THE ROLE OF HUMAN RESOURCES IN THE CORPORATE TRANSFORMATION PROCESS

Rafael Castaño Sánchez, University of Alcalá, Spain;
Teresa del Val Núñez, University of Alcalá, Spain [1];
Lidia García Ruiz, University of Alcalá, Spain

Abstract. It is necessary to create a new organizational corporate design where human resource will play an essential role. The new design that must be undertaken is a reduction in the traditional institutional functionalism to enter greater institutional synergies where each manager must provide leadership and guidance for the entire company or specific project. This means that we will need a new human resources policy. According to D. H. Pink (Pink, 2010) it is necessary to develop intrinsic motivation, economic incentives are no longer valid in changing environments where it is necessary to develop innovation and creativity. It is also necessary that companies that succeed give more value to social interaction among workers, invest more in training and encourage communication and cooperation.

Taking this in account we have undertaken an empirical analyse in order to know the level of integration and satisfaction in the company and predisposition for undertaken a change process. A survey was conducted. The survey was structured in six dimensions and included 370 variables. It is also important to mention that this paper's analysis was based on each individual's perspective and appreciation, not based on third party perspectives.

Some of the previous result is that individual's identification with the company is not as high as individual's identification with the job itself. Excellent human relations with minimal co-ordination costs are the result of achieving a dynamic corporate culture within a flat organization. In order to determine the causal relationships of many of these phenomenon's it is necessary to use the multivariate analysis (factorial analysis, cluster analysis, structural analysis, etc.), which will determine the necessary indexes and profiles.

Key words: *humans resources, transformation process, institution*

JEL code: M12, M14

Introduction

The increase in globalization, an open economy and consequently the increase in competitiveness have without a doubt wreaked havoc on corporate organizational designs (del Val, 1995). After 130 years of

---

corporate and industrial history the time has come to create new organizational corporate designs, as well as shift behaviour of all individuals involved in the economic and social corporate process (Thom, 2000).

This is perhaps one of the deepest changes, although the need to change designs and especially the need to manage human resources is not yet fully appreciated. We find ourselves in the presence of a total rupture of our definition of the division of labour and the way it is distributed among companies throughout the market. Both the functional design and the analytical optimization of thought processes are weakened, as we enter into a more globally oriented design with a more coherent response to current economic and social dynamics and where the immaterial compensation are important. Hence we must take into account the following aspects:

- The *speed of change* is modified and *time* becomes the most significant strategic factor (Albach, 1993). The speed of processes is a key factor and the Olympic motto of "higher, quicker, further" (Thom, Zaugg, 2001) should be applied to the transformation process.
- The need to manage a company by *integrating external factors* with factors and function within the company. Therefore, Power Competencies (Thom, Zaugg, 2001) should be applied.

It can be said that there is a reduction in the traditional institutional functionalism in delimited, closed spaces, to enter greater institutional synergies where each manager and personal must provide leadership and guidance for the entire company or specific project. Globalization and the opening of the economy drive a greater dynamic in the corporate context, which is different from the traditional way national and international economies operate. Therefore, according to Pink (Pink 2010), we believe that by rewarding workers with economic incentives; such as bonuses, prizes or commissions, we are able to improve their results. Science however, refutes this: when we reward a task that requires a high amount of creativity what we get is exactly the opposite: the subject is blinded by the reward and unconsciously blocks out any kind of creativity. In his opinion, what really makes us achieve extraordinary results comes from intrinsic motivation, based on our natural desire to control our own destiny, to improve in our profession and to help build things that go beyond our own personal achievement. The executives, the personnel of the XXI century – from whom we do not seek obedience but rather commitment-, is motivated if they are allowed to work autonomously (Autonomy), if they are allowed to improve in their specialty (Expertise) and if they are certain that their job is worth something, that is to say, that their work in the company allows the company to offer a really significant product or service (Purpose).

Along the same line, a company that investigates tendencies, Trendbüro of Hamburg, has published a study (Trendbüro of Hamburg, 2012) hat claims to be a road map of the possibilities and challenges of the transition to a new work culture. A fundamental question takes the forefront: what differentiates successful companies from less successful companies? – We can see from the results of this study that companies, with higher than average profits, give more value to the social interaction among workers, invest more in continued education and encourage communication and cooperation, both internally and externally.

