth and concern, because rarely is structured interview used [5], especially when testing or an organizational theory is involved.

Definition of Employee Satisfaction

To define the term of employee satisfaction, it is first necessary to construct the satisfaction to explain it in more detail. Scharnbacher and Kiefer [6] define satisfaction as a psychological phenomenon, whereas everybody has a more or less exact perception although they have individually different ideas. They connect to this term positive emotions such as happiness, feeling good, harmlessness, joyfulness or satisfaction. Transferring this definition to the economic exchange processes, satisfaction is the emotional reaction of an employee on the entrepreneurial performance. The designations job satisfaction and employee satisfaction in the literature are frequently used alike. The choice of the term seems to depend on the preference of the author, because the content showed no significant differences and therefore the term employee satisfaction will be used further. According to the generally accepted definition from Locke, job satisfaction is: “. . . a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences.” This definition is the importance of affect, or feeling, and cognition, or thinking. This occurs if we think, we have feelings about what we think. The other way round, when we have feelings, we think about what we feel. Cognition and affect are hence inextricably linked, in our psychology and even in our biology. Therefore, when evaluating our jobs, as when we assess most anything important to us, both thinking and feeling are involved [7]. Another universally accepted and practical used definition of employee satisfaction is: “the individual employee’s general attitude towards the job. It is also an employee’s cognitive and effective evaluation of his or her job.”

Theoretical Background

For the measurement of job satisfaction can be assumed that it is multidimensional and this contains among others the following dimensions: payment, work conditions, colleagues, promotion, management and leadership, work content, recognition and status in the company, responsibility, development possibility and security [8]. These different facets must be considered for the measurement of employee satisfaction as well as the specific test quality criteria which were developed by Lienert and Raatz. These include, in addition to the primary quality criteria of objectivity, reliability (reliability of the test) and validity (measures what the test is to measure it) the secondary quality criteria (the standardized test will be comparable, economically and useful) as well as the verification of the selectivity of each items (correlation



between single item and the total test). It is important to note that a high validity and high reliability most likely can be achieved if the selectivity coefficient lies between 0.3 to 0.8 [9]. In general there are three different methods for detection of employee satisfaction which are the following:

1. The observation of the employee is a rarely used method, because employee satisfaction refers to the individual sensitivity of the person involved and therefore external assessment would cause problems.
2. The product analysis, where the results and or performances of the employees such as absenteeism or productivity will be concluded in measuring employee satisfaction. Also this form is deemed to be an undeveloped method.
3. The survey; which can be carried out as an interview (risk of minor objectivity) or a standardized test. In this connection the test with the direct written measuring method is preferable [9].

In the field of direct written technics there are several methods: the ranking method, the pair-comparison method, the Thurstone scale, the semantic differential method and the Likert scale. Whereby the Likert scale method is the most commonly used [10]. With the Likert scale method there are given statements for the interviewed person, which are classified according to a usually five or seven-point rating scale.

To understand why and how employees feel themselves satisfied at the work we need to find out what kind of needs and motivations they have. The author relies on the existing motivation theories like Maslow's Theory of Motivation, Alderfer's ERG-Theory and Herzberg's Two-factor Theory because these are able to explain the motivation factors of humans.

Intrinsic and Extrinsic Motivation

Extrinsic motivation attempts to trigger an activity by promising an external reward such as money, recognition, or other benefits. This kind of motivation that leaders or managers create in people is extrinsic since people are extrinsically motivated to take certain actions by their leader hoping to get a certain kind of reward in return. However, motivation is not only a result of good leadership but also of bad leadership by which people may be motivated to achieve the results wished for in order to avoid unpleasant consequences, which would be called negative reinforcement. Moreover, extrinsic motivation always entails a feeling of compulsion to act in order to achieve an outcome that usually "only" satisfies lower-order needs like money to survive.

In contrast, people may also be motivated by intrinsic needs, for instance the need for satisfaction which results from successfully performing meaningful, interesting, enjoyable, or challenging tasks, a desire to belong to a social group, a sense of responsibility, achievement, self-esteem, creativity, or the wish to make a difference in some way or another. These are all phenomena of intrinsic motivation that people may have in the absence of leaders or managers as well since their actions are motivated by the satisfaction of the activity, which is inherent in itself [11].



Content Theories

At the middle of content (or need) theories are all the factors that internally trigger and direct individual behavior. Thus, such theories usually see motivation as the result of internal drives leading individuals to act or move (as the term “motivate” implies) toward the satisfaction of their individual needs [12]. As for motivating employees need-based approaches concentrate on the role needs or motivational dispositions play in making people act a certain way as well as on the questions concerning the importance of needs and the conditions which both have a great influence on whether motivation is aroused and consequently also translated into behavior [13].

The following part will give a short excursion about the existing motivation theories, which information is important for further analysis of the factors which has to be considered by developing the employee satisfaction survey.

Theory of the Hierarchy of Needs

Maslow’s hierarchy of needs is one of the best-known categorizations of needs which orders five sets of needs according to the objectives people strive for when seeking to satisfy them. For Maslow, these needs determine the collection of behaviors an individual develops in order to satisfy each objective. Regarding the development of the five basic needs, Maslow suggests the following hierarchical order:

1. Physiological Needs. As long as the physiological needs of an individual are not contented, all other needs are completely ignored and therefore become almost nonexistent. According to Maslow, it is a unusual characteristic of the human organism that the entire philosophy of the future is likely to change if it is dominated by a certain need. “For our chronically and extremely hungry man, utopia can be defined very simply as a place where is plenty of food.” However, as soon as this need is contented, other “higher” needs arise which then dominate the individual.
2. Safety needs. Most of the human abilities such as seeing, hearing, and smelling as well as the ability to think are needed and used for try to find safety. This need for safety manifests itself in “the common preference for a job with tenure and protection, the desire for a savings account, and for insurance of various kinds (medical, dental, unemployment, disability, old age).” Other signs for this certain need are the human tendency to believe in something “that organizes the universe and the men in it into some sort of satisfactorily coherent, meaningful whole [14].”
3. Social needs. Once the individuals’ need for food and security are fulfilled, other needs emerge and start to drive their behavior. These drives are referred to as social needs for company and relationship, for giving and receiving affection, and for friendship [13].
4. Esteem needs. Most individuals desire a high evaluation of themselves which is based on achievements that in return lead to self-confidence and respect from others, while thwarting this need leads to feelings of inferiority, weakness, and helplessness [15].
5. Self-actualization needs. Finally, there is a need that only begins to dominate behavior once all lower-level needs have been reasonably contented, the need for self-actualization or self-fulfillment. Self-actualization needs motivate people to realize their potential, develop themselves further, and be creative [13].



According to Maslow, the individuals must first have their lower-level needs satisfied by safe working conditions, adequate pay, and job security in order to then be motivated by increased job responsibilities, a higher status, and challenging work assignments [12].

Acquired Needs Theory

According to David McClelland and John Atkinson the following three higher-level needs are most important when striving for the motivation of employees: the need for affiliation, power, and achievement.

1. The Need for Achievement. People with a significant need for achievement have a tendency to strive for success. They are highly motivated to obtain contentment by facing challenges with a reasonable chance for success, while they avoid those tasks that are either too easy or too difficult. Such people prefer specific and timely reaction on their performance [13].
2. The Need for Power. People with a strong need for power have a demand to influence others directly by making suggestions as well as openly voicing their opinion and evaluations. These people enjoy speaking in public and they feel comfortable as leaders. However, the way the need for power expresses itself constantly depends on the person's other needs. A person with a great need for power but a low need for relationships may become dictatorial, while someone with a need for comradeship rather become a social worker. According to McClelland: "A good manager is motivated by a regimented and regulated concern for influencing others." This means that outstanding leaders have a need of power, but one that is under control [16].
3. The Need for Affiliation. People with a strong need for affiliation are very motivated to create and maintain strong relationships with friends and relatives. As for the workplace, such persons try to form a friendly atmosphere in group meetings relationship, often by being agreeable or giving emotional support [17]

The interesting regarding this theory is the concept that a need has the potential to motivate behavior that leads to its satisfaction when it is strong enough. Accordingly, managers should attempt to develop an understanding of whether their employees have one or more of these needs and the extent to which their jobs can be organized to satisfy them [12].

ERG Theory

This theory is an extension of Maslow's hierarchy of needs. According to Alderfer, needs can be classified in the following three (rather than five) categories [18]:

1. Existence needs are requirements for physiological and material well-being.
2. Relatedness needs are requirements for interpersonal relationships.
3. Growth needs are requirements for a continuous personal development.

Similar to Maslow's theory, the satisfaction of a need influences its importance as well as the importance of higher-level needs. The contentment of growth needs makes them more important rather than less important, while the lack of contentment of higher-order needs can



lead to lower-order needs becoming more important to people. Moreover, the significance of a need is influenced by the satisfaction or frustration of the needs above and below it in the hierarchy. Furthermore all needs can be simultaneously active [19].

The ERG theory varies from the hierarchy of needs in so far, that lower-level needs do not necessarily be completely satisfied before upper-level needs become motivational. According to the theory lower-level needs become the major determinants of an individual's motivation if they are unable to meet upper-level needs over a longer period of time. The implications of this concept for managers are quite similar to those of the hierarchy of needs: managers should focus on meeting the employees' existence, relatedness, and growth needs [12].

Two Factor Theory

According to Herzberg, it is not enough to eliminate dissatisfactions since satisfaction is not merely achieved by eliminating dissatisfaction. There has to be an additional asset: motivation.

Comparable to Maslow, Herzberg believes that the primary function of any organization, whether religious, political, or industrial, should be to implement the needs for the individual to enjoy a meaningful existence. Herzberg analyzed incidents at work in which engineers and accountants felt exceptionally good or exceptionally bad about their works in order to find out ways to increase productivity, decrease turnover and absences, and improve relations at work. The results presented that for employees contentness with their work is a primary source of motivation and satisfaction, while the work context or hygiene factors are the source of dissatisfaction, therefore the name "Two Factor Theory" or also "Motivation-Hygiene Theory" since the two factors are motivators and hygiene factors.

Herzberg made the observation that it is often the manager who is motivated rather than the employees. The managers are the ones who want their employees to fulfill certain tasks and to reach certain goals. Furthermore, motivated managers are likely to produce movement rather than to motivate [15].

Process Theories

Content theories emphasize the ways to improve motivation by dealing with activated or unsatisfied needs. They neglect to reflect the thought processes which subsequently make people choose one action over another at the office [18]. Process (or cognitive) theories of motivation focus on conscious human decision processes as an explanation of motivation. These theories are concerned with determining how individual behavior is energized, directed, and maintained in the willed and self-directed human cognitive processes. According to the process theories of motivation, they are based on early cognitive theories postulating that behavior is the result of conscious decision-making processes. The major process theories of motivation are the expectancy theory, equity theory, goal setting theory, and reinforcement theory [12]. The following three theories will be discussed in more detail: Expectancy Theory by Victor Vroom, Goal Setting Theory by Edwin A. Locke and Equity Theory by Adams.



Expectancy Theory

This theory was developed in order to better understand and be able to explain vocational choices. According to Vroom, motivation is a creation of the following three aspects: $Motivation = E(xpectancy) \times I(nstrumentality) \times V(alance)$. Expectancy refers to the probability that a certain action will lead to instrumentality in terms of a reward which has a explicit significance to the person who takes action [20].

According to the expectancy theory individuals are seen as “conscious agents” who consider their perceived needs in every situation and act on them. For a manager this means that he will not be motivated unless he can be sure that a certain action leads to the desired success or to a reward. However, a manager can not only rely on himself to do all the effort needed to have the desired success but he has to rely on his employees and their skills as well. Hence, building up the employees’ confidence in their skills and supporting them are essential for motivation [13].

All three of these factors of the expectancy model together influence motivation in a multiplicative approach which means that all of them have to be high in order for an employee to be highly motivated as well. Thus, managers should attempt to ensure that their employees trust that an increased effort will improve their performance and that this improved performance will lead to valued reward [12].

Goal Setting Theory

Goal setting is a simple technique for successfully enhancing the content of jobs and the motivation among employees. Accordingly to the goal setting theory of motivation, once someone decided to pursue a certain goal, they modify their behavior to reach it [21].

For Locke et al. goals are the catalyst that transforms unsatisfied needs into action since unsatisfied needs prompt individuals to seek ways to content those needs; then goals are being formulated which prompt actions [13].

There are several factors that can moderate the relationship between a specific goal and the level of motivation. An important factor is the goal commitment, which means that the more individual employees want to achieve a goal; the more motivated they are to accomplish their target. According to the theory, having employees participate in goal setting will increase their level of goal commitment. Another significant factor is self-efficacy, which is the individual’s in their ability to successfully complete a particular task. Individuals with a high degree of self-efficacy are able to respond more positively to challenging goals than people with less self-efficacy [12].

Equity Theory

Adams theory forecasts possible effects of wage inequity on work output, work quality, and attitudes toward work. Even though this theory is a general theory of social inequity, it focuses on the effects of wage inequity, especially on how equity affects the attractiveness of rewards. Its predications seem to be particularly relevant to understanding the effects of offering increases in payment and of paying dissimilar salaries.



Inequity exists for person when he perceives that the ratio of his outcomes to inputs and the ratio of other's outcomes to other's inputs are not equal. This may happen either (a) when the person and other are in a direct exchange relationship or (b) when both are in an exchange relationship with a third party, and person compares himself too them.

The rewards of a job include pay, fringe benefits, status, and the intrinsic interest of the job. Inputs from the side of the employees vary from their efforts at work to their educational level and their general qualification for the job. Furthermore, what determines the equity of a particular input-outcome balance is the individual's perception of what they are giving and receiving which may not equal to an objective perspective [19].

Employees are motivated when it comes to reducing their perceived inequity. Individuals may endeavor to reduce inequity in various ways, such as by changing their level of effort or rewards. For managers, the equity theory emphasizes the significance of a reward system that is perceived as fair by their employees [12].

Measuring Instruments

The Porter Instrument

This instrument from the year 1962 is one of the earliest measurement methods for employee satisfaction. It is connected to Maslow's theory of motivation because it describes the satisfaction of work-related needs with employee satisfaction. The survey measures 15 items, which can be referred into five categories of need. The attempt that rewards of labor will raise regardless of the level of aspiration has to be considered as positive. But it cannot be underestimated that it is very difficult for the subjects to observe the aspiration level independently from the perceived reward [22]. Another negative effect reveals if an especially positive or especially negative rating appears simultaneously to a high or low significance. This phenomenon has a double rating as a result where an overvaluation from the item follows. This can lead to falsification of the statement [23]. Furthermore the Porter Instrument is based on the theory of Maslow which also expects that the subjects can follow the thought structure while rating the answers. In addition, it means on the one hand, that Maslow's need categories are not universally accepted, what supports the main basis for the Porter Instrument. On the other hand, inter-correlations between the need categories are clearly verified which leads to not isolated needs [24].

Therefore, the overall evaluation of the Porter Instrument from the author is rather critical.

The Job Description Index

The Job Descriptive Index (JDI), was developed in 1969 by Patricia Cain Smith, Lorne M. Kendall, & Charles L. Hulin it is a questionnaire of job satisfaction that has been widely used because unlikely to the Porter Instrument it has less speech understanding requirements to the test subjects. The following requirements to the JDI exist:

1. It should be feasible at a low level of language proficiency.
2. To be inexpensive the use of the instrument should require little time.
3. It has to be standardized without company specifications.



4. The JDI measures different aspects of the satisfaction and not the overall satisfaction of the subject. The JDI measures one's satisfaction in five facets: pay, promotions and promotion opportunities, co-workers, supervision, and the work itself.
5. It has to be reliable.
6. Its criteria validity has to be given [25].

The scale of the JDI is quite simple; participants answer either yes, no, or can't decide (?) in response to whether given statements accurately describe one's job. To give an evaluation about the answered questionnaire, each of the answers is weighted, the "yes" with 3 points, the "no" with 0 points and the "?" with 1 point. Each given point in every facet is summarized and gives the satisfaction level to the asked aspect.

It can be viewed positively that the answering of the questionnaire is not that much time-consuming like the Porter Instrument and the language requirement from the subjects is also lower. Another pleasant issue is, that the half of the questions are negatively phrased, that means yes answered questions as well as with no answered questions can indicate employee satisfaction. This excludes the automatically answered "yes". Despite the criticism in the field of reliability, other factors make this instrument the most commonly used worldwide. These are the comparisons of validity with other instruments and the universal applicability and the simple evaluation technique [26].

The Job Description Sheet (Arbeitsbeschreibungsbogen ABB)

Oswald Neuberger and Mechthild Allerbeck developed the Job Description Sheet in 1978 and it contains the German variation of the above-mentioned JDI made by Smith. The classification of the survey is in seven aspects: colleagues, development, payment, organization and leadership, superior, work task, work conditions. Every item in the scale gives us four possible answers whereby the unconvincing emphasis from the JDI scale can be circumvented. Additionally, at the end of every scale there is an overall summary of the aspect, which gives us a valid result about the scale. At the evaluation there are four points for "yes", three points for "rather yes", two points for "rather no" and one point for "no" answer. After summarizing these points, we become the overall sum for a subscale. [24] It can be positively asserted, that the reliability coefficient of the subscales are between 0,81 and 0,91 which gives a reliable and independent measurement method. In contrast, the importance measuring question at the end of the survey has a much lower reliability because of the different interpretation of the subjects.

The Scale for Measuring Employee Satisfaction (Skala zur Messung der Arbeitszufriedenheit SAZ)

The scale for the measurement of job satisfaction (SAZ) was developed at the beginning of the 70-s by Lorenz Fischer and Helmut Lück. Besides, the authors pursue the objective to sketch a test with given answer possibilities, which fulfills the test goodness criteria as well as the following demands:

1. It should be applicable universally, have no special adjustment.
2. It should have a group-diagnostic usability.
3. It should grasp different aspects of the job satisfaction.
4. It has to do a generally understandable formulation.



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Fischer and Lück decide with their questionnaire, in contrast to JDI and ABB., on a measurement of the general job satisfaction under concurrent consideration of different aspects of a working situation, whether this is relevant to the general job satisfaction [23].

The authors choose the aspects marking one certain working situation relation to the colleagues and superiors, possibilities for personal development, opportunities for advancement, payment, conditions in the job and behavior pattern of the management and the company guidance and allow to subject a total of 160 Items of the test raw form to an expert's rating (to the examination of the objectivity and the content validity) and a dividing sharpness analysis. In the final form the SAZ comprise of 36 Items to be evaluated which are valued in each case with the help of a 5-stage Likert scale and with a value system by zero to five points. By addition of the single points per Item a maximum score of 180 arises, the slightest score and with it also the lowest job satisfaction corresponds 36 points.

In addition, there is a short form of the SAZ which encloses only eight Items, but still a correlation of 0.90 with the gas office test beside the verbal formulation of the answer possibilities there is the possibility of the use of a thermometer scale (the test person marks his personal approval to Item on a thermometer: the higher the marked stamping degree is, the higher the satisfaction is to be valued [25]).

The aim of a linear capture of the job satisfaction can be reached only if everybody misses the same dimension Item of the questionnaire. The dividing sharpness of the single Items gives the correlation with the whole result. Because, nevertheless, the value area of the coefficients with Fischer and Lück already with $r=0,36$ begins, a very extensive test originates. Positively is, beside the objectivity the reliability which lies in the whole version as well as in the short form between 0.86 and 0.95 and shows it good values. Moreover, the fact of the light intelligibility and with it to wide application possibilities is to be called with the SAZ like with the JDI and FIG. as positive. Nevertheless, a dissatisfactory result can be delivered. The difficulties of the analysis of the Items and the inclination in general named in this area of the interviewees to positive satisfaction judgments will be clearly revealed. Easy duties show within the scope of the satisfaction questioning those Items with which the biggest part of the test persons states a high satisfaction. For a good differentiation between contented and discontented employees the degree of difficulty should lay between 0.40 and 0.60, however, with the SAZ these values lay between 0.60 and 0.70. Another minus point is the missing comparison with other tests. The tests comparable with the lack at the time of the development of the SAZ are related. Moreover, standard values are absent for the point result relatively to be estimated of the SAZ and around the general degree of the job satisfaction to be exactly estimated [23].

Methodical Approach

The researcher first contacted the Association of International Companies (NVE) in Hungary to get a list of the organizations that have fewer than 250 employees. For a representative survey, 10 SME's were chosen. Phone calls and site visits were made by the researcher to further explain the purpose of this study and to vary the items in case there were specific organizational interests. However, the participation of these companies could be overestimated. The questionnaire is designed in English for the research and Hungarian for the employees. Participants can be allowed to get sufficient time to finish the study during their



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work hours. They can be guaranteed in that even though supervisors and managers would receive a formal presentation about the findings in the end. This, on the one hand could deliver for the Management important information about the satisfaction level of their employees on the other hand data would be collected anonymously, so no individual information would be provided by any means. For this case a short description about the survey like appendix 1 will be helpful. This anonymity is important to get reliable information from the employees. The questionnaire will be carried out via online questionnaire at one of the following; www.2ask.de or <http://www.q-set.de/> or <https://www.soscsurvey.de> or at similar web page. Alternatively a written questionnaire could be filled out with the employee at the work.

Conclusion

The main purpose in this research is to find out the characteristic of employee satisfaction survey for the Hungarian SME's. In summary, employee satisfaction can be measured not precisely which can be founded, primarily, with the hardly possible comparability of the measuring results. They result for differently built up draughts and definitions of the employee satisfaction what entails a low inter-correlation between the single satisfaction values of the different instruments [25].

Only with a uniform method usable comparison and with it an examination of the validity could be really carried out [10] what would be, therefore, a compelling connection for the recognition of the questionnaires introduced here. In the objective measuring instruments introduced here will not be sufficient for the subjective sensation of the employee satisfaction calculation carried out. People react very differently to aspects of the working life [11] and are able to classify certain aspects, which could not be mentioned from the authors; however they could be for them of great importance. Respectively the arrangement of the working facets can be called basically for the respective test person as insufficient.

In the known elevation instruments an important point of view becomes in my opinion with the inquiry of the employee satisfaction, the dynamic aspect, completely disregarded by which an exact inquiry of the employee satisfaction will be complicated. Around for future investigations the comparability demanded on top of the results to guarantee, the one uniform definition would have to be found to one by the employee satisfaction on whose basis a new draught could be developed. To the other it would have to be processed – as on top described – the subjective sensations of the individual and the dynamic aspect with the inquiry, how it, for example, Marc R. H. Roedenbeck in his work developed, while he makes available the choice from 59 facets in order to give answers to the test person and thereby considering subjective as well as situational aspects [27].

Even if with this complicated model of employee satisfaction, there is still very limited empirical evidence available; the beginning meets the demands for a generally appreciative measuring instrument to a great extent, because it stands firm to the known criticism demonstrated on top of the current available measuring instruments.

Finally it can be asserted, that all of the existing methods has its strength and weaknesses. Using the above mentioned measurement methods catalog, the most adequate technique can be selected for the planned survey.



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Appendix 1

Dear Madams and Sirs,

For my dissertation I designed a survey on motivation in the Hungarian SME sector with the objective to scientifically analyze the influence of employee satisfaction on the success of the companies. I heartily invite you to take part in this interesting survey and thus to contribute to scientific research.

Moreover, I would like to briefly explain the questionnaire:

- The survey is **anonymous**.
- Participating in the survey is voluntary.
- The questionnaire consists of **XX questions** and it will take a maximum time of **5-10 minutes** to answer them.
- The questionnaire cannot be looked at beforehand and the questions have to be answered sequentially (due to technical reasons).
- The questionnaire consists of closed questions only which can be easily and quickly answered by clicking on one of the given answers. The questionnaire is to be answered online via www.2ask.de or <http://www.q-set.de/> or <https://www.soscisurvey.de/>. Please follow the link at the end of this email to directly get to the questionnaire.
- Please answer all questions. If you do not get from one page to the next you did not answer all questions. In this case please read the **red comment**.
- The answered questionnaires are sent to me without any email addresses or names. No personal relation can be traced back to the answers.
- Please note that the deadline for submitting your answers is **January 31, 2012**.
- All answered questionnaires will be analyzed with SPSS in order to find correlations between the individual answers.
- The results will be published in form of a dissertation. If you are interested in the results please contact me in **summer 2012**.

Contact person for questions on the content or technical questions:

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SUPPLY CHAIN MANAGEMENT MATURITY AND THE IMPACT ON PERFORMANCE OF FIRMS

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Keywords: Supply Chain Management (SCM), Maturity, SCM-Performance.

Abstract

Purpose. The purpose of the paper is to investigate the relationship between supply chain maturity and performance [1], with specific references both to the supply chain maturity model and to the supply chain operation reference model.

Design/methodology/approach. Quantitative and qualitative, survey based research was carried out with 12 Austrian companies. Statistical analysis combined the use of descriptive statistics and structural equation modeling [2].

Findings. Empirical results indicate a strong and positive statistical relationship between supply chain maturity and supply chain performance. The results also suggest that the deliver process maturity has a higher impact on overall performance than the other supply chain processes [3]. Best performers schedule a higher percentage of orders to customer request date and are more likely to deliver the goods on the committed date.

Research limitations/implications. Quantifying supply chain maturity and performance is an opportunity for a company to align its performance measurements and process improvement actions with its broader policies and strategies. The use of this approach has been validated in several previous research studies in organizational self-assessment and business management.

Practical implications. Maturity models are valuable frameworks for corporate leadership. This study provides solid statistical evidence that a company that has achieved a higher maturity level and implemented the maturity factors also has achieved better performance. It also validates the application of these specific maturity factors in 12 Austrian companies.

Originality/value. This paper confirms and expands upon earlier research suggesting higher levels of process maturity were related to superior performance [19]. This paper also examines the evolution of performance measurement systems, moving from a traditional approach to a more process oriented perspective by reporting on the origins of maturity models and presenting the main empirical contributions through the use of the supply chain maturity model and supply chain operation reference model.

Introduction

To cope with today's business volatility and to meet the performance levels demanded by today's customers in terms of quantitative and qualitative flexibility of service in demand



fulfillment, delivery consistency and reduction of lead times related to fulfilling orders, firms have developed repertoires of abilities and knowledge that are used in their organizational process [4] [5] [1]. Since the 1980's supply chain (including logistical and planning) processes have evolved because of these new demands from a departmental perspective, extremely functional and vertical, to a holistic organizational level of integrated horizontal processes, oriented to providing value to intermediate and final customers [6]. This development of supply chain process management has focused on the development and application of different maturity models and performance metrics useful in helping define a strategy and face trade-offs as well as identifying items that are critical to improvement of supply chain processes.

First models were developed in the early 90's with titles like "the next source of competitive advantage", in Harvard business review, written by Georg Stalk, Jr. as a seminal article in 1988. In the past two decades, a growing amount of research, much of which is anecdotal, has been dedicated to investigating maturity model development and performance measurements for the strategic management of supply chain processes (Supply Chain Council, 1996, [7] [8] [9]).

The process maturity concepts, including supply chain processes, derive from the understanding that processes have life cycles or developmental stages that can be clearly defined, designed, managed, measured and controlled and continuously improved throughout time. Higher levels of maturity in any business process result in:

- better control of results;
- improved forecasting of goals, costs and performance;
- greater effectiveness in reaching defined goals; and
- improving managements' ability to propose new and higher targets for performance [10] [11]

In this article I will present the results from quantitative research that investigated the supply chain process maturity levels of several Austrian companies and the relationship between supply chain process maturity and performance. This research confirms and expands upon earlier research suggesting higher levels of process maturity were related to better performance. This research not only validates the components of a widely used maturity model but also tests the entire model using structural equation modeling.

This article is divided into four sections including this brief introduction. In section two, the origin of the Performance Measurement System concept and the components of SC-maturity models are discussed. In section three, methodology and results are analyzed. In section four, conclusions are presented and future research suggested.

Theoretical Framework

The Performance Measurement Systems

Performance measurement systems are typically evolving from a system based on measurement and cost control, referred to as traditional performance measurement systems, to a system based on the measurement and creation of value using so called, non-cost performance



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measures, those that are not economic or explicitly financial, referred to as innovative performance measurement system [12].

In this sense, companies are becoming more aware that value means much more than cost efficiency and profit orientation. This means evaluating performance on only financial indicators points to results and does not consider its determinants, providing a myopic approach for long-term results.

The developments of performance measurement systems, mainly related to the processes in the supply chain, supply chain operation reference model (SCOR) has gained increasing visibility in business and academic communities as an innovative approach. By offering a standardized way of viewing the supply chain, the SCOR model has also contributed to the development and evolution of different supply chain maturity models.

The SCOR Model

The Supply-Chain consortium was formed by, a group of industry's early adopters, together with sponsors and participants in early benchmarking studies by PRTM, the MIT, Stanford University, and Pennsylvania State University in 1994. It's aim was to promote the success of supply chain integration and implementation efforts across industries. In 1995 PRTM joined forces with AMR and founded the SCC (Supply Chain Council) which initially had 69 member companies and developed the SCOR model (Supply Chain Operations Reference-model) with the mission of facilitating supply chain management across industries and benchmarking. This supply chain framework defined best practices, performance metrics, and software functionality requirements for each core supply chain process, sub-process, and activity. It contains five processes, Plan, Source, Make, Deliver and Return processes. There are defined metrics, best practices and technologies for each of these processes and for overall supply chain performance to be used for target setting and performance management. [13].

The SCOR model has four levels of detail, the first three of which – processes, sub-processes and activities – are described in the model operable processes, or level four, are detailed workflow-level tasks and are always customized to an organization's specific strategy requirements.

Level 1 is how business processes will align with higher level business structure and supply chain partners and refine your supply chain's strategic objectives (the business priorities that your supply chain must support. It focuses on the 5 core SC-processes, using these processes, the alignment between process and organizational domains can be established to describe where processes must be standardized across entities. Choices at level one drive information system costs because different processes across business units typically involve multiple applications and the associated implementation and maintenance costs. In addition level one will also determine whether an organization will be able to implement certain business practices. Once business processes and organizational domains are aligned, setting performance targets for these key process areas is an important next step.

The SCOR model also provides a "scorecard" framework for setting and managing supply chain performance targets across the organization. The scorecard is used to help define an enterprise business strategy, align the activities of the partners and to identify the business value that is obtained through the improvement in operations efficiency. This is one of the most



difficult steps of the activities in the supply chain design because the need to gain internal consensus on targets and priorities.

For each metric the scorecard can focus managers on being responsible for not only current performance but the amount of improvement needed to attain the company's goal for that metric and the projected financial gain that could be obtained in case of achievement of the desired improvement.

The SCOR model emphasizes process orientation (a horizontal focus) and deemphasizes organizational or functional orientation (vertical focus). This means that the model focuses on the activities involved in the process and not on the professional group or organizational element that may execute such activity. This process orientation is a critical element of process maturity and is reflected in the maturity model used in this study.

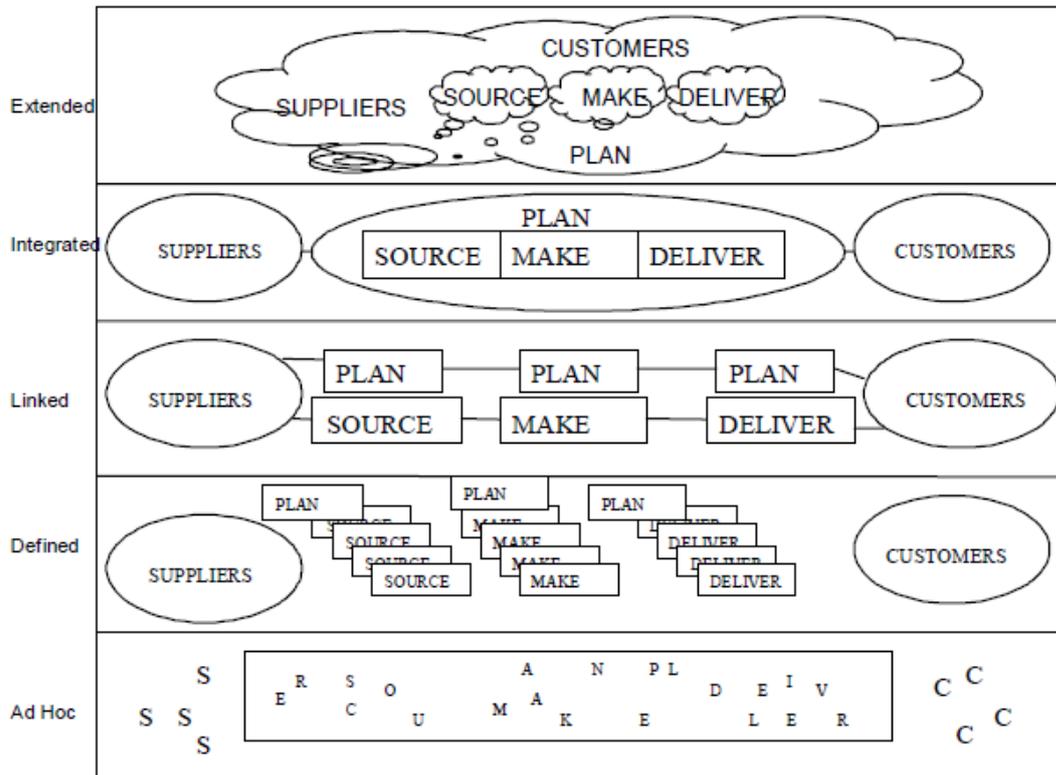


Figure 1. The Supply Chain Management Maturity Model from SCOR [17]

The level 2 of SCOR is to refine the choice of supply chain processes and confirm how supply chain processes align with the infrastructure (configuration level). Level 3 is about completing the supply chain architecture by adding operational detail (specific practices, associated metrics, and guidance about the information systems needed to support the process – in terms of functionality and supporting data).