Analysis of the Problem

All issues related to human resources that are within the framework of the company's logic cannot be analysed exclusively using economic analysis. One must also consider:

- Developing the capacity to detect changes in the company's environment as well as the evaluation of competitive situations.
- Knowledge of how transformation processes occur.
- Knowledge and awareness of behavioural changes as well as the integration process of individuals in the company.
- An analysis of the role of organizational development and the dynamics of smart companies (Baumgartner, 2001) with respect to human resources and their behaviour.

Rafael Castaño Sánchez, Teresa del Val Núñez, Lidia García Ruiz **125**

- An analysis of how organizational development can influence human resources, so this development insures a transformation process that in turn allows the company to respond effectively to changes in the company's environment.

As shown in Figure 1, human resources policy and development is defined by four main elements:
- By the *dynamics of the surrounding*, which is the intensity of competition.
- By the corporate design, which is the value system reflected in the corporate philosophy and carried out by the corporate culture being practiced.
- By the *corporate design* and the *management of processes*, basic pieces in operative management. The demands on personnel are not the same in a functional-hierarchical organization as in a process-oriented organization, which is the style that companies should follow.
- By the *management style* which is a key factor in defining the leadership profile that will have a significant impact on human resource management.

Source: M.T. del Val

Fig. 1. **Analysis Model of Human Resources Behaviour and their development in the Spanish Company**

Therefore, the personnel's ability to adapt depends on the company, the organisational design and the manner in which the company is managed, always acknowledging the company's surrounding environment.

Proposals for the empirical analysis of change processes in human resources

Therefore, according to the described model and keeping in mind that it is not possible to analyse human resources and success factors without knowing their internal and external context, their "habitat". This habitat exhorts great influence causing us to analyse the following:
- How the *institution* is and how it should be. We must analyse:
  - The *company's value system*, hence, its corporate culture and specifically how the culture should be.
  - *Values shared by the personnel and the company*, making personnel feel identified with the company, as well as those values which personnel wishes to be identified by.

Taking this approach one can determine the level of corporate integration or the existing predisposition to integrate or not. It would be a useful way to gauge the company's human potential that is willing and able to assume new challenges.

- *The company's competitive edge*. This is based mainly on a qualitative analysis, since it is the perception of what is viewed as a strong point and what isn't, that is analysed from within. Obstacles and barriers to the transformation process must be analysed to determine if there are "hard" or "soft" barriers.

- A third aspect to analyse is the *company organization*, meaning whether the company at hand has a pyramidal structure, oriented by functions, or a company with a flat organization process-oriented. The coherence between competitive perception, corporate value system and leadership style are also analysed.

- In regard to *management styles* they must and will be analysed from top to bottom, from bottom to top and interdepartmentally. The company's leadership style will also be included in this analysis. This will reveal the levels of coordination within the company as well as its management capacity.

- A fifth aspect to analyse is *how human resources are evaluated* to assess attitudes and aptitudes and whether or not they should be different. We must also analyse whether the current human resource policy contributes to such attitudes and aptitudes and whether or not the new human resources policy supports the transformation process.

- Finally, this paper also analyses *the integrations and identification that each individual has with his / her job*, meaning, by this, each individual's professional expectations, how superiors are valued, how peers and subordinates value the individual, evaluate the level of participation in carrying out the assigned job. In a certain way it can be interpreted as an approximation to understanding the "corporate climate" which aids us in assessing the inclination for change in addition to the increase or decrease or newly generated co-ordination costs originated by the transformation process itself.
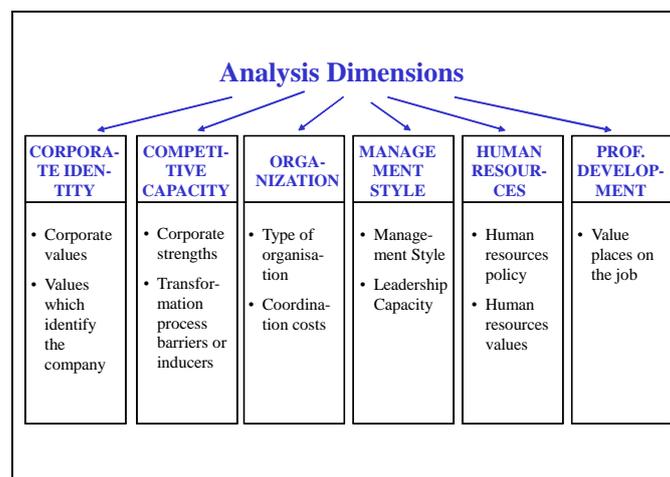
Source: M.T. del Val, R. Castaño, L. García