Five Processes for End-to-End Supply Chain Management

Every supply chain process has inputs and outputs. The “plan-process” has as input information on demand, supply, and supply chain resources. This information enables better decision making and guides all supply chain activities related to the execution processes – source, make, deliver and return.

Each of the execution processes has a planning element. Planning-process excellence contributes to superior business performance by ensuring that decisions are timely and well prepared and that their implications are understood, agreed on, and feasible. To achieve the company’s business objectives, planning needs to be integrated with other enterprise business processes:

- marketing and sales processes for the better view of customer demand, to get on customer market priorities and
- with technology, product and service development processes to ensure that key programs have the needed resources and
- with finance process to ensure the quality of financial information

Metrics of “plan-processes”: Forecast accuracy, customer service (on time delivery to commit), total inventory days of supply [1].

Key principles: Use timely, accurate information, focus resources on business priorities, aim for simplicity, integrate all supply chain requirements, and create explicit actions and accountabilities.

The supply chain “source-process” procures all needed materials and services, performing the operational activities of purchasing, scheduling, receiving, inspecting, and authorizing supplier payment. It includes also supplier selection and supplier relationship management. For the supply chain to operate effectively it is vital to integrate source with the plan, deliver, make, and return process, both within the organization and with suppliers.

Metrics of “source-process”: Materials availability (days to increase by 20%), raw materials inventory days of supply, material acquisition costs [1].

Key principles: aim for the lowest total cost of ownership, set procurement strategies according to category, maintain an enterprise wide focus, measure and manage performance.

The supply chain “make-process” transforms the resources procured by source into goods and services according to agreed-on specifications and regulations.

- Make must be integrated with plan, source, deliver and return process and
- the integration with other business processes, technology and service development speeds time to market by inputting engineering changes more quickly and
- the integration with marketing and sales processes ensures that customer, market and product priorities drive production scheduling.

Metrics of “make-processes”: Direct labour availability (days to increase by 20%), work in progress inventory days of supply [1].

Key principles: focus on business priorities, aim for speed and flexibility not just for low costs, synchronize all manufacturing activities.

The supply chain “deliver-process” starts with the receiving of customer orders and includes all activities needed to complete that order, from providing a price quote to collecting



payment from the customer. Makes the order visible to “source and make” for execution and includes all warehousing, transportation, and distribution activities:

- Deliver must be integrated with marketing and sales processes so that customer contracts take systematically logistical aspects into account
- Marketing and sales processes must provide deliver with pricing, customer specific terms and conditions and clear guidelines on customer priorities needed to balance service and the cost to serve
- Must be integrated with the other supply chain processes
- “plan-process” depends on the “deliver-process” for information on demand, based on order backlog and customer shipments, for resource and revenue planning

Metrics of “deliver-processes”: Order fulfilment lead time for make to stock products, order management costs, and days sales outstanding [1].

Key principles: balance service with the cost to serve, cut costs and time with straight-through processing, set up end-to-end tracking and traceability manage data for on-going accuracy and timeliness.

The supply chain “return-process” ensures that previously sold products are supported, collected, and dispositioned according to business policies and customer agreements and covers all activities from return authorization to financial settlement.

- The “return-process” must be integrated with other supply chain processes (provides information on defects and faults, must be picked up,..) and
- Requires integration with other core business processes (technology and development process, marketing and sales processes,..)

Metrics of “return-process”: Return lead time, return costs [1].

Key principles: create distinct supply chain for return, feedback return information quickly, base return policies on total cost of returns, Maximize revenue opportunities.

Maturity Models and SCM

A maturity model represents a methodology with components related to definition, measurement, management and business processes control. These have been shown to be very similar to management approaches/concepts of BPR (Business Process Reengineering), thus attracting a growing interest not only by companies but also by researchers involved in this area [7] [9]. Although its origins are not directly linked to supply chain processes, there has been a growing amount of research in recent years that represent the use of maturity models based on KPI (Key Performance Indicators) to analyze the activities of supply chains [7] [9].

In the following section, a leading maturity model currently used by companies to analyze the performance of their supply chain processes is presented. Specifically, the Supply Chain Maturity Model developed by PRTM. This self-assessment model has been used since 2001 to evaluate over 1,000 companies in Europe, North America. This model is also the SCOR based, comprehensive model whose components, but not the model as a whole, have been statistically examined and their relationship to performance established.



Definition of the Model

The maturity stage model follows the qualitative practice assessment of PRTM. In order to increase questionnaire returns and willingness to respond the original questionnaire was condensed from 270 questions to 95 questions that characterize supply chain practices in the areas plan, source, make and deliver. The questionnaire covers in a multiple choice form the following scope: planning strategy: demand planning, supply planning, demand and supply balancing and decision making; sourcing strategy, sourcing processes, supplier development/management, sourcing organization and infrastructure; manufacturing strategy, production scheduling, material issue, movement and tracking, manufacturing process control; delivery enablement, order entry and scheduling, warehousing, transportation, and delivery, invoicing and cash collection; overall supply chain strategy, overall supply chain performance management, overall supply chain processes, and overall supply chain organization.

The model has 4 stages:

Stage 1 functional focus: functional departments within an organization focus on improving their own process steps and use of resources. Manager typically focus on their individual department's costs and functional performance, processes that cut across multiple functions or divisions are not well understood, resulting in limited effectiveness of complex supply chain processes [1].

Stage 2 internal integration: division and company-wide processes are now defined, allowing individual functions to understand their roles in complex supply chain processes. Cross functional performance measures are clearly defined, and individual functions are held accountable for their contributions to overall operational performance. Resources requirements typically are balanced across the organization. A well defined demand supply balancing process that combines forecasting and planning with sourcing and manufacturing is evident at this stage [1].

Stage 3 external integration: policies are now extended to the points of interface with customers and suppliers. The company has identified strategic customers and suppliers, as well as the key information it needs from them in order to support its business processes. Joint service agreements and score card practices are used, and corrective actions are taken when performance falls below expectations.

Stage 4 cross enterprise collaboration: Customers and suppliers work to define a mutually beneficial strategy and set real-time performance targets. IT now automates the integration of the business processes across these enterprises in support of an explicit supply chain strategy [1].

The correlation between advanced processes (maturity stages) and quantitative performance results will be checked in the model.

The performance figures cover:

Supply Chain Performance

- Delivery reliability: on time delivery performance to committed date
- Delivery capability: scheduled to customer request date
- order fulfilment lead time in days

Financial Performance

- revenue development
- profitability development – EBIT
- return on capital development – ROCE
- working capital development



Methodology and Research Results

This research used a self-administered survey based quantitative study using a sample of cross industry supply chain professionals from Austrian Industry. To reach the respondents, an electronic self-administered survey was conducted February and March 2011 using the members of a supply chain expert network in Austria. The sample is composed of companies from different economic sectors and covers 6 process manufacturers and 5 discrete manufacturing companies. The sample size is for sure too small to be representative but this study is an early stage model test which shall be extended to a much bigger audience in a next stage of research.

Instrument Development

For the purpose of the development of the research instrument, a literature review on the subject of “performance management systems and maturity models” was first completed. Next, the model proposed by PRTM [1] was used as a basis for the development of 95 questions. The model of PRTM used the SCOR model for the purpose of evaluation of four areas (Plan, Source, Make, Deliver), on a scale of 1 (poor) to 3 (excellent). Considering that in many companies the processes for return or reverse logistics are not a significant factor in their supply chain, this model does not include the “Return” area of the SCOR model in the assessment.

This maturity model was selected because it already contained detailed measures that had been tested and validated (PRTM). In addition, this self-assessment model has been used since 1998 to evaluate over one thousand companies in Europe, North America, China, and Australia. This model is also the only SCOR based, comprehensive model whose components’ relationship to supply chain performance has been quantitatively tested, although not the model as a whole.

Since actual performance data is difficult to gather and compare between companies, this research used self-reported performance measures as the dependent performance variable. The use of this approach has been validated in several previous research studies in organizational self-assessment and business management and has been shown to be a reasonably accurate measure of comparative performance [14] [15].

The questions were translated into German by the researchers and the translations were tested using various test subjects. Adjustments were made as needed until the translations were deemed valid.

The survey was conducted using e-mail. The data collection instrument was constructed using Excel to consolidate the data.

Pre-test and Sample

This paper contains the pre-test results on supply chain maturity and it’s influence on quantitative performance. For this pre-test sample, the questionnaire was given to a group of 11 respondents representing companies from diverse segments. Translated questions were adjusted as needed based upon feedback from this group.

Data Preparation

A total of 11 surveys were sent out and received for a response rate of 100 per cent. The first step in data preparation was analysis and treatment of the missing data within the returned



surveys. As [16] suggests for the first level of purification, all the questionnaires that had more than 15 per cent missing data were excluded from the sample. As there is a close relation with the group of experts all questionnaires were complete and could be used for the analysis. The financial performance data were collected from public financial reporting of the respective companies.

Next, variables for the constructs were generated. The maturity construct variables (Maturity), were generated using the sum of the 96 questions for each case. The Maturity variable was then used to evaluate the level of maturity for the sampled companies and test the relationships to performance.

Data analysis

Frequency distribution profiles of the respondents were then examined. 100 per cent of the respondents in the sample held, at the time of this research, supply chain management positions in their respective companies. This was found to be representative of the positions within supply chain management and no position bias was indicated.

Correlation Analysis between the Performance and Maturity Constructs

In order to answer the research question, “What is the relationship between supply chain processes maturity and performance?”, the Spearman correlation coefficient was done.

By examining the relationship between performance of the main areas of the SCOR – Plan, Source, Make and Deliver – with Maturity level by using the Spearman Correlation Coefficient. Results indicated a positive, strong and highly significant correlation in all cases.

As the correlations between constructs indicates, the null hypothesis, an absence of a statistically significant association between the levels of maturity and performance, can be rejected. The supply chain processes maturity of the companies in the study and performance has a strong and positive relationship thus confirming the hypothetical model purposed in this study.

Interrelationship Analysis with Structural Equation Modeling

The test was applied according to SCOR areas using maturity as a formative construct composed of the sum of the indicators of maturity for Plan, Source, Make and Deliver impacting the performance construct which was created by summing the overall performance indicators of Plan, Source, Make and Deliver areas.

After running the PLS algorithm, the following model converged at the eighth iteration cycle resulting in the weights and loadings. Additionally, the result of analyzing the path coefficient, the correlation between the maturity and performance variables, was an expressive value of 0.8592. This value corroborates previous research results showing a strong relationship between maturity and performance of the supply chain processes [5].

When the construct of maturity was examined, the Deliver area had a significantly higher coefficient than the others areas. These results suggest that maturity indicators for Deliver have a greater impact on performance than the other SCOR areas. This might be explained by the emphasis normally given by supply chain practitioners and academics to order processing and



order execution including logistics and transport compared with other activities in the supply chain.

Analyzing the quality indicators of the model, it is possible to conclude that all results showed good scale adequacy, i.e. the model was well adjusted, providing a good representation of the performance variables.

In summary, these results suggest that there is a strong and positive correlation between maturity and performance of the supply chain processes. Additionally, 73.83 per cent of the performance results can be explained by using maturity indicators. This means that if companies use maturity indicators in order to direct and measure improvement in its processes, it will most likely generate a positive impact on performance. This result also contributes to the use of maturity models in research on supply chain processes by confirming the practical performance results acquired from its implementation and use.

Conclusions

The Supply chain processes, as well as other kinds of processes, demand assessment and management models, etc. geared towards actions resulting in improvement and measurement of results or impacts of these actions. Quantifying its supply chain maturity and performance levels using a maturity model represents an opportunity for a company to solidify and align its performance measurements and process improvement actions with its competitive strategies.

The research suggests that measurement and performance systems, in the form of maturity models can significantly contribute to the theory and practice of supply chain management. As for supply chain processes, use of self administered maturity models, along with the implementation of the changes that lead to the higher levels of maturity prescribed by the models, supported by the use of process frameworks such as SCOR, can be a valuable input into supply chain strategies.

Most maturity models currently applied to the supply chain use SCOR as a way of organizing and classifying the processes and metrics enabling an evaluation system focused on adding value to the customer. These cross-functional process measurements also stress continuous improvement, accountability and commitment resulting in improvements for short and long-term results.

All maturity models, supported by SCOR, enable access to a complete process definition and measurement system that, by implementing the model, can help the company to improve its performance by looking for a superior maturity level in its supply chain processes. In addition, a complete measurement system is essential in improving a companies supply chain process performance and supply chain management practices, including supply chain orientation [12].

From the point of view of corporate leadership, maturity models have broad application, in that they emphasize performance measurement and continuous process improvement in whatever process or activities involved. The maturity models are valuable support tools for corporate leadership, specifically the leadership of the supply chain processes, in terms of determining the actual stage of maturity, setting the goals for the next level of maturity and performance and identifying precedence and the items considered more critical to implement so that the companies can focus their resources.



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But trends that can be seen as part of a wider set of trends like, outsourcing, cross-boundary working, new organizational forms characterized by flattened hierarchies, teams, empowerment, present an opportunity for SCM. The trend towards fragmentation and variety in product and service offerings necessitates greater thought and skill in managing decoupling points and postponement of final product composition. Globalization and increase in volatility will have a significant influence on future theory and practice of SCM. The risks associated with both firm-specific and external are now greater than ever since before the concept of SCM has been developed. As a result much of the wisdom about supply chain design has to be reviewed. All theories aimed to control variation (system dynamic models), but this holds not any longer true in a turbulent environment where such rigid structures will struggle to cope with unexpected demand and supply changes (needs structural dynamic models). Yet there is a silver bullet, the tools on hand to managing supply chains remain largely the same, but we need to apply them in a new mindset that considers the option value of flexibility. We need to move away from the control mindset and embrace volatility as an opportunity for a temporary competitive advantage [18]. The maturity model identifies the key components from plan, source, make, and deliver, which are necessary to enable companies to understand gaps and build flexibility into their supply chain and see SCM as a key area of competitive advantage. Maturity identifies components in the supply chain process being important to move from a system dynamic view to structural dynamic view, where learning, collaboration and knowledge how to use practices is by far more than technological aspects. The maturity model can help organizations to assess their capabilities to cope with uncertainty and volatility and can so help them to drive change and stay competitive.

Future Research

Questions for future research:

- What are the main barriers that must be overcome by companies when they decide to apply any maturity model oriented approach to improvement of supply chain process?
- Is there a precedence of improvement activities in a maturity model beyond the basic and advance categories indicated in this research?
- How can a maturity model be used as a standard to analyze different companies from the same branch or from the same supply chain, e.g. benchmarking?
- How does leadership (transactional, transformational leadership) impact the maturity of supply chain processes, especially cross functional and cross company collaboration?
- How does the company culture impact the supply chain maturity?

The answers to such questions can contribute significantly to the practical use of maturity models. At the present time, there is not a model able to properly synthesize all the complexities typically encountered in the management of supply chain processes in the wider context of supply chains (extended supply chains or supply chain networks), although efforts are being aimed at improving and extending the individual performance evaluation systems of the companies into suppliers, distributors and customers.



Therefore, research is continuing on developing new and improved maturity models that can contribute to the principle of continuous improvement in a supply chain that is truly integrated across company boundaries.

It is predicted that certifying a company's level of maturity, according to the level of their supply chain process maturity, will gain relevance, similar to total quality and certifying professional and services of IT. In addition, as discussed by [5], evaluating and certifying a supply chain network's maturity level will be a new frontier in the use of cross company maturity models. In this sense, momentum is building for the broad use of benchmarking and other different measurement systems geared towards the continuous improvement of planning, supply, manufacture and distribution processes, translated into more robust and imposing levels of process maturity for companies and value chains.

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EMPLOYEE PERFORMANCE MANAGEMENT IN PUBLIC SECTOR: HOW TO MANAGE PEOPLE AFTER CRISIS?

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Abstract

Financial crisis in public sector in Latvia as well as in other Baltic states was most obviously manifested as a large scale downsizing and cost cutting. After crisis public sector has to revise the public expenditure targets and consider declining the quality and scope of offered public benefits, while retaining the most necessary services to inhabitants and entrepreneurs. To be able to succeed in such circumstances, it is necessary to revise the existing planning and management systems in organizations, including the way its human resources are managed. It makes an impact on requirements to employees and managers. The competencies and skills, which provided results during stable economic and social circumstances, are not so much relevant any more.

The **purpose** of the article is to present the main results of the research that was carried out in the public sector of Latvia on existing practice of employee performance management and changes required in the system. The basic elements of employee performance management system were studied (e.g., goal setting, employee performance evaluation, connection with other human resource management processes like development and reward) to find out the main deficiencies of existing practice and to formulate suggestions for improvement. The results of the research are important to the enhancement of efficiency and effectiveness of Latvian public administration and its management. Its conclusions may be significant also for other countries with similar history.

Introduction

In the course of the reforms in the European public services, many administrations have introduced new instruments for measuring and managing the performance of their staff. The study of Performance Assessment in the Public Services of the EU Member States by Christoph Demmke reveals that Portugal, Spain, Poland, Hungary and Germany are currently in the process of introducing a new appraisal system. In the European Commission, the current system is also being revised towards a system based on those factors that were identified as positive



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(„self-assessment, objective-based appraisal, annual dialogue, recognition of personal development“). Other member states implement systems that have been introduced recently, and/or are planning to introduce new systems. [1, 5]

In parallel, extensive activity in many EU member states is directed towards introduction “a closer tie between performance and remuneration”. [1, 5]

Studies show that classic employee performance appraisals have been viewed critically across Europe in the past few years. Both superiors and employees were against appraisals, but with different reasons. The one group did not wish to conduct evaluations; the other group did not wish to be evaluated. Besides that, frequently performance appraisals had no consequences: in many cases, the appraisals had no significant effects on the work conditions of the personnel. The principle of life-long employment contracts, the seniority principle and more or less automatic promotions put the use of performance appraisals to question. The appraisal system itself represented another weakness: bureaucratic requirements and a multitude of criteria to be evaluated led to subjective results. Another point that yielded much criticism is the tendency to assign ratings that are too high, in order to prevent internal personnel management conflicts. [1, 5]

Features of Employee Performance Management Systems in Europe

The actual practices of employee performance management in countries of European Union involve nearly the whole spectrum of constructs associated with employee performance management known from the management theory (Table 1). The diversity of employee performance management systems and approaches reflects the different administrative systems and different human resource management systems employed in the European countries. It also reflects that understanding and managing performance is one of the most topical subjects in public management theory and practice today and no uniform solutions on the subject have been defined by now.

Table 1

Various forms of performance appraisal in Europe [1, 93-94]

Characteristics	Options
What is evaluated?	<ul style="list-style-type: none"> • Results/targets • Performance • Job profile • Conduct • Properties • Competencies • Leadership skills • Social skills
Who are evaluated?	<ul style="list-style-type: none"> • All employees • Group/team • Management • Employees still in the probationary period



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Characteristics	Options
Who evaluates?	<ul style="list-style-type: none"> • Direct superior • Board • Head of department • Self-assessment • Others (e.g. employees, customers, 360° feedback, etc.)
Which instrument is used for the evaluation?	<ul style="list-style-type: none"> • Performance appraisal • Target agreement • Balanced scorecard • Employee interview • Job description • Competency profile
Which criteria are used?	<ul style="list-style-type: none"> • Requirement-orientated procedures (universal, general requirements such as communication skills, work quality, innovativeness, team orientation) • Position-specific requirements (depending on function) • Characteristic-orientated procedures, e.g. performance/work results, qualification, knowledge, expertise, conduct at work, leadership, personality • Output-orientated requirements, e.g. target agreements, performance-based agreements
What rating system is used?	<ul style="list-style-type: none"> • Grades • Evaluations • Quotas • No rating system
How frequent are the evaluations?	<ul style="list-style-type: none"> • Annually • Every 2 years • Other intervals

Employee Performance Management in Transition Countries

Transition countries, like Central and Eastern European countries and Baltic countries, seems to be a special case with regards to employee performance management system development. These countries have inherited systems in which personnel units has a purely administrative role. This role has seen little change in the last 20 years, thus making them highly unsuitable for supporting the introduction of individual performance appraisal mechanisms. The institutional culture in Central and Eastern Europe is highly adverse to individual performance appraisal. The level of belief in objectivity is very low, and the suitability of advanced performance appraisal systems is often questioned as “culturally incompatible”. [2, 213] The experiments with performance-based management remain vulnerable, in particular as long as the final step, translating overall performance objectives into individual performance targets and creating a sense of personal responsibility for result among civil servants, has not been completed.” [2, 214] Thus, the employee performance management systems, suitable for transition countries, are one of the perspective research directions.



Employee Performance Management During and After Crisis

The comparative research of public sector human resource management reforms, caused by economic downturn, in 10 countries: Azerbaijan, Bosnia and Herzegovina, Estonia, Hungary, Latvia, Lithuania, Moldova, FYR Macedonia, Serbia and the Ukraine in the period of 2008 – 2010, carried out in 2010 by Regional Centre for Public Administration Reform (RCPAR), reveals that the economical downturn has put employee performance management on a rather harsh perspective. Performance bonus cuts and service termination decisions based on performance evaluation results became the main issues associated with performance appraisal and performance related pay issues. The impact on employee motivation of these actions was not studied in any of the countries. However, the losses, brought by economical crisis, are associated with the following factors:

- higher risk of corruption as a consequence of reduced remuneration;
- reduced means of motivation and career advancement possibilities and a subsequent outflow of qualified staff from public service;
- reduced possibilities for qualification and competency development and a subsequent drawbacks in professionalism of public service;
- risk of high turnover after the end of economic downturn, difficulties in retaining top performers;
- recruiting and selecting under-qualified personnel for key positions as a consequence of low attractiveness of civil service career;
- lower productivity and performance levels as a consequence of outflow of professionals and low of motivation. [3]

The RCPAR study shows that the public servant motivation in many cases has been affected negatively and some signals of de-motivation have been noticed. The level of motivation has been less affected in the countries where salaries in the private sector are lower or more unstable than in public sector. Nevertheless, although motivation to keep the job when there is 10 or more % of unemployment in the country is probably very strong, it is not a sustainable basis for public service development in the future. [3]

Research of Employee Performance Management Practice – The Case of Latvia

Latvian public administration employees' individual work performance evaluation started in 2001, when the new State Civil Service Law was enforced a requirement to carry out an annual employee performance appraisal. [4] The evaluation system was aimed to encourage professional growth and development of civil servants, to motivate self-improvement and development of communication between managers and subordinates, to determine the official training and career development needs to improve and facilitate the achievement of objectives of public administration institutions. [5] At the time it was designed, the performance appraisal system was not planned to be used as a tool for setting the pay level of civil servants. In 2006/2007, though, with the introduction of a new public administration remuneration system, determination of individual pay of public administration employees and civil servants was



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linked to the results of performance appraisal, not revising the appraisal system in any aspect. Thus the performance appraisal system that was initially developed for civil servants (approximately 12 000 employees) with the new pay system was automatically extended to a much wider range of employees with more diverse functions than civil service (approximately 65 000 employees in 2007, 38 000 employees in 2010). [6]

In order to explore the current state of employee performance management system (does it achieve the goals it was designed for?) and to develop recommendations for its improvement, the author conducted a study in January and February, 2011. [7, 8] The key findings, conclusions and recommendations, for improving the system, revealed by the study, are summarized in this article.

The purpose of the study

The research was aimed to evaluate the design and operation of public administration employee performance appraisal system of the Republic of Latvia, analyzing the following aspects of the system:

- process and quality of setting individual targets;
- quality of performance review process and appraisal interview;
- performance evaluation criteria.

To achieve this purpose, the following tasks were accomplished:

- data collection and analysis;
- formulation of conclusions and recommendations on public administration employee performance evaluation, improvement of the system;
- discussions in focus groups to explain, clarify and improve the conclusions and recommendations for development of the system.

The *methods* used to accomplish the purpose of the study were the following:

- on-line employee survey. The survey was conducted electronically by sending a link to an Internet-based survey to personnel departments of ministries that subsequently forwarded it to staff of the ministry and its subordinate institutions. The survey comprised 1521 fully completed questionnaires [7], that represents 4% of the general population which is 38 000 of public administration employees covered by the present employee performance appraisal system;
- structured interviews with senior managers of public administration – state secretaries of ministries or their deputies. All 13 ministries and State Chancellery were covered, as well as five institutions subordinated to ministries were interviewed, a total of 19 interviews; [8]
- structured interviews with civil servants, responsible for public administration human resources policy planning, a total of 4 interviews; [8]
- interviews with stakeholders (Prime Minister's Office, the Latvian Employers' Confederation, the Latvian Chamber of Commerce, the Latvian Association of Free Trade Unions, University of Latvia, the Commission of Strategic Analysis of the President of Latvia, the Parliament, society for transparency “Delna”, the State Audit Office, Ombudsman of Latvia and representatives of the Latvian Association of Local Governments), a total of 11 interviews; [8]



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- state secretaries' – the administrative heads of ministries – focus group discussion; [8]
- focus group discussions of Human Resources Management unit managers of ministries; [8]
- analysis of legal regulations of existing performance evaluation system of public administration employees. [4-6]

Results of the research

The results of the research show that the existing employee performance appraisal system has several drawbacks that can be structured into two groups:

- *Substantive deficiencies.*
They are related to system architecture, its elements - the evaluation criteria and their relative importance in determining the overall rating, as well as the formula of tying results of evaluation to remuneration. The main substantive deficiencies are the following:
 - incomplete evaluation criteria (the achievement of the objectives and several social competencies are evaluated, but evaluation of routine or regular work is often beyond the scope of evaluation);
 - “universal” competency framework for all job groups: the same 6 competencies are evaluated for all positions, thus ignoring the specific features that distinguishes the different functional groups;
 - controversial link between merit and reward that stimulates the tendency to set the highest ratings in the scale of 5 (A (the highest) – E (the lowest)).
- *Implementation deficiencies.*
They are linked to the way the system has been implemented by various governmental bodies, how managers lead performance appraisal discussions, as well how they set the performance ratings in accordance with established standards. The following implementation deficiencies were identified:
 - the “inflation” of the grading scale - a disproportionate share of high scores;
 - differences between the institutions in evaluation practices and a formal approach, focusing most on remuneration and less on performance analysis and improvement;
 - underdeveloped management skills;
 - extensive use of so called “evaluation commissions” that turns performance management into a process more similar to attestation, which is a substantially different process;
 - lack of training programs and methodological materials on purposes and best practice in employee performance management in public administration.

Conclusions and Recommendations

The development and implementation of a sound employee performance management system, especially in public administration, with its multiple, often controversial goals, is a



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task with no easy and uniform solutions. Despite of the methodological difficulties, in Latvia, likewise in other countries of European Union, the efforts to design and implement employee performance management systems that truly support achievement of goals of public administration should be continued. The most important steps to be made to improve the Latvian public administration employee performance management system are the following:

- to define additional evaluation criteria to achieve a better match with job content and different expectations towards different job groups with a particular emphasis on setting goals and adequate outputs;
- to revise the connection between results of appraisal and remuneration so that the *input* criteria (like qualification and competencies) would determine the base pay, but *output* criteria (like goal accomplishment) – variable part of pay;
- to implement electronic support (IT system) to planning and evaluation of performance to reduce the workload of managers and human resource specialists and to provide more substantive information for senior managers and human resource policy planners;
- to design and carry out extensive training to enhance employee management and motivation skills of managers considering the fact that a certain proportion of public administration employees are intellectual workers and they should be managed in accordance to requirements of intellectual workers management.

Introducing changes, it is important to recognize that present appraisal practices are firmly rooted, so the introduction of new solutions and a substantive problem correction will be durable and will require a lot of resources in terms of training and methodology. There is a real need for a new management culture in Latvian public administration, but cultural change is a time consuming process. At the same time it is one of the most important prerequisites to achieve a real performance improvement of public administration operation quality in the future – the fundamental purpose of development and implementation of performance appraisal system.

The issue which is beyond the scope of the study is the priority – or rather – *non* priority of so called “people issues” in public administration during times of cost cutting and down-sizing. The non priority of people issues is obvious when decisions on allocation of necessary resources are made. De-motivation, outflow, brain drain and overload – the *status quo* of public administration workforce is striking. It is not a popular topic, either for politicians or for public. Now we know that our vulnerable state cannot afford too large administration. The unanswered question remains: can we afford de-motivated, poorly managed human resources of public administration and how they will create the high quality results (and what results exactly?) the public expect? Well designed, deliberately implemented employee performance management system could be the solution. Although, there is too little research evidence that the success of employee performance management system can be guaranteed by any set of criteria or particular steps of implementation. In the first place the success depends on the motivation and skills of leaders to drive the culture of high performance standards in public administration.



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¹ UNDP – United Nations Development Programme, www.undp.org

² RCPAR – Regional Center for Public Administration Reform, www.rcpar.org



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STRATEGIC DECISION MAKING AT SMALL AND MID-SIZE COMPANIES USING THE EXAMPLE OF INFORMATION TECHNOLOGY ACQUISITION

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Keywords: Strategic Decision Making, Enterprise Resource Planning (ERP), Small and Mid-size Entities (SME), Information Technology (IT), acquisition.

Abstract

Purpose. The strategic decision making process for small and mid-size entities (SME) is very critical and more relevant than ever given the need for globalization and automation. Mid-Size companies understand their challenges in the global market. They need to focus on following their growth priorities while they find themselves squeezed by the effects of an increasingly tough global competitive environment [1]. Due to the historical approach and set up of these companies, business processes even for these very critical areas are not structured. Especially the question of “who makes the decision and how?” has been analysed more recently for SME’s, it still follows the same established approach that the owner, CEO or head of the family business makes the decision.

Design /methodology /approach. This research is based on a literature review as a source to point out main theoretical approaches for the strategic decision making process and the people involved, choosing the example of the IT/ERP system acquisition at SME’s.

Expert interviews are used to provide high quality input to reflect the hypothesis. A questionnaire has been developed to discuss these theories with subject matter experts from SME companies as well as experts from the scientific community.

Findings. The hypothesis, that a structured process should be followed and certain personalities and characters have to be involved to execute and finalize the strategic decision, could be supported by the expert interviews. The interviewees added many additional aspects but mainly confirmed both hypotheses.

Originality/value. Interviews verified that a structured process for the decision of an IT/ERP system is needed. The deciders and their abilities to support due to their role, key characters and personality have been identified in the discussion with experts.

Introduction and Relevance

Strategic decisions have been made in each and every war in history but the term strategic decision making in management has been discussed just in the 20th century. Theorists as Bar-



nard, James March, Herbert Simon, and Henry Mintzberg laid the foundation for the study of managerial decision making. The awareness of a dependency on culture, economy and politics has resulted in a movement away from the traditional approach to consider all aspects of psychologies, economists, sociologists, organisational theorists, statisticians, philosophers and others. Risk is an inescapable part of making a decision, especially a strategic decision, meaning the implications of it might be enormous [2], [3].

Strategic decisions for small and mid-size entities (SME) are very critical and more relevant than ever given the need for globalization. Due to the historical approach and set up of these companies, business processes even for critical areas are not structured. Especially the question of “who makes the decision and how?” has rarely been analysed.

As an example, one very critical and special event is the process of IT acquisition. It is a one off strategic decision process and instrument in which usually the decider has little or no experience. This acquisition is a fundamental cost factor. In a lot of industries in mid-size companies it is over 5% of the yearly turnover [4]. The decision for one specific package defines not just the IT framework with hard- and software, the selected system is the backbone for all business processes. The interviews with industry experts provide a clear overview of the current practice and support the hypothesis that awareness at senior management level from the very beginning would lead to successful long-term decisions. A clear and structured approach should be followed as well as experience from large entities leveraged for SME considering their specifics.

Definitions

The key terms are defined at high level for the purpose of this paper.

Definition of strategic decision making

The term strategic indicates something long lasting, using the big picture. In history the term usually was connected to war and military. In the 19th century it became more related to strategic management. So, long term strategies to run the businesses. “Eyes wide open” defined decision making for SME (Small and medium size entities) as a special art to combine strategic, tactical and operational decision making. Just looking at the strategic part it specifies that it’s focus is on the big picture, on the question “what?” “The focus of strategic decisions is typically external to the business and usually future oriented. Strategic decision-making created the forward thrust in the business.” [5] The primary focus is on strategic decisions of top managers of a small, possible medium size company.

There is a variety of definitions of the term decision. In science the term management decision making is very often synonymously threatened with the preparation process, the acquisition and the decision itself. “Decision making comprises three principal phases: finding occasions for making a decision; finding possible courses of action and choosing among courses of action.” [6]

For the purpose of this paper decision making is defined as a process which is finalized with the decision itself in the end. This process needs a specific structure and unfolds over



weeks and months, with management political power and role play to end in a final result, the event of a decision [7].

Definition of SME and the importance of strategic decisions for them

The definition of SME (small and medium entities) or mid-size companies is not consistent anywhere in the literature. There are two factors used for the definition, one is the number of employees, the other the turnover. The Institute for the research of mid-size companies in Bonn, Germany, [8] defined:

- Small businesses have up to 9 employees and a turnover under 500 kEuro;
- Mid-size companies employ up to 499 employees and a turnover under 50 Million Euro;
- All other are big companies.

The conclusion reviewing many different approaches and papers is that the definition needs to be specified based on the criteria and subject to analyse. For the matter of the IT/ERP implementation and organization subject the number of employees is much more relevant than the turnover. As a basis for this paper, these so called small companies under 50 employees and the mid-size companies with 50-250 employees are target companies [9]. Reviewing other definitions as well, analysing it and reflecting it with my personal experience, companies with 10-100 employees provide the ideal structure. Other companies or big entities with more than 250 employees are out of scope but will be used as a reference.