Fig. 2. **Analysis Dimensions**

Every part of this analysis is relevant because it allows us to evaluate the predisposition for change and especially upon which factors change should pivot to enhance its chances of success, in the least

amount of time and with the least amount of cost possible. Also, it should give us information about what the Human Resource policies should be and what incentive systems should be used.

In seeking answers to the questions raised, a survey was conducted[2]. The survey was structured in six dimensions and included 370 variables[3].

It is also important to mention that this paper's analysis was based on each individual's perspective and appreciation, not based on third party perspectives.

The analysis process, which begin with a global valuation (descriptive analysis), lead to a singular analysis (multivariate analysis) and identified success factors by studying cause-effect relationships.

The global analysis will not be addressed in this paper, however it can be said that both good work environment and employee identification with the job exist. However, individual's identification with the company is not as high as individual's identification with the job itself. Clearly, excellent human relations with minimal co-ordination costs are the result of achieving a dynamic corporate culture within a flat organization. There is a detailed vision of the enormous change processes the company's personnel must make to ensure its future in the company.

To determine the causal relationships of many of these phenomenon it is necessary to use the multivariate analysis (factorial analysis, cluster analysis, structural analysis, etc.), which will determine the necessary indexes and profiles. The statistical techniques applied in this paper are result-oriented and are strictly based on research. This research identifies the factors, which set the predominant corporate culture, as well as the factors upon which the corporate transformation process should be based.

Factorial Analysis

Factorial analysis[4] was the first technique applied to determine success factors in the transformation process. Prior to the realization of this analysis the following calculations were made to verify its applicability:

- The correlation matrix, which based on our data, was calculated at a value of 1.209E-18.
- Barlett's sphericity test, which had a high value of 11022.513 and a low significant value of 0.000.
- The Keiser-Meyer-Olkin (KMO) index, which compares simple correlation and partial correlation coefficients. The KMO index value was calculated at 0.863, a value with considerable weight.

The positive result of these calculations confirms the need to apply factorial analysis. Once the validity was proven, applicable factors were extracted by using the principal axis factorization method.

A total of 16 factors were extracted and they account for the 56.9% global variability rate. The factors[5] are listed below:

Factor	Description
Factor 1	Management style: focus on the individual
Factor 2	Current human resources policy
Factor 3	Compensation satisfaction level
Factor 4	Company's future identity
Factor 5	Human resources competencies

---

[2] The chosen sample consisted of 565 people. 345 or 61% of the surveys were received. With this index, we can consider the sample to be valid and representative of all company levels.

[3] No technical or quantitative data was requested in any instance, since the goals was to generate a reflexive qualitative document. Variables were qualitative and were valued from 1 (not relevant) to 5 (very important).

[4] *Factorial analysis* was used to discover if all the surveyed individuals presented the same profile, or if it was possible to identify different behavior patterns.

[5] Factor relevance decreases from 1 to 16.

Factor	Description
Factor 6	Values that tie personnel to the company
Factor 7	Competencies used in the job
Factor 8	Communication in the future
Factor 9	Change barriers
Factor 10	Organization dynamics (future)
Factor 11	Horizontal management style
Factor 12	Interfunctional coordination
Factor 13	Vertical management style
Factor 14	Human relations in work development
Factor 15	Current service capacity
Factor 16	Future integration values

The use of factorial analysis not only reduces the number of variables but also serves as a prior step to other analysis in which the original variables are replaced by these defined factors. Therefore it was necessary to calculate values for each variable to be able to use them in *cluster analysis, index integration analysis* and the *causal* or *structural analysis*.

Cluster Analysis

Cluster analysis is based on values obtained through factorial analysis and is used to determine the existence of different groups. The analysis was done using a non-hierarchical cluster-k-means in which 4 groups were determined. The four groups show internal homogeneity an external heterogeneity.