Strategic decisions are especially very critical at a SME, because SME's lack critical human and technical capabilities' and spend a significant amount of money in comparison to their turnover (over 5%). The business case is usually stretched to all limits. Hence, to fail the IT/ERP implementation results often in bankruptcy of the company [10].

Definition of IT and the importance of IT/ERP acquisition as a strategic topic

The abbreviation "IT" means Information Technology.

"IT is the area of managing technology and spans wide variety of areas that include but are not limited to things such as processes, computer software, information systems, computer hardware, programming languages, and data constructs. In short, anything that renders data, information or perceived knowledge in any visual format whatsoever, via any multimedia distribution mechanism, is considered part of the IT domain." [11].

For the matter of this paper IT should be limited to business process engineering software packages supporting a day to day business of a SME company, as an example ERP-Systems. The term stands for "Enterprise Resource Planning" a term to express the concept of managing all areas of the business efficiently. "ERP Software is a strategic tool that unifies and manages the core process of a business to improve client and supplier interactions as well as equipping the business with well-defined and controlled processes." [12].

"The term "acquisition" refers to all the stages from buying, introducing, applying, adopting, adapting, localizing, and developing through to diffusion." [13].

For the purpose of this paper the term "acquisition" should be limited to its original meaning really the procurement of the IT system. The basic procurement process containing the



information gathering, supplier contact, background review, negotiation, and contract finalization [14].

IT /ERP acquisition is one of the most critical strategic decisions for a SME because it usually impacts all business processes and the entire organisation of the company. The risk associated is much higher than for big enterprises.

Literature Review / State of the Art of Scientific Papers

A review in literature shows that the subject “decision making” is exhaustive and especially “strategic decision making” is getting more and more popular in recent years. One aspect of decision making should be taken into further consideration - rational decision making addresses how a decision should be made rather than how decisions are made [15], [6], which is a very valuable aspect for the subject IT acquisition. Given the study of strategic decision making is a conglomerate of all intellectual disciplines, this paper and its research focus on managerial decision making where Barnard and later theorists like James March, Herbert Simon and Henry Mintzberg laid the foundation for. To make good choices, companies must be able to calculate and manage the risks [2]. Decision making is seen as a functional view driven by rational behaviour [16]. Strategic decision making is a non-routine process with long-term consequences [17]. Key for management decisions is to threaten the decision as a process not as an event [7].

Reviewing literature for the specific subject of IT / ERP decision making, it shows that IT /ERP acquisition (and implementation) is getting more and more popular in the recent years. This document just references the most important and recent papers. Just provide an overview:

Multiple cases have been analysed [18], [19] and many different approaches reviewed [20], [21], [22], [23], [24]. The management topic is mainly covered reviewing the different organization structures, decision making processes, political, behavioural, procedural specifics [25], [26], [27], [28]. For the very specific combination of the successful acquisition of ERP systems for small – medium size companies some papers are available [4], [9], [11], [29], [30], [31].

Reviewing scientific papers in much more detail it can be highlighted that the very critical part of this strategic decision making process can be divided into three key areas: the acquisition process itself as a process (structure), the characteristics to be evaluated and the people making the decision. For the purpose of this paper the characteristics are out of scope.

Critical part in IT/ ERP acquisition: The structure of the acquisition process

The acquisition process is more structured and organised at bigger companies meaning even mid-size companies with usually more than 50 employees, do not follow a structured process [19]. They all aim to implement the most appropriate product that matches their needs, preferably at reasonable cost and within an acceptable timeframe [32].

Small and medium-size companies might not have a purchasing department or an IT department, so they do not have the capacity to execute a long structured process. Companies follow a financial or non-financial approach and try to evaluate tangible and intangible benefits. They try to compare all possible business processes and match them with software functionality,



but even small companies follow an acquisition process to limit the number of ERP packages down to the one they want to buy and perfectly fit their business [19], [33].

Deep, [34] developed a V-Model process, Percin [35] follows the Analytic Network Process (ANP) a multi decision- making methodology, Biermann [4] used a structured phased approach as well as Verville [23].

The literature summarize that there are a lot of similarities for the execution of the acquisition process itself. For the purpose of this paper the process is taken as a multi stage process with reference to all mentioned authors. The 4, 5 and 6 stage processes usually cover the same activities just describing a different level of detail. The key factors are taken for the purpose of this paper: planning, the information search process, the (pre-) selection process, the evaluation process, the choice process and the negotiation process [23]. Mainly these criteria's have been taken for the development of a detailed acquisition process.

Critical part in IT/ ERP acquisition: The decision maker(s) – people approach:

Very specifically looking at the decision makers there is a significant difference between small and mid-size companies mainly driven by the organisation structures. Small production companies rarely have an IT-department or purchasing department, in addition administrative and management functions are usually combined. Mid-size companies act much more like the big companies due to their organisation structure and the availability of an IT and / or purchasing department. Reviewing the literature according to this topic there are many opinions presented.

Shiau confirmed in his study the hypothesis that “Possession of rich IS (ERP) knowledge by the CEO has a strong and positive relationship with ERP adoption [31]. “With regard to investment decisions, the CEO of small and medium-sized businesses makes most of the critical decisions? Previous research also had concluded that CEOs affected IS adoption.” [31].

Focusing more on mid-size companies, Biermann stated that during all phases of the selection process of an ERP system the CEO, owner or board is significantly involved [9]. According to Deep [34] it is most important to define the value-adding process up front in much detail. Therefore the decision needs to be a team decision of the end users, functional experts and management. Reference visits are much more important than the demonstrations.

Reviewing literature and the positive examples from companies making successful decisions there is a clear trend towards group decisions. Even if the CEO of a smaller company makes the final call, a lot of key users should be involved to provide professional input and a steering committee should be set up. Discussing the decision making process all aspects of decision making failures due to personalities and backgrounds need to be considered [36], [37].

To summarize; the decision making person is a key influencer for the acquisition of the ERP software package; with his/her technical background, the relationships to consultants, colleagues and competitors matter, as well as the advice and experience of friends and other managers or CEO's.

Reflecting and Discussing New Hypothesis

The software acquisition of an IT/ ERP package covers a wide range of internal and external factors and actors that engage in the strategic decision-making process. Looking at the



first part of this very complex strategic process; the time taken for it and the people involved are the key factors which will be considered for this paper.

The quality of the execution of the decision making process is highly important and include a lot of variables creating hypothesis. Two key hypotheses have been defined as an underlying approach for this research paper to ensure a measurable successful acquisition.

H1: An ideal model / process should be followed or used as a guideline for the acquisition of an IT/ERP system for small & medium size companies.

H2: The most knowledgeable leaders /people /teams from all management levels have to be involved to collect and prepare the information and enable to make the “right” decision.

Both hypotheses have been reflected using recent scientific literature and empirical studies. For Hypothesis 1 there is a trend to confirm that a structured process has to be followed. For Hypothesis 2 the review shows that it generally depends on the involvement of the right leaders, as well as their skills and ability to involve teams.

The **research methodology** chosen for this study was the literature review and more importantly expert interviews. Given the fast moving diverse topic, experts seem to provide the most current input. The format of semi-structured expert interviews have been chosen and executed with experts from the scientific community and experts from companies.

The structure and results of the Expert Interviews

Structure and execution of the Expert Interviews

The semi-structured interview technique was chosen seemed most effective to get detailed feedback. It ensures to cover the entire area and be able to compare the answers and collect new facts.

Two major groups of experts have been identified during the conduction of the interviews. In Group ONE are general subject matter experts with years of experience in the strategic decision making process in the IT / ERP area and the acquisition of IT/ERP systems from SME companies, university professors or IT consultants. They reflect also the current situation of small companies based on their long term experience.

Group TWO are CEO's, CIO's, IT department leads or IT managers working in a SME company which have been involved in the acquisition of an IT / ERP system recently.

In summary key questions asked like:

- The story about the preparation and acquisition versus the implementation
- The structure or plan if there were any
- The decision making process; who made the decision on which basis
- Was there money or time pressure to justify the process?



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Expert interview - Layout
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Expert interview – for Experts which just currently implemented an ERP system

1. Overview of the company (specifics, numbers, sites)
 - a. Just a basic overview
 - b. Overview of possible IT department (Responsibilities and organisation structure)
2. Information about the interviewed expert (name, position, how long in company,...)
 - a. Why is he an expert in this subject?
 - b. Is he representative for a specific group of experts?
3. Information about the ERP/IT system and landscape
 - a. Which systems are you currently using - brand?
 - b. Which area is using which system - scope?
4. Story about the implementation
 - a. Why was it needed?
 - b. When was it implemented?
 - c. Who selected the system?
 - d. External support?
 - e. How long took the preparation / implementation process?
 - f. How were the implementation process structured / organisation structure?
 - g. Did you follow an implementation plan?
 - h. Estimated time (%) ratio planning /selection/implementation?
5. Decision for the specific system
 - a. Who made the decision? Why?
 - b. Was anybody else / a team involved
 - c. Decision made on which basis?
 - d. Should more people been involved?
 - e. Time pressure? Scale 1-10 where 1 means no time pressure
 - f. Money pressure? Scale 1-10 where 1 means no money pressure
6. Satisfaction about the system? Scale 1-10 where 1 means not satisfied at all
 - a. Are you overall satisfied?
 - b. Do you measure it? If yes, how do you measure it and what are the results?
 - c. Do you have a supporting reporting?
7. Cost of the system?
 - a. Do you know the implementation cost? Ca. Euro?
 - b. Do you know the running cost? Monthly Euro?
 - c. Do you use permanent external support?
8. Lessons Learned?
 - a. What would you do different the next time?
 - b. Do's / Don'ts
 - c. If you have to select another system – how would you start?

Seite 1

Figure 1. Questionnaire for the semi-structured expert interviews (author, 2011)

A significant number of interviews have been conducted. The questionnaires sent up front to the interviewees for their preparation. 40% of the interviews have been executed in a personal



interview, discussing the subject and all the questions in person. 60% of the interviews have been done via telephone. For data collection purposes the interviews have been recorded whenever the interviewee agreed, during all of the interviews a lot of notes have been taken and a summary documented.

A lot of very valuable information has been provided with the interviews and very specifically for the analysis and reflection towards the taken hypothesis.

Results of the Expert Interviews

Group ONE (blue 1-9) are the overall experts; this group support strongly both hypotheses.

For hypothesis 1 it means to follow a structured approach in setting up and planning for the strategic decision is essential. In detail they confirmed that taking more time in the beginning to prepare for the decision, to collect a lot of information, to compare with other companies with the same size and same industry, to define the business and economical requirements in very much detail, clearly set expectations for the functionality of the system and be aware of tangible and more relevant intangible benefits.

For hypothesis 2 they confirmed that a team of managers should be involved, key user defined and involved and a steering committee set up to make the decision together. The figure 2 shows on a high level a summary of results of the interviews. The blue cloud on the top right corner indicates the area where experts propose that the SME companies should be in. The reflection to the green bottom left shows that based on the experts experience; this is the corner where usually the SME companies are currently located.

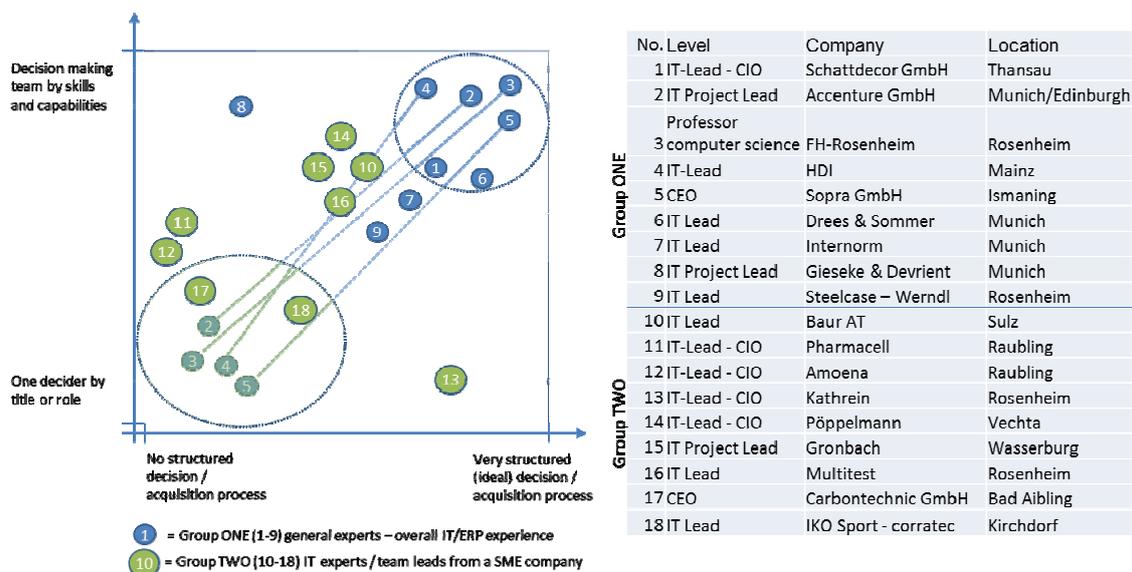


Figure 2. Results from the interviews (author, 2011)



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Group TWO (green10-18) are the general IT managers of SME companies which provide feedback from the departments where ERP systems are selected and show mainly the status of the “As-Is” situation.

At first glance the results from group TWO seem more diverse as the one from the overall experts. Describing more the decision making process as it happens during the real acquisition the green spot covers the entire history of the company. Looking at the details there are commonalities. Company 17 and 18 are much smaller than companies 10, 14, 15 and 16. So, the smaller companies had much less time and experience to execute the decision. The other companies (11-12) faced the specific situation that the old ERP system had to be preplaced. So, most decisions are made based on history of the company and its IT affinity. Company 13 shows the problem of a strong hierarchical driven decision making process – the CEO / CIO made the decision. Company 14 was a global, well structured, medium size company which had been fully aware of the impacts of this decision and executed the planning carefully using industry and outside experience.

In the end of the interview – the section “Lessons Learned” – they all confirmed mainly both hypotheses. If they would have known before “what to do” and “what is ahead of them”, they would have done it differently. They would have taken more time for preparation, planning and acquisition and they would have involved more subject matter experts and key users to support the decision making process.

Concluding Remarks

Making strategic decisions is a key topic for SME companies especially in a fast moving business environment. To remain competitive in a global and automated world most of the companies face the major strategic decision to select for an IT / ERP system. Given it is usually a one-time decision they face it with little or no experience.

The expert interviews with IT Leads of SME companies confirmed the assumed As-Is structure, that the acquisition of an IT / ERP system is not very structured and mainly depended on one or very few decision making people. The two hypotheses that a structured decision making process for the acquisition is needed and a team with very knowledgeable key users should support the deciders, could be corroborated by the expert interviews so far.

SME companies need to be enabled to make this very important strategic decision by following a structured acquisition approach and involve multiple internal and external people in the decision making process.

This topic is rather new in literature, so there are many additional areas for further research. For example reviewing rather small companies preferred in the very early stage of the decision, to focus on one industry or region could be beneficial for comparison purposes due to the very high diversity of the IT / ERP products.

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WOMEN AS LEADERS OF LOCAL GOVERNMENTS – SITUATION BEFORE AND AFTER ADMINISTRATIVE TERRITORIAL REFORM IN LATVIA

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Abstract

Women in EU still account for less than 30% of councillors while at the same time in Latvia 23% women are city mayors, from all deputies women are 35.75% in local government. Currently, in Latvia there are 110 local governments and 9 cities of national importance (woman is a leader in one), but situation have changed nearly after author's first research in local governments in Latvia at 2004-2006 (with women leaders in local governments). In 2006 there were 192 women leaders from 524 local governments or 36.6% (the highest per cent in EU).

Administrative territorial reform was one of the most important tasks targeted in Latvia's transformation, with the main goals: democratization and decentralization of state power and administration, increasing accountability of local governments in fulfilling the tasks delegated to them, improvement of the quality of public services rendered to local residents and increasing public participation in the processes of administration.

This article provides an analysis of changes after administrative territorial reform in the field of gender equality. Results gained from author's research with chairwomen of local government councils.

Introduction

Simultaneously, there have been three different types of reforms in Latvia: *administrative territorial reform* (comprising also the formation of counties by amalgamating several parishes (119 local governments formed out of 548 local governments) and *public administration reform* (it included reorganization and liquidation of ministries (Ministry of Children and Family Affairs of the Republic of Latvia, Ministry of Regional Development and Local Government) and Secretariats of the Special Assignments (Secretariat of Special Assignments Minister for Electronic Government Affairs, Secretariat of the Special Assignments Minister for Social Integration), and also other significant changes took place in order to adjust public administration structures).



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As a result of reorganization, staff units in public administration were decreased significantly, also by amalgamating several parishes leaders of the parishes lost their job, after which a single leader of the future county was elected. The aim of the author is to find out how the administrative territorial reform has affected the proportion of women in leadership of local governments compared to men in leadership of local governments, which, for instance, was the highest proportion in per cent among all EU countries in 2006.

Currently, there are (after local government elections on 1 July 2009) operating 119 local governments in Latvia – 110 counties and nine republic cities: Riga, Jūrmala, Valmiera, Liepāja, Ventspils, Rēzekne, Daugavpils, Jēkabpils and Jelgava. All governments have the same status of local governments. In accordance with the data of the Central Election Committee [6] 1752 deputies have been elected altogether in nine city councils and 109 county councils in these elections. As a result of administrative territorial reform, the number of elected deputies in local governments has been two times lower, if compared to local government elections in 2005. Four years ago 4179 deputies were elected in local government elections.

Prior to local government elections of 2009, there were local governments of 41 county, 424 civil parishes, 50 district towns, 7 republic cities and 26 district local governments (548 local governments altogether). Competences among counties, district towns and civil parishes did not differ, and they were the so-called local governments. Districts had the status of a regional local government, but republic cities had the competence of both types of local governments'.

Currently, women in leadership of counties' councils account for 21% (prior to the administrative territorial reform – 36% [5], which was the highest figure among all EU countries), but still there is a trend for women to be the leaders of smaller local governments in terms of the size of the local government and population. In 2011 the only women who occupied the post of City Council chairwoman, of the Republic of Latvia, was Žanna Kulakova (so far women have been in charge of city councils in Daugavpils – R. Strode and Jūrmala – I. Aizstrauta) in Daugavpils. Comparatively, in the 10th Saeima, women have been a minority – 20 deputies from 100 deputies [10].

In 2007, in the international conference, organized by LIEDRA (European Association of local authorities for gender equality) in the European Parliament, various level representatives (at European, national, local, NGO level) expressed their points of view on increasing opportunities for women in politics and in the labour market. The main conclusion was that more active women participation should be promoted not only in leading positions in local politics and business, but also at an EU level, by referring to EU institutions, like the European Parliament and the EU Committee of Regions [9] where women representation is far from 50/50 ratio. For example, the influence of growing racial, ethnic, and gender diversity in public employment positively affects the meanings of law and rules for public officials. [13]

Dual political space in Latvia is formed by politics consisting of different levels, with different rules for each level. The higher political level, the more closed politics and the sharper gender equality. Women in politics encounter with many obstacles, which are related to both accessibility to resources and game rules in parties. For example, glass ceiling is a popular metaphor for explaining the inability of many women to advance past a certain point in their occupations and professions, regardless of their qualifications or achievements. [15] Family experience for women, on the one hand, gives some benefits and skills both for formulating



political perspective and work organization. On the other hand, the traditional role of a woman in a family being subordinate to a man is widened also in the public domain, thus justifying woman's secondary place also in politics. According to respondents [18], the image of a politician basically is masculine, thus it is hard for a woman in politics to create her own image. An image of a convincing and strong woman-politician, which would be considered as convincing just as a male-politician image, has not taken root in the Latvian society yet.

1. Nature of Administrative Territorial Reform and Comparison of its Output with Neighbouring Countries

By the notion "reform" usually is understood "a political transformation, reorganization". As stated in Section 1, Paragraph 1 [1] of the Regional Reform Law, "administrative territory is a unit of division of the territory of Latvia wherein State administrative institutions and local governments perform administration within the competence thereof". The administrative-territorial division in Latvia, which had stayed in Latvia after regaining independence, did not conform with modern requirements: it was not suitable for the economic structure, lifestyle, development of information technologies; it also failed to provide the fulfilment of functions entrusted to local governments, caused the fragmentation of already scarce resources available to local governments and thus irrational use thereof.

Although the aim of the administrative territorial reform is to form administrative territories with local governments capable of economic development which would ensure the provision of quality service to population, yet the administrative territorial reform had many opponents.

EU experience shows that in the last 20-30 years local governments of regions have changed dramatically. This was due to two reasons: 1) development of national or cultural autonomy; efforts to support such requirements; 2) the necessity to promote balanced and self-sufficient development of territories. The first reason in Latvia does not exist, but there is a clear need to square territorial differences [14]. By assessing the development in many countries, it is clear that regional local government can contribute best to taking care of regional development.

Implementation of territorial reform was already included in the concept adopted in the administrative territorial reform in 1993. But the Administrative-Territorial Reform Law was adopted only on 21 October 1998. Until then all activities in this field failed because the prepared projects regarding territorial division were based on a coercive method, the development of versions of administrative-territorial division was too centralized, and also local governments and population were not involved in project output. On 22 September 2005 the Saeima (Parliament) in the third reading adopted amendments to the Administrative-Territorial Reform Law which provides the administrative-territorial reform to be concluded by the end of local government elections in 2009. This granted that county local governments, created until 31 January 2009, for each territorial unit of a town and civil parish in the county shall receive single operating grants from the state budget in the amount of LVL 100 000 for the development of local government infrastructure. Also the amendments provided that local governments shall receive LVL 10 000 for drafting an amalgamation project and a single grant in the amount from 1-5% from the total budget of local governments to be amalgamated in a county, to be used by a local government according to its own discretion.



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Looking back at the formation of local governments in Latvia from historical point of view, starting with reforms in 1868 until state inversion in 1934, in Latvia, there existed and operated a local government system with a time-relevant independence and democracy level. At this period of time administrative territorial division was established which is still used nowadays in local and regional municipalities. From 1934 until elections in 1989, various forms of area governance were used in Latvia; their administrative territorial division remained the same as for local government territories also during Ulmanis' dictatorship and the World War II. After the warm division of territories was repeatedly reformed (according to colonizers' political objectives), yet in 1962 the planners returned to the historical territorial division. Local government elections in 1989 were held before Latvia gained its independence [21]. In these elections, where not only the citizens of Latvia participated, the territorial power of citizens was reinstated.

A research conducted prior to the administrative territorial reform [18] shows that two different political spaces exist in Latvia. At the local government level the main role is played by personalities of local politicians. The small scale makes politics dependent on personal contacts. Respondents often spoke about lack of alternative candidates, as a result of which one and the same woman or man were elected to the office of a council or civil parish chairman for many years running, as there were no other candidates. However, in general, women have the possibility of moving forward at this level. As to the ratio of men and women in the largest local governments and at the Saeima (Parliament), there is evidence that the ratio of women tends to increase outside Riga. The administrative reform and the amalgamation of civil parishes is one of the threats that will affect the possibilities of women to stand for local government elections. In its turn, at the level of the large local governments and the state, decision-making depends on party politics and corporate ties. At this level the men's lobby is attributed dishonest, brutal methods that are linked with intimidation or exerting influence on family members. Thus "big politics" is typically assessed as negative and dirty in the opinion of its participants as well as people not involved in it. Gender inequality manifests itself in politics of the highest level. The higher the political level, the more difficult it is for a woman to enter it on her own, without men's support. The woman feels much lonelier in politics as the cooperation networks of women are much weaker than the informal networks of men. [11] Although women also hold several of the highest public offices, the view prevails that in reality decision-making and policy-making take place at the level of executive power, where women in Latvia have not yet progressed to the leading positions. In politics of the highest level the impact and the pressure of various interest groups manifest themselves more clearly by using financial resources and informal relations.

Active female participation in the work of local governments is very crucial, if only for the argument that the proportion of women among Latvian population was 53.9% [7] in 2011, and also because of the reason that local governments are considered as a basis of every democracy, as a cradle of democracy and also a mirror: the more developed local governments, the larger democracy in a state. At the local governmental level, it is more likely to involve citizens in governmental work, use their knowledge and abilities to improve living conditions. Local governments enjoy the most favourable conditions for creating a harmonic society, relevant to the demands of local citizens, for which they feel responsible [20]. If local governments are strengthened, the whole nation gets stronger, thus society's policy is



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implemented more efficiently and democratically. Therefore it is important that both genders participate in these processes.

The break-down from the Soviet Union was a great leap toward freedom, progress and openness for the Baltic nations, which, also being different, share similar historical, cultural, socio-economic and political heritage. The Baltic States gender policies have been shaped by the worker-mother contract institutionalised in the Soviet era. As a consequence, gender role changes have been strongly influenced by soviet cultural and political ideology [2]. There are some common features of organization of administrative territorial reforms in Latvia, Estonia and Lithuania. But simultaneously each Baltic state has different organization of local government system. The goals of administrative territorial reforms are similar in three countries. The main goals of the administrative territorial reforms concern the further democratisation and decentralization of state power and administration, improving the quality of public services rendered to the local residents and involving them in the process of administration [19].

Comparing regional development in neighbouring countries, it can be seen that Lithuania has implemented administrative territorial reform and there has been created a one-level local government system with 60 municipalities [4]. Yet, the first trends of decentralization can be observed in Lithuania – the administrative-territorial division provides an increasing number of municipalities (only 9 local governments in Lithuania are with population under 30 thousand, in 24 local governments the number of population was from 30 thousand to 50 thousand, in 13 local governments – from 50 thousand to 70 thousand, in 5 local governments – above 1000 thousand). Therefore one alternative proposes to increase the number of local governments from 56 to 93. Reducing the number of population and area of local governments will increase residents' participation in managing local affairs and increase access of residents to local government administrative institutions. The second alternative solution could be increasing the competencies and power of neighbourhoods [3].

There are a total of 227 municipalities in Estonia [16], 34 of them are urban and 193 are rural. Estonians are planning to implement a territorial reform and diminish approximately 150 municipalities. However, in Estonia there have been suggestions to nullify or merge civil parishes, yet it is considered that this will not improve the development of small local governments. It is considered in Estonia that civil parishes may form unions themselves, if this is needed for the implementation of any large scale project; this example is taken from Finland where the scale of territorial local governments are very diverse and yet in Finland they manage to absorb EU funding successfully. There are local activity groups in Finland which combine the capacity of several local governments for planning and implementation of larger scale EU projects.

Nordic countries carry out many activities in order to promote gender equality in local governments, like studies and reviews regarding opportunities for local governments and good practice examples are published on a regular basis, study seminars are organized in order to provide equal opportunities for both genders of population, which would be a good example also in Latvia's case. In Sweden, many local governments employ or attract a gender equality expert who assists the local government by conducting case studies, planning events, organizing educating programmes for local government employees and deputies in order for them to acquire the required skills and methods.



To support women's leadership roles in local government, the aim of the Year of Women in Local Government 2010 was to address the need for systemic and cultural change while supporting women and building their capacity to thrive in leadership roles. For example, in Gender Equality Strategy for Northern Ireland 2006-2016, promoting of gender equality is one of the government's priorities and the focus of the Women in Local Councils' initiative for councils and political parties, as to increase women's participation and representation in decision making processes, develop recognized good practice in relation to flexible working policies and work-life balance initiatives etc.

2. Female Ratio in Local Governments before and after the Administrative Territorial Reform – Results from the Author's Studies

Statistics on deputy candidates registered for and deputies elected in local government elections of 2009 can be seen in Table 1 (number of deputies 1765, number of registers 737, and number of candidates 11196). Table 1 provides that gender distribution among deputy candidates is more proportionate, yet the number of men elected is larger. Still the number of female deputies exceeds 30% margin which is a high indicator if compared to other EU countries.

Table 1

Gender statistics of deputy candidates registered for and deputies elected in local government elections of 2009

Gender	Deputies		Candidates		Population in Latvia [7]	
	Number	Ratio (%)	Number	Ratio (%)	Number	Ratio (%)
Men	1134	64.25%	6528	58.31%	1,029,391	46.17%
Women	631	35.75%	4668	41.69%	1,200,250	53.83%

Source: Home page of the Central Election Commission, Republic of Latvia, available at <http://www.cvk.lv/cgi-bin/wdbcgiw/base/komisijas2010.GalRezs10> (observed 01.06.2011)

Although female leaders of local governments in Latvia comprise 23% (out of 35.75% female deputies), it should be concluded that men are more likely to be elected as council leaders, respectively, at the moment this proportion is 77% out of 64.25% male deputies.

The author has carried out both quantitative and qualitative research in Latvian local governments before the administrative regional reform. In the course of the research, conducted in February 2005 and August and September 2006, the author interviewed 20 women in leadership of local governments from different regions and various level local governments in Latvia.

Women who are active in politics indicated that at entering the politics they had to prove themselves professionally and work hard, but later the pressure in gender aspect diminished, yet the overall competition remained. In a reply to question whether during the administrative



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regional reform gender equality principle in local governments is taken into account, all respondents were indicate that in this process the most important is personality, not the gender.

In a reply to questions whether there exist different point of views of a women-in-charge/woman-politician (does there exist any prejudice), respondents indicate that there are higher expectations of a woman than a man, and also if there is nothing else a woman can be reprimanded for, then she gets a comment on the gender. Women indicate that prejudice exists and they consist of different levels. In a collective body these obstacles may be overcome by proving that a woman is professionally suitable for the chosen position, but it is much harder to change this attitude in external relations.

Respondents have mentioned that it is easier to “attach” the negative image to a woman than a man, for example, for some things women are criticised more, but men – not at all. At times women-politicians try to prove that they are not weaker and less-valuable, and exaggerate with arrogance and conceit. Officials indicate – if two male-politicians exchange with harsh wording on some issue, the society does not perceive this as a gender specific trait, whereas, if women do the same, then it is classified as women’s quarrel. If a man affords himself to be emotional, then he will not be reproached for that, but a woman shall receive an immediate reproach.

By characterizing the politics in Latvia, respondents mentioned the following examples:

- “Politics is such a thing which should not be done publicly, just like making of sausages”;
- “Place where I don’t want to be”;
- “Currently we can find many politicians only in that field where they can get personal benefit. I feel very sorry for the next generation who go into politics not to give something but to gain something”;
- “Improvident politics which is not based on agreement”;
- “Non-transparent and unfortunately pretty often dishonest. I stand close to political arena and see this closer than any person from the street, and I have seen the bad side of it, therefore I hesitate to engage in politics”;
- “Politics in Latvia is shallow and selfish. Just a hustle, without any growth objectives in the future and serving the public good and the country”;
- “What is happening in Latvia cannot be regarded as politics”.

One of preconditions for successful reconciliation of work and family life is appropriate working environment and infrastructure suitable for family needs. In this aspect, the state and local government, as well as employers taking interest in providing their employees with opportunities for professional realisation by allowing also to perform family-related duties successfully play a significant role. Especially speaking about the division of female and male duties, if comparing to the actual situation, we can observe out-of-date points of view.

Summary of responses to the question “How would you explain unequal relation between men and women in leading positions/politics” from the author’s study:

- a woman feels more responsible towards her family;
- a woman is better aware of the responsibility burden; the threshold of responsibility is very high;
- in case a women has worked in local government or city council and is not re-elected, it is hard to find a new job; in this case for men it is easier;



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- a women has stronger family ties; still if she works in the Saeima, then family will suffer more because of constant commuting back and forth;
- women are less ambitious;
- the main obstacle are stereotypes;
- perhaps, unequal relations exist because of women themselves; yet I have an experience when I was not elected in a high ranking post just because I am a women, so gender discrimination exist, even somewhere subconsciously;
- this trend has developed historically when a man is the master and manager, but a woman had somewhat lower status;
- a woman is perceived as a gentle creature, but a man – as the head of a family and also local government;
- because for women family is more important than personal career.

Similar results have been gained in another study [18], conducted prior to the administrative reform: the majority of middle-aged women-politicians indicated that it was possible to have success in politics if family obligations had been successfully fulfilled – children had already been brought up and had become independent. They treat the entry of younger women into politics sceptically, reproaching then either with inability to devote all of their time to work, or with failure to devote sufficient time to a child.

In author's quantitative research on 2006, the author questioned 85 women in leadership of local governments from different regions and various level local governments in Latvia.

Respondents' opinion on the administrative territorial reform was not with a common tendency. 34% of respondents had a negative view of respecting gender equality principle during on the administrative territorial reform, 57% had a positive opinion, but rest didn't even answer the question.

Women and, in particular, women – local politicians emphasise the independence of children and the family support they received when they started to participate in politics. It must be noted that children in particular and providing for them, especially in large families with many children, serves as the motivation for women to work in elected positions in local governments.

The stereotypical division of genders that obstructs the entry of women into politics, has been particularly emphasised by women-politicians who themselves have refuted this stereotype in their own life, considering themselves to be a rare exception, having violated their gender role and feeling the public condemnation for it. The actual distribution of roles in families of politicians interviewed refutes and in part confirms the stereotypical division.

It outlines also the way how women can combine family and work in governance as well as the change of the traditional stereotypes itself. The family has served as a significant support network and a source of stability for respondents of the study. As a rule, work in elected positions is related to the redistribution of home duties in the family, the children and the spouse taking on additional duties.

Lack of tradition in depicting the image of the woman-politician creates a rather vague and diffuse image of the woman-politician. Contrary to the man-politician women feel that more attention is paid to the woman's appearance and clothes.



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In another study [12] 26 women in leading positions in Latvia discussed differences in male and female management style, by gathering opinions in topics with expressed gender differences: emotionality, decision-making, focusing on results, long-term/short-term focusing, consensual/appositional management approach, focusing on a team work. Factors contributing to women-manager employment in Latvia – history and social traditions, lack of aristocracy, female/male characteristics, remuneration, societal pressure to be multifunctional, support and personal models. Obstacles to women managers being appointed in the office – children, “old-boys” network, gender expectations and lack of confidence.