The cluster grouping is not generated by artificial causes as is demonstrated in discriminating functions and in the canonical correlation. In this paper it is three axes which provide the contrast:

$$V_0 = \left\{ n - 1 - \frac{K+G}{2} \right\} \left\{ \sum \ln(1 + \lambda_i) \right\} = 661,290$$

Once the value is calculated, the significance of the others is then evaluated:

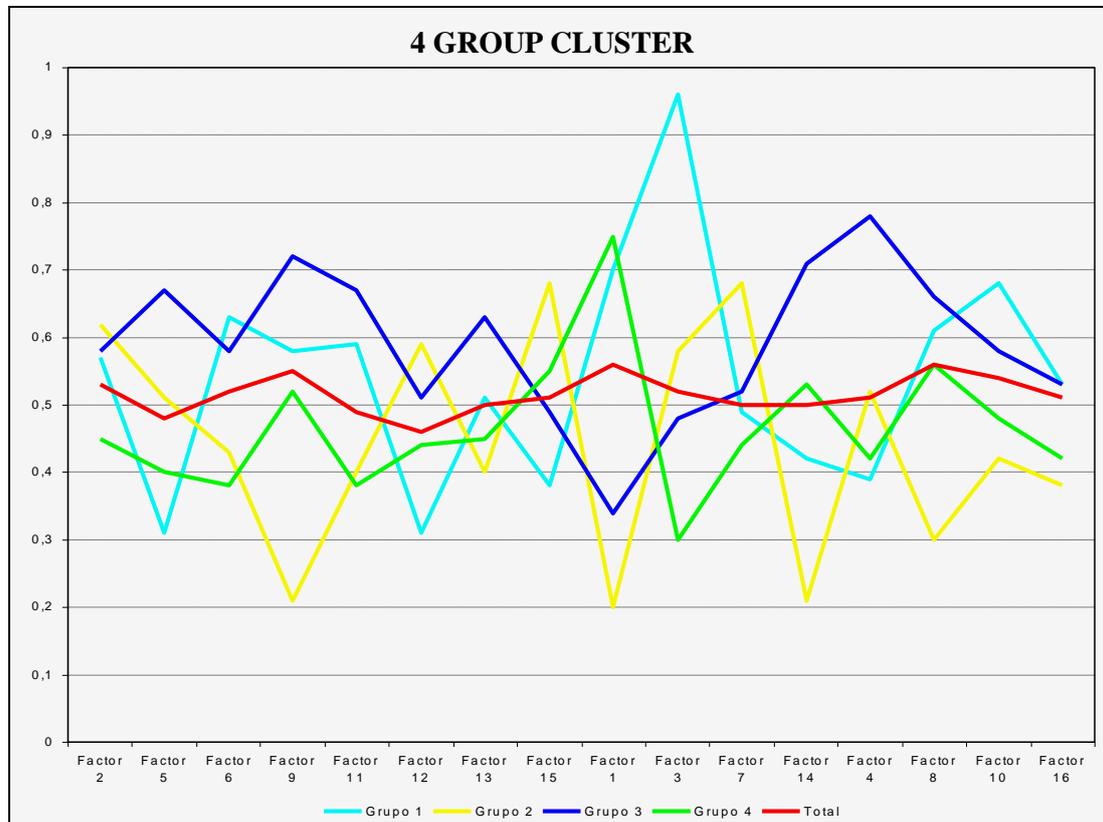$$V_1 = \left\{ n - 1 - \frac{K+G}{2} \right\} \ln(1 + \lambda_2) = 372,017$$

With (K-1)(G-1-1) the second axis is significantly different from zero (0). For the third axis:

$$V_2 = \left\{ n - 1 - \frac{K+G}{2} \right\} \ln(1 + \lambda_3) = 162,460$$

The canonical correlation would be:

ηi	Value
η_1	0.762
η_2	0.725
η_3	0.662

It can be concluded then, that there are four clearly differentiated groups.

Rafael Castaño Sánchez, Teresa del Val Núñez, Lidia García Ruiz   **129**

4 GROUP CLUSTER

Source: M.T. del Val; R. Castaño, L. García

Fig. 3. **Cluster Analyse – 4 groups**

Group 1 best identifies itself with the corporate culture and the organizational structure. Together with Group 3 it is also the group with the greatest predisposition for transformation. Therefore the transformation implementation process should begin with Groups 1 & 3 beginning at each job position. On the contrary, Groups 2 & 4 are the more resistant groups to transformation and must somehow be bought in prior to beginning the transformation process.

Integration indexes

While the information gathered so far is relevant, we must go a step further and analyse the possibility of grouping variables at a higher dimension to better determine success factors.

For this purpose, three dimensions were identified:

- *Corporate orientation*: satisfaction level/integration in the company;
- *Behaviour in the area of activity*: satisfaction level/integration in the activity and in the job position itself;
- *Change process behaviour*: the degree of acceptance of future corporate values so that a clear transformation process orientation is available.
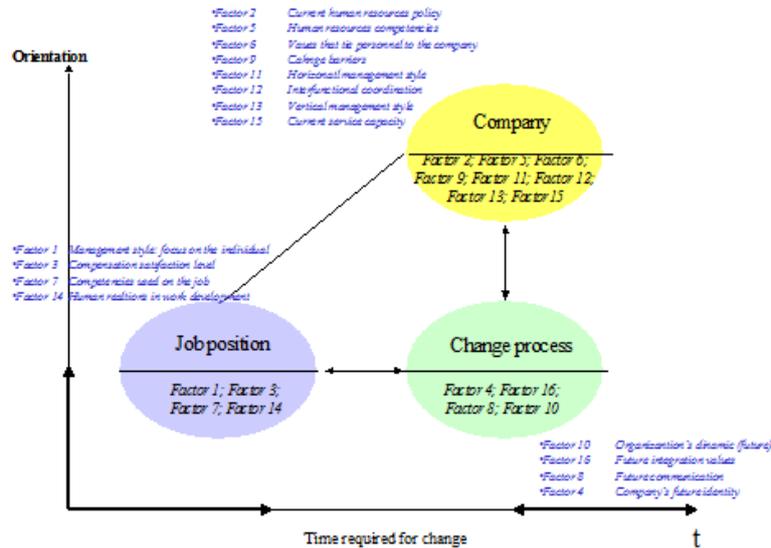
Source: M.T. del Val; R. Castaño, L. García

Fig. 4. **Grouping model**

This method facilitates the analysis of personnel values, attitudes and behaviour, as well as the causes for such behaviour. Change processes can be managed using this information.

Once the dimensions are defined, the focus is shifted to *identifying behaviour indexes* in order to understand integration levels and change predisposition.

These behaviour indexes[6] combine the concepts of an individual's cohesion to the human collective he/she belongs to, and the feeling of belonging to the company.

Each factor's index is measured using its internal constancy, which is, then measured using α, Cronbach's coefficient:

$$\alpha = \frac{N}{N-1}\left[1 - \frac{\sum \tau^2(y_i)}{\tau^2 x}\right]$$

where:
N   – number of variables;
$\tau^2(y_i)$ – sum of variables variations;
$\tau^2 x$ – Groups variation,

The global index and that of the three dimensions, company, job position and change process, are calculated using a weighted arithmetic mean using the coefficient not rotated.

---

[6] The metric used to calculate these indexes is based on a *constructo* definition that rests in the proposed model. Since the *index of integration* is not a variable that can be observed directly, it must be depured so that it is a more reliable index. An index can be considered reliable whenever measurements generate consistent results. The reliability is directly related to the aleatory error, since the systematic error had no influence because it is always the same.

Rafael Castaño Sánchez, Teresa del Val Núñez, Lidia García Ruiz   **131**

In accordance with other studies, and based on personal experience a scale is established for integration and satisfaction indexes:

Measurement	Index of integration and satisfaction
5.00 – 3.67	High
3.66 – 2.78	Middle
2.77 – 1.00	Low