The study “Gender equality principle applying the Latvian local government” revealed the attitude regarding various gender equality issues of employees in local governments. For example, respondents were asked “What is gender equality?”, and some of the answers were – both genders have equal “social value”, and it is necessary to gain “equal attitude” from the society towards both genders. 65.5% of respondents among employees and members in local governments consider that gender discrimination in their particular local government has never been observed. Meanwhile 42.7% female respondents find that men frequently receive higher remuneration for the same job than women [17]. Gender discrimination is more often experienced by women and respondents with higher education.

Summary

Even if women in Latvian local governments have lost their positions, the administrative-territorial reform has not had a crucial impact on the number of women-leaders in local government compared to men. Since the majority of women-leaders of local governments hold their posts already for many years running, the decisive factor in local governments is the professionalism, not the gender aspect.

However, the author’s study showed that discrimination exists, yet very often in a hidden form, and although the interviewed women were managers in different local governments in Latvia, still the main problems are similar. There are certain circumstances in the society hindering a woman to express herself in a leading position, and while the human attitude remains unchanged, the topicality of this problem will not disappear.

The author has carried out both quantitative and qualitative research in Latvian local governments before the administrative regional reform. In the course of the research, conducted in February 2005 and August and September 2006, the author interviewed 20 women in leadership of local governments from different regions and various level local governments in Latvia. In a reply to question whether during the administrative regional reform gender equality principle in local governments is taken into account, all respondents were indicate that in this process the most important is personality, not the gender. In author’s quantitative research on 2006, the author questioned 85 women in leadership of local governments, respondents’ opinion on the administrative territorial reform was not with a common tendency. 34% of respondents had a negative view of respecting gender equality principle during on the administrative territorial reform, 57% had a positive opinion, but rest didn’t even answer the question.



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Women-leaders receiving support from their families are more likely to engage in politics, they are ready to assume responsibility and have know-how of skilful personal time management thus having stable political position in a longer period of time.

Situation with regard to gender proportion changes in every elections, although statistical data indicate that women ratio in Latvian politics tend to increase, yet this cannot be necessarily predictable.

Changes to the field of gender equality are determined by a complimentary approach which includes the change of public awareness and attitude by highlighting informative and educative measures – seminars, trainings, informative base etc. Suggestions are as follows:

- Examples of good governance (to raise the self-esteem of women, to encourage etc.).
- To break free of perceptual sets and stereotypic thinking by raising the society's awareness.
- To reduce the cultivation of role division in the mass media, training handouts and educative materials etc.
- To provide a wider reflection on the positive gender equality experience around the globe.
- To activate cooperation and solidarity, information exchange and communication between women.
- Possibly it is necessary to introduce concrete changes to the legislation, for example, by introducing the quota system in division of jobs or in payment of salaries, and also by organizing more informative campaigns to raise the social competence.

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LABOUR TAX CHANGES EFFECT ON SOCIAL PROCESSES IN LATVIA

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Keywords: labour, human resources, personal income tax, social processes, state social insurance contributions.

Abstract

The main growth of the national quality resource is human capital or, in economic interpretation – labour. The author researching questions about role of labour conclude that there is a never-ending relationship between the state economics growth and labour. State economic development can not occur without labour force, which includes unique human resources and guides the production processes, participation. Why do we need progress? Population – labour, reuse economic development results to improve their quality of life. Inhabitant is the central impellent behind the country’s survival and development.

The author uses 10 year period for analysis during which social breakdown contributions by types of social insurance changes are analyzed and whether it constitutes a correlative relationship with government spending on social processes types.

According to the author, quality of life without the social insurance contributions is also characterized by the personal income tax trends. By analyzing collected personal income tax correlative relationship with the welfare indicators, the author would prove hypothesis that personal income tax is direct indicator of population’s living standards measurement.

I. Introduction

Growth of the country can be measured by various quantitative and qualitative indicators. As the quantitative indicators, i.e. GDP, balance of export and import quantity, government revenue and spending, investment in the country, as well as specific branch trends are used. As the qualitative indicators, by the author’s opinion, education of national population and cultural level, the level of welfare, labour productivity and inhabitant’s health indicators should be identified. According to the author, quantitative indicators can be characterized by relief of qualitative indicators. For example, the higher labour productivity, the less resource needed to produce the same amount of GDP.

Wages as a key source of household income is remuneration for work and factors for cost of production. Wages are one of the most promoting factors of productivity, and its purpose is



to reimburse the efforts of the individual entities in production process. Labour tax income is used for government to redistribute of inhabitant's income. To ensure the inter-generational solidarity, working inhabitant's paid part of their income from their wages to the state budget, what is the redistribution of income to the economically inactive and losing the ability society.

Aim of the research is to find theoretical and empirical evidence whether the labour tax changes affect social processes in the country and what dynamics of the trend of impact are.

Population's quality of life characterizes social processes in the country. The author uses frequency distributions and correlation analysis for analyzing and measuring social processes. Such social processes are chosen for the analyses, which would be important for business environment research. The author uses social processes characterizing empirical data on economic activity of population, employment and unemployment, wages, labour costs and productivity, social security for analyses. Mentioned social processes are researched in the state social insurance contribution context, i.e. whether there is a correlative relationship between the government social insurance contributions and incomes spending to provide social processes continuity.

II. Labour Tax in Latvia

Labour taxes in the total tax classification are defined as direct taxes. Latvian labours make payment for social insurance contributions from their income and do the personal income tax payments.

Currently, an employee pay social insurance contributions to 11 per cent of gross wage from their income and personal income tax 25 per cent of the income derived from gross salary minus social insurance contributions and state tax relief granted, i.e. the non-taxable minimum 45 LVL and tax relief for dependent persons 70 LVL for each. In addition to employee's taxes, employer pays social insurance contributions from employee's gross income of 24.9 per cent. Researching 10 years of labour tax changes in dynamics, the author's opinion is that tax rates have not changed significantly in figures. Social insurance contributions rate for the total period of 10 years has fluctuated by 2 percentage points, the lowest rate was 33.09 per cent and highest 35.09 per cent of the employee's gross income. Personal income tax rate has varied by 3 percentage points; the lowest rate was 23 per cent in 2009, the highest was 26 per cent in 2010, in addition eight times out of 10 labour tax rates remained unchanged.

Not be denied, that Latvian labour tax rates were affected by globalization. World economic debate is a sign appeared – adverse effect of globalization on taxes, what in the author's research area identifies problems of implementation of social programs in the country [1].

The law "On State Social Insurance" defines the principle of social insurance: social insurance is a set of measures, organized by the state to insure a person or a dependent person the risk of losing income due to the insured person's sickness, disability, maternity, unemployment, retirement age, occupationally accident or professional disease, child care, as well as additional expenses due to the insured person's or dependent person's death. Social insurance is a part of the national social security system. Social security frameworks provide solidarity between social insurance contribution payers and social insurance recipients, as well



as social insurance funds are used only for social insurance services [2]. According to the law, the state social security system is build to compensate lost potential income from work, due to inability to work. To ensure social system, national budget has separate part of accumulation of funds: the state social insurance special budget. The state special budget consists of four special budgets: the state pension special budget, the special employment budget, the special budget of occupationally accident and disability, and maternity and sickness special budget [3]. An employer making social insurance contributions is informed about percentage of the contributions that will go to each of the special budgets. The legislature changes the percentage distribution of the special budgets according to state social insurance contributions each year.

Proportionally to the total amount of social contributions for the greatest share of social contributions, i.e. 72.84 per cent is directed for pension insurance, the next most important social contributions to the 18.98 per cent consists of social contributions of inability to work due to employee's disability, sickness and maternity, amount of 30.7 per cent of contributions are allocated to unemployment benefits and only 0.88 per cent of social contributions are occupational accident insurance.

Personal income tax in the state budget does not provide specific spending items, but clearly is separated collected tax user, on average, 80 per cent of collected personal income tax is granted to the local government or municipality budget and 20 per cent is granted to the state budget [3]. Legislature has not defined clearly in legislation the purpose of personal income tax usage.

For living standards measure the author uses personal income tax empirical data relationship with the inhabitant's welfare indicators. In the law "On State Budget 2011" explanations the legislature indicates that personal income tax revenue mainly affect the number of employees in economy, wages and salaries, non taxable minimum and tax relief for dependent person, as well as the minimum wage [3]. In the context of social processes research the author selects such welfare indicators as education, public safety, health care and index of unequal distribution of income for the analysis.

III. Social Process Analysis

Social processes are operation elements of the state social policy. Social processes in different sources of information are identified in different ways.

Social policy is the state organized activities to ensure members of society by education, protection and other social needs [4].

One of the government key tasks is to ensure its citizens social protection. There is a special budget managed by the Ministry of Welfare to fundamental solutions of four basic social issues.

Based on the indicators characterizing social processes, the author identifies the following social processes in the country:

1. Education. To get a concept of education in the country, it is important to determine the proportion of the population, which takes appropriate level of education and whether it is available in all regions of the country. Quantitative indicators of education are characterized by pre-school educational institutions in the country, the number of children in them, comprehensive schools in the country, the number of students, colleges



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- and universities, the number of students per country and the number of teachers per pupil or student. For education in the context of sustainable development, by the author's opinion, essential is lifelong learning access to all regions of the country.
2. Culture. This social process is the most difficult to measure quantitatively, in addition to cultural development and activity in the population is statistically complicate to measure. Several local cultural events attendance estimates can only be done by same organizers, but according to the Latvian legislation such accounting is not mandatory; cultural activities in quantitative statistics are not listed qualitatively. The author considers that quantitative cultural measures, quantitative indicators like number of public libraries, museums and the number of meeting places of cultural events such as theatre, opera, cinema venues can be used.
 3. Public safety. Security describes individual's place in society. The higher level of safety in the environment in which the individual lives, the higher quality of life it describes. Quantitatively, the level of security characterizes such indicators as number of security guard and law enforcement institutions, their activity and quality of work and the number of security guard in region. Quantitative indicators of safety are the number of offenses and the number of road accidents in a given period.
 4. Social Security. This social process is the base of the state social system. Foundations of this social process are the special budget build for budgets which provides individual to continue receiving financial support after loosing earning capacity for shorter or longer period of time, i.e. individual has reached retirement age, an individual becomes unemployed, has an accident at work, that prevent continuation of work, there is a sickness, maternity or disability case. In addition to the basic types of social insurance there are many other types of social benefits, such as state family benefits, survivorship benefit, benefit for orphans up to adulthood, a number of housing maintenance related disability benefits.
 5. Health care. Qualitative health care indicator is population desire to live a healthy and active lifestyle, because a large proportion of health problems, including population health self-assessment, are related to the rhythm of individual's quality of life, which is determined by individual himself. Of course, we cannot go on without health prosecuting institutions and their availability at hand, and numbers of them is as quantitative indicator of health care in the country. Statistically, health care is measured by quantitative indicators such as life expectancy of newborn, infant mortality per 1000 live births, HIV infections per 100 000 inhabitants, sickness rate of psychiatric and drug addiction, sickness rate of alcoholism and the number of doctors per 1000 people.
 6. Employment and unemployment. Employment, by the author's opinion, takes the most important place among social processes. All other social processes are directly or indirectly depend on population employment. For example, demand of labour market for specific qualification workers make inhabitants wish to learn a specific profession, which affect education system in the country. If inhabitants have labour income, they do not need to ask for social benefits, also employment make free money funds, which maintain a security system in the country, just as labour income create more accessible cultural life. Quantitatively by economically active population, the number of unemployed, the unemployment rates and the dependency ratio characterized employment.



The above described social processes are chosen for analysis by the author because she considers them to be representative for research and overall findings given. According to the author, diversity of social processes evolves over time with society's development and the process that was mentioned in the 21st century is not the same process that it was in the 18th century. According to the author, the research through the ages of social process may include different processes and exploration processes are characterized by societal needs and graduated by priorities in long term. Similarly, difference between social processes will be seen in various popular spaces and differential individual thinking. Social processes are variable researchers object over the time and space, causing the research question of contemporary actuality.

IV. Analysis of Social Insurance Contributions Impact to Social Processes in Dynamics

During the analysis of social processes the author collects the government revenue by social insurance contributions types and the government expenditure for social security services. The author's aim is to research whether the government spending on fiscal year is the basis for next year's social insurance contributions percentage change by the distribution of special budget types and also the next year's government budget plan.

Table 1

Social contribution revenue and expenditure by social contribution types in dynamics [5; 6; 7; 8; 9; 10; 11; 12; 13; 14; 15]

Year (1)	Rate of pension insurance (2)	Change in <i>rev.</i> over the pr.year % [5] (3)	Change in <i>exp.</i> over the pr.year % [5] (4)	Rate of unempl. insurance (5)	Change in <i>rev.</i> over the pr.year % [5] (6)	Change in <i>exp.</i> over the pr.year % [5] (7)	Rate of work accident insurance (8)	Change in <i>rev.</i> over the pr.year % [5] (9)	Change in <i>exp.</i> over the pr.year % [5] (10)	Rate of work inability (11)	Change in <i>rev.</i> over the pr.year % [5] (12)	Change in <i>exp.</i> over the pr.year % [5] (13)	Total social contribution rate % (14)
2002	27.10			1.9			0.09			6			35.09
2003	25.59	6.76	2.01	1.94	16.34	11.70	0.09	19.11	33.79	5.47	3.66	7.38	33.09
2004	25.51	15.02	8.38	1.89	12.32	13.91	0.09	7.38	46.14	5.6	18.11	16.23	33.09
2005	25.26	16.69	12.16	1.8	12.14	6.60	0.09	17.85	38.55	5.94	25.13	16.69	33.09
2006	24.79	25.62	17.64	1.86	32.72	12.70	0.25	255.91	36.90	6.19	34.14	14.78	33.09
2007	24.49	36.38	17.80	1.8	29.43	45.45	0.25	37.71	31.60	6.55	45.59	19.24	33.09
2008	23.65	15.95	21.71	1.75	22.00	17.37	0.24	16.22	42.49	7.45	38.10	74.54	33.09
2009	22.86	-30.89	23.60	1.7	105.89	142.31	0.26	-10.25	43.19	8.27	-16.01	21.72	33.09
2010	21.66	-8.75	8.31	3.81	-37.89	-34.92	0.29	-15.14	9.69	7.33	-28.80	-18.47	33.09
2011	25.56	12.84	-4.53	2.56	-23.20	4.43	0.31	20.82	-10.15	6.66	3.74	-7.21	35.09
2011/2002	X	102.57	167.32	X	201.61	329.73	X	690.14	881.24	X	156.31	220.39	X
Average increase	X	80.42	86.07	X	88.58	96.15	X	109.88	114.99	X	85.20	89.85	X

The most closely associated rate with the national economy is the employment rate. Employment, by the author, is also an important indicator characterizing business environment. Quantitative trends of this indicator can be predicted by analysing the gross domestic product and the estimated value added tax dynamic trends. However the author points that the employment rate is a lagging indicator and prediction of unemployment rise can be done only in



cases where the government planning next year's budget focused on the number of officials reducing in the country. Throughout the researched period, part of social security contributions, which are directed to unemployment benefit, was on average 2.10 per cent of social contributions by the employee and the employer taken from the employee's income. The largest variation is 2.11 percentage points, which occurred in two successive periods. In 2009 was the lowest, but in 2010 the highest percentage of the unemployment insurance rate throughout the surveyed period. When the government is planning the annual budget, it does not indicate any special circumstances why it is planned to direct the revenue and expenditure of the amount of unemployment insurance, it only mentions that the plan is based on general revenue and expenditure trends. The government also does not mention that planned increase in expenditures is related to targeted government officials reduction measures. To find rate changes of unemployment insurance, the author uses quantitative employment indicators.

Table 2

Employment indicators from 2002 till 2010 [16]

Year	Population	Working age population of total population, %	Demographic burden to 1 workable	Economically active population of workable, %	Demographic burden to 1 employee	Unemployed of workable, %	Long term unemployed of all unemployed, %
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2002	2 345 768	61	0.65	79	1.07	9	45
2003	2 331 480	62	0.60	77	1.15	8	44
2004	2 319 203	63	0.59	78	1.18	8	43
2005	2 306 434	64	0.57	77	1.24	7	45
2006	2 294 590	64	0.55	79	1.33	5	37
2007	2 281 305	65	0.53	80	1.41	5	26
2008	2 270 894	66	0.52	82	1.44	6	25
2009	2 261 294	66	0.51	79	1.29	13	26
2010	2 248 374	66	0.51	78	1.23	15	45

Researching employment figures, the author concludes, that the statistics reported demographic burden does not describe correctly an economically interpretable quantitative data on the demographic burden. The statistical demographic burden describes how many workable inhabitants are to one economically inactive inhabitant, i.e. the age of 15 or after 64 years. Analysing demographic burden indicators, economic activity indicators and unemployment indicators, the author chose statistical weights by the number of employed people, because employed is such part of the population, that constitutes the special budget revenue in order to pay benefits for economically inactive or lose working ability population. Analyzing new demographical burden indicators the author gets whole different demographic burden indicators



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per one employee, see table 2, (4) and (6) column. Researching employees burden indicators, see table 2 (6) column, the author concludes, that by social security contributions one employee should ensure social benefits for more than one economically inactive or lose working ability population member, but analysing statistically obtained demographical burden indicators, see table 2 (4) column, demographical burden of one workable in year 2010 is only 0.51, i.e. two workable have to earn for one economically inactive or lost earning capacity population member. In addition, in the period to year 2008, Latvian economy is characterized by growth, showing growth of dependency and also shows growing demographical burden per workable, peaking in 2008.