In our analysis the integration index is calculated:
- Global;
- For each group.
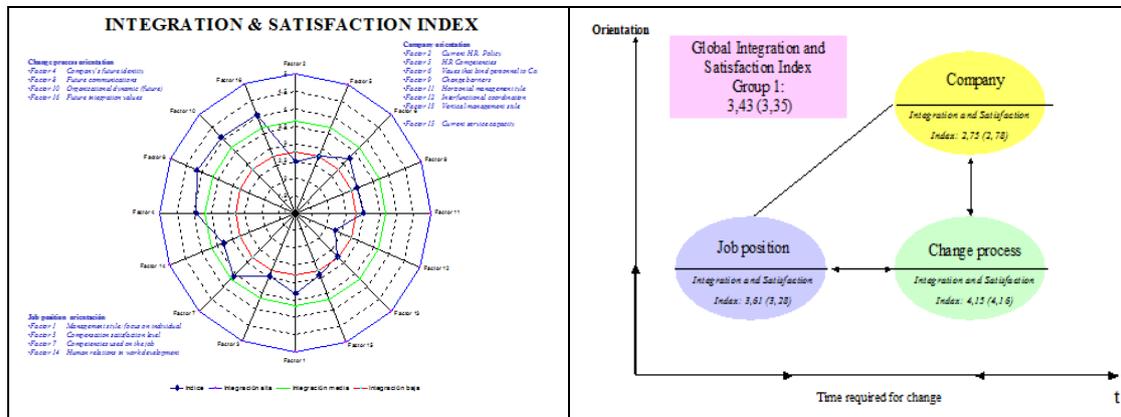
Analysis of the integration and satisfaction indexes at a global level

First, the integration index was calculated and then it was analyse its composition. The index of integration for each factor was calculated. The value of each dimension was also taken into consideration.

The index of global integration and satisfaction is: 3.35

Therefore we conclude that there is in a middle-high integration.
Then, the integration and satisfaction index was evaluated for each one of the factors:

Source: M.T. del Val; R. Castaño, L. García

Fig. 5. **Integration and satisfaction indexes at a global level**

The integration in the company is in the *middle-low range (2.78).* Also, integration indexes relating to individuals' integration and company values are in the *middle-high* range. Where index values are the lowest is in the *utilization of resources and instruments,* which represents "how" it is done: vertical and interfunctional management styles as well as the current human resources policy. In addition, the *integration index for the job position* is in the *middle-high range (3.28)*, while the integration index for the *change process* is high *(4.06).*

In conclusion, it can generally be said that the integration and satisfaction index values are positive, particularly with respect to predisposition for change.

Analysis of the integration and satisfaction indexes for each groups

The next step is an integration index analysis for the groups obtained through the cluster:

	Group 1	Group 2	Group 3	Group 4
Global index	**3.43**	**3.22**	**3.45**	**3.30**
Company orientation	**2.75**	**2.86**	**2.87**	**2.80**
Factor 2: Current human resources policy	2.52	2.49	2.75	2.32
Factor 5: Human resources competencies	2.52	2.73	2.19	2.58
Factor 6: Values that bind with Co.	3.32	3.52	3.33	3.16
Factor 9: Change barriers	2.77	3.58	2.40	2.92
Factor 11: Horizontal management style	3.26	2.70	3.56	2.72
Factor 12: Interfunctional coordination	2.12	2.18	2.56	2.21
Factor 13: Vertical management style	2.83	2.49	3.19	2.59
Factor 15: Current service capacity	2.63	3.19	3.02	2.88
Job position orientation	**3.61**	**2.81**	**3.33**	**3.25**
Factor 1: Management style: focus on individuals	3.63	2.49	3.11	3.53
Factor 3: Compensation satisfaction level	3.82	2.92	2.80	3.58
Factor 7: Competencies used on the job	3.68	3.10	3.83	3.57
Factor 14: Human relations in work development	3.31	2.75	3.59	3.33
Change process orientation	**4.15**	**3.84**	**4.26**	**3.87**
Factor 4: Future corporate identity	3.83	2.98	4.25	3.79
Factor 8: Future communications	4.34	4.29	4.24	3.90
Factor 10: Organizational dynamics (future)	4.36	3.95	4.35	3.97
Factor 16: Future integration values	4.19	4.13	4.21	3.82