The unemployed index in 2008 shows a slight increasing trend, by the author, it was in the private sector, because private sector to economic recession reacts faster than public sector. Only after unemployment benefit eight-time growth in 2009, see table 1 (7) column, the government decide in 2010 to change distribution of social contribution rate for unemployment by increasing the percentage to 2.2 times. Assessing the economic recession in the above context, the author asses rates increase positively, although at the same time researching reduced rate of work Inability, see table 1 (11) column, the author concludes that increase in unemployment benefits is covered by reducing social benefits of other part of society, i.e. in 2010, work inability insurance rate and pension insurance rate is reduced, the author asses negative social insurance rates reduction.

The largest share of social contributions is accounted by pension insurance; the average size of it in the researched period was 24.65 per cent of the employee's income and fluctuations throughout the whole period is 5.44 percentage points. By 2008, both revenue and expenditure growth rates remain positive. By researching relationship between insurance rate and collected tax increases, the author concludes that collected tax increase is more accelerated than insurance tax rate. In addition, collection tax increase remains positive when tax rate goes down, see table 1, 2006th, 2007th, 2008th data column (2), it is because number of social insurance contribution payers is growing as well as employee income gross. Comparing revenue and expenditure growth in the period to 2007th, the author positively evaluate earnings trend over spending growth rate. The government has increased on purpose the expenditure growth in pension insurance system by increasing the amount of pension of Latvian residents primarily by indexing pensions by the Consumer Price Index twice a year, and increasing of pension's amount in 2006 for those retired, whose pension does not exceed 105 LVL. The government explains in budget 2006th attachment that the number of retired is reduced by 6000 persons [17], but increased on pension benefits over the previous period increased by 17.64 per cent. In 2008 compared to previous period expenditure on pension benefits increased by 21.71 per cent, in 2009 further by 23.60 per cent, the author explains this by substantial revenue increase in 2007, of 36.38 per cent and ahead previous period growth rates, therefore the government increased its share of pension benefits in 2008 and 2009 by indexing measures two times a year, as well as returning withheld pension benefits of the working retired, if the pension is less than 135 LVL amount and overall growth of pension benefits of 11 per cent [18]. By analysing steady reduction of interest rates in the surveyed period, the author emphasize, that economic quantitative indicator of gross domestic product and corporate income tax rate already for 2008 has decreased in growth, but it does not take into account further reducing percentage of pension insurance rate up to 2010. Taking in view the sharp decline 2009 and 2010, in 2011 the



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government increases pension insurance rate part of social insurance contributions, reducing rates of other types of social insurance contributions, as well as increasing employee tax rate by 2 percentage points. In view of fact that the number of pensioners in the country decreases, by the author's opinion, pension insurance contributions from the total amount of social insurance contributions creates additional burden to remaining taxpayer. In 2010 demographic burden is 0.51 on workable population, or 1.23 on an employee, which creates high degree of risk to maintain social security system.

In contradistinction to pension insurance for occupational accidents and inability insurance, expenditure amounts is not exactly predictable. If you know reached retirement age population in the country, accident and the number of sickness case is impossible to predict. Planning insurance deferred expenses, the government undoubtedly guided the last year quantitative indicators of social processes of national statistics, but the actual situation in the conclusion of the period, by the author's opinion, may differ by several hundred per cents. Occupational accidents special budget includes sickness benefits in cases where disease is caused by accident or occupational disease, it is 80 per cent of the insured person's contribution wage, and compensation for disability of employment, injuries by occupational accidents and disease specific treatments, compensation for breadwinner loss, funeral benefits if death occurred of social insured person [3]. In 2006 increased social insurance percentage of occupational accidents, see table 1, (8) column, can be explained by increase of the number of paid days of illness and increase of average size of sickness benefit. But already in 2009 paid days of illness were reduced from 52 weeks to 26 weeks, which comes into conflict with occupational accident social insurance contribution rate increase in 2010 and 2011.

Work inability insurance provides income when employee loss their earnings of sickness, maternity, paternity, disability and survivors. In contrast to pension insurance and unemployment insurance, inability insurance part of social contribution rate increases until 2009. The author explains this increase as increasing the number of employed person, which will undoubtedly make more necessarily of inability insurance budget increase. 2010 and 2011 percentage decrease of incapacity of social contributions share can be explained by reduced number of paid days of illness as well as parental benefit reduction by 50 per cent of those parents who during child care have compulsory insured person [3]. According to the author, last two periods of inability insurance rate reduction is due to funds flow to unemployment insurance. To ensure social security balance, reducing social guarantees of working population due to need for funds of unemployment insurance, the author asses ambiguously.

Researching the state social insurance budget financial performance summary for 10 year period from 2002 to 2011, the author concludes that the special budget revenue consists of several revenues, i.e. the state social insurance contributions on labour income, as well as non-tax revenue, revenue from fees and transfers. The first three sources of revenue are directly related to employee's social contributions, but transfers have reallocated payment from the state budget. Use of transfer for social insurance benefits expenses are evidence of special budget revenue shortfalls for estimated expenditure. Analysing the LR law "On State Budget" annual data, the author concludes, that transfer takes place continuously from one special budget to another. According to the author, creating special budget for specific purposes the legislature has not researched population demographic content, indicators of economic activity, indexes of employment, as well as Latvian population social goals, values, priorities. According to the



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author, more developed social security system contributes fragmentation in smaller households, which increases risk staying without earnings in situations of unemployment, illness or disablement. Latvian small population, the author's opinion, should focus in larger households, which would exclude many of social risks, however, should undoubtedly limit inhabitant's democracy. Based on the author's previously researches of the grey economy in Latvia, the author concludes that large part of Latvian employees is unable or unwilling to pay certain state taxes on labour, although knowing that payment of taxes from wages are accumulated for providing social security system in the country. Therefore, it is concluded that existing social security system is not suitable for Latvia, because it constitutes large burden for population to avoid paying taxes. July 23, 2011 referendum of dissolution of the legislature shows confusion and frustration about job of the legislature.

The author analysing correlation of relationship between social insurance rates by type of insurance, the government budgeted expenditures and the Treasury expenditure by type of social processes, obtained followed results:

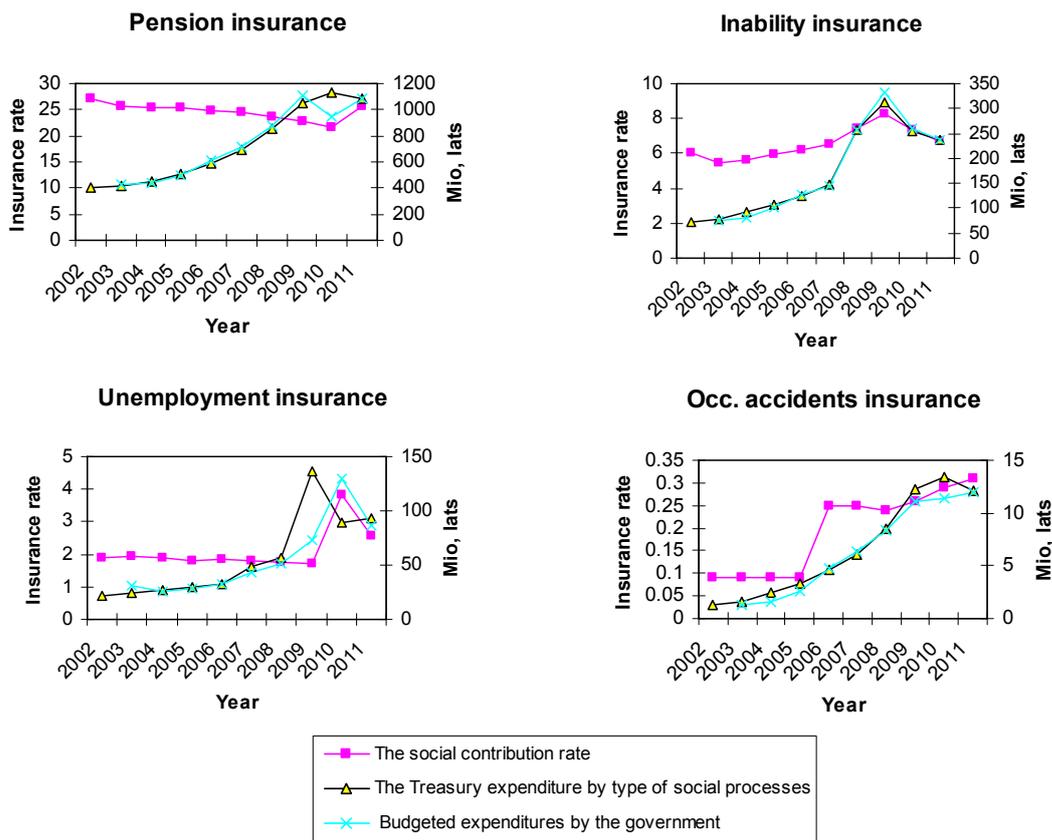


Figure 1. Social contribution rate compared to the Treasury expenditures by types of social processes and to budgeted expenditures by the government [3; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 17; 18; 19]



By analysing relationship between social insurance rates and expenditure for providing social processes, the findings are ambiguously. Unemployment benefits expenditure and unemployment insurance rate is correlated + 0.33, relationships between the legislatures set interest rates and employment processes are weak. Occupational accidents expenditure and insurance rate correlation is +0.87, inability insurance +0.95, relationships are close, but pension expenditures and pension social insurance rate correlation is -0.75, they are average close correlation, but negative. Analyzing the findings, the author concludes that the government created social security system is not based on mathematical utility calculations; insurance rates are not mathematically linked to the expenditure amount, which is needed to provide social processes. According to the author, obtained close correlative relationship is accidental, because for two insurance types they are completely different.

V. Personal Income Tax as a Social Process Indicator Analysis

The author selects for analysis personal income tax to find answer on the question: whether personal income tax can be used as an indicator of living standards, including measurement for social processes.

In researching context of social processes, the author selects for analysis such welfare indicators as education (population with higher education), public safety (rate of criminal offenses) and health care (rate of doctor visits). For income characterising is used two psychologically related income indicators – collected personal income tax and real wages. To prove assumption of personal income as an indicator of social processes, the author carried out the calculation of correlative relationships between mentioned figures during nine years researching period. The table is made by the author, Central Statistical Bureau published data is used.

Table 3

**Correlative indicators of social processes and population income
in the period from 2002 to 2010 [16]**

	Collected personal income tax	Real wages	Gini coefficient (income distribution inequality index)	Population with higher education
Collected personal income tax	x	+0.31	+0.24	+0.80
Real wages	+0.31	x	+0.33	+0.30
Doctor visits	+0.98	+0.35	+0.09	x
Population with higher education	+0.80	+0.30	-0.09	x
Number of criminal offenses	+0.24	+0.32	-0.90	+0.17

The author's opinion, indicators of population intellectuals are educational level rates of population, income rates and crime rates. The higher education of population, the lower should be crime rates. According to the author correlation should be close, but negative there, but



analysing mentioned figures from 2002 to 2010, resulting correlative value is +0.17, relationship is weak. The author agrees that correlation between personal income tax and population with higher education there should be close, it is such, i.e. +0.80. Very close correlation between personal income tax and the number of doctor visits the author explains by fact that increasing wages and thus personal income tax payments, people are more careful to health doing additional tests and also take opportunity to recover part of personal income tax transfer back. According to the author, there should be close correlation between personal income tax and real wages, but estimated correlation is +0.31, relationship is weak. Statistically the most important influencing rate of this correlation is the consumer price index. The author concludes that real wage rates do not describe true statistical information; in fact that real wages are linked to personal income tax collected amount.

The Gini coefficient, which characterises income inequality in the country between segments of the population, shows close negative correlation -0.90 with the number of criminal offenses in the country. The author concludes the greater inequality between sectors of society, the less crime takes place and this can be explained by high average wealthy middle strata of society existence and in terms of income, on average situating poor strata of society. Overall Gini coefficient does not have close correlative relationships with other researched variables. According to the author, real wage should be most accurately describe processes of social trends, this means that correlation with real wages should be close to all of researched variables, but it is not so. By analysing correlation indicators, the author concludes that personal income tax can not be used as a measure indicator of living standards, including measurement of social processes, although collected income tax has close relationship to certain social processes, close correlation can be accidental.

VI. Conclusions and Proposals

After analyzing data about social system elements, the author concludes that there is no mathematical relationship between the revenue of social system and the expenditure of social processes. The author has a proposal to build a mathematical equation between researched variables – social processes influencing indicators should be placed into "equation scales" and should be differentiate by given variables while balance has been achieved across social security system. Below the author suggests a performance that should be taken into account when required insurance amount is determined. The author analyzes actual data of 2010 in "equation scales". If the balance is not achieved with the given weights then more flexible weighting of the elements are adjusted. The author makes an assumption that more flexible is social contribution rate. Calculations were made by simplifying the situation being modelled. The author uses *planning factors* in each of equation calculated according to the government's planned changes of expenses on social processes.

1. Pension insurance

*Necessary amount of pensions \approx number of employees * average salary in the economy * rate of social contributions of pensions insurance * planning factor*



The planning factor for pension insurance should be calculated according to the government's planned pension indexation, pension amount and projected changes in the number of pensioners.

By placing the numbers we get (in) equation:

$$1\ 135\ 896\ 099 > 940\ 900 * 445 * 0.2166 \quad (1) [5; 7; 16]$$

To fulfil the equation or employees to be able to pay required amount of pension in the country, an equation shall be as follows:

$$1\ 135\ 896\ 099 \approx 940\ 900 * 455 * (2.65 < \text{rate} < 2.66) \quad (2) [5; 16]$$

2. Unemployment insurance

*Necessary amount of unemployment benefits \approx number of unemployed * average salary in the economy * unemployment rate (as a percentage of average wage) \approx number of employees * average salary in the economy * rate of social contributions of unemployment insurance * planning factor*

Unemployment insurance rate is necessary to reduce amount of benefit and to promote reduction of an individual's desire to return to labour market. The planning factor is planned job seekers increase or decrease depending on the economic situation in the country or the economic cycle. On recession period the unemployment planning rate would rise but on economic growth cycle decline.

By placing the numbers we get (in) equation:

$$88\ 872\ 062 > 940\ 900 * 455 * 0.0381 \quad (3) [5; 7; 16]$$

The equation fulfilled if insurance rate of unemployment is following:

$$88\ 872\ 062 \approx 940\ 900 * 455 * (0.20 < \text{rate} < 0.21) \quad (4) [5; 16]$$

3. Occupational accidents insurance

*Necessary amount of occupation accident benefits \approx number of employees * average salary in the economy * rate of social contributions of occupational accident insurance * planning factor*

The planning factor would be predicted by the government's planned changes to occupational accidents benefit amount for a single insured event or the changed number of paid days.

By placing the numbers we get (in) equation:

$$13\ 421\ 774 > 940\ 900 * 455 * 0.0029 \quad (5) [5; 7; 16]$$

Equation fulfilled at the rate:

$$13\ 421\ 774 \approx 940\ 900 * 455 * (0.03 < \text{rate} < 0.032) \quad (6) [5; 16]$$

4. Inability insurance

*Necessary amount of inability insurance benefits \approx number of employees * average salary in the economy * rate of social contributions of inability insurance * planning factor*



The planning factor would be predicted by the government's planned changes to inability benefit amount for a single insured event or the changed number of paid days.

By placing the numbers we get (in) equation:

$$254\ 550\ 722 > 940\ 900 * 455 * 0.0733 \quad (7) [5; 7; 16]$$

Equation fulfilled at the rate:

$$254\ 550\ 722 \approx 940\ 900 * 455 * (0.59 < \text{rate} < 0.60) \quad (8) [5; 16]$$

Continue modelling this situation is possible to use more accurate data, for example, wages statistically distributed by quartile.

Obtaining an equals, which mathematically are fulfilled, the author concludes that required insurance rates are disproportionate for employee to pay it. The author concludes that the government created the special social budget does not provide its intended purpose.

By analysing correlative indicators of personal income tax and social processes, the author concludes that personal income tax can not be used as a measure indicator of living standards, including measurement of social process. Although collected income tax has close correlative relationship to certain social processes, in general, the author obtained close relationship asses as accidentally obtained, because social processes that are psychologically related, statistically uncorrelated. According to the author, the largest error in calculation occurs because of large shadow economy in Latvian and unfortunately statistical data becomes difficult to be analysed.

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