Therefore it can be said:
- The degree of integration and satisfaction is in the middle-high range. There is a great predisposition for change. There is also integration and satisfaction in each individual's job position as well as with corporate values. On the other hand, there is not a strong identification with current *personnel instruments and policies* within the company.
- There are two groups (Groups 1 & 3) with higher integration and satisfaction index values. These two groups should lead the driving thrust for change. In addition these groups' high predisposition for change should also be mentioned.
- Group 4, has an integration and satisfaction index similar to the mean value. This group identifies itself with the organization as a corporation, but it needs a stronger predisposition for change. Groups 1 & 3 should be used to influence and lead Group 4 into change.
- Group 2, has an integration and satisfaction index value below the mean. Neither its identification with the organization nor its predisposition for change are high. This group represents the largest resistance to the change process in the company.
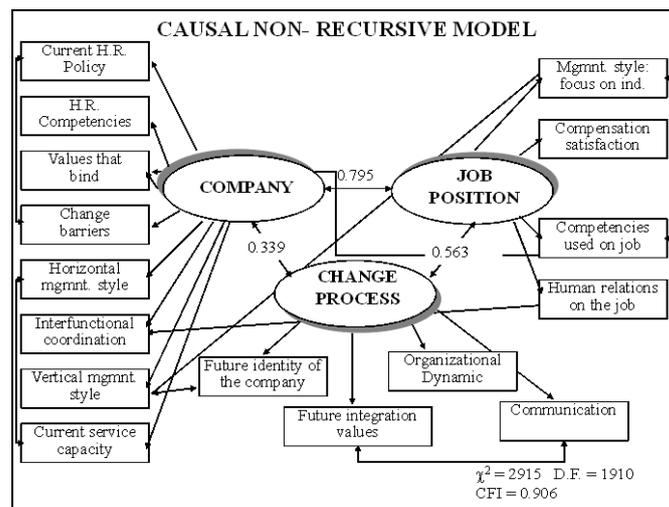
Structural Analysis

The information was also analysed from a causal perspective to have a more thorough understanding of the relationship between factors and variables, therefore identifying the variables upon which change should be based. Identifying these variables will also help understand or predict possible effects produced

by change. A *Structural analysis of covariance*[7] was used for this purpose because it allows the use of factorial and latent variables. Factorial and latent variables are explained variables (saturated) by observable variables.

Based on the hypothesis presented and taking into consideration different models[8], the best fit and the model used in this paper is the *causal non-recursive model.* Using the causal non-recursive model the following model is obtained:

Source: M.T. del Val; R. Castaño, L. García

Fig. 6. **Structural Analyse**

As can be observed in this causal diagram, it only includes non-observable variables based on the standardized solution. Adjustment coefficients are interpreted as correlation coefficients. There is a mutual relationship between all three dimensions:

- Company;
- Job Position;
- Change process.

These three dimensions present positive correlations and furthermore such correlations can be considered statistically significant.

---

[7] The analysis of structural covariance was used to learn about the direct and indirect influences of some variables on others. The principal estimators for this analysis are the regression coefficients cij (where i – effect, j – cause). These coefficients are identical in the regression and they measure direct effect while indirect effects are measured by the correlations.
It can be said that we are dealing with a global contrast model sine it allows the use of simultaneous equations. Such is not the case when using multiple regressions.

[8] Feasible models to consider are:
- Exploratory factor analysis;
- Confirmatory factor analysis;
- Confirmatory factor analysis, 2nd level;
- Causal analysis and
- Causal non-recursive model.

Rafael Castaño Sánchez, Teresa del Val Núñez, Lidia García Ruiz

The relationship between *change process* and *job position* is stronger (0.563) than the relationship between *change process* and the *company* (0.339), which again reflects the need to begin the change process of the company through the job position. This will aid in the transformation process because a strong relationship exists between the *company* and *job position* dimensions (0.795). Hence, confirming that employees identify the job position with the company and therefore makes changes within the company is difficult if they create "job insecurity" in the workplace.

The relationship between the different dimensions comes from the interrelations between one factor and another, or between all factors.

Conclusions

- Corporate culture, management styles, leadership, human resources policy, organizational forms do not favour individuals' identifying with the company and the corporate project.
- On the contrary, there is generally a clear *vision* of the corporate culture, management styles, the organization, human resources policy and that the company can reach high levels of competitiveness and be able to face the challenges that are globalization and the new economy. There is a preference for a corporate culture that favours clients, personnel and stakeholders; *a corporate culture that seeks both economic and social efficiency*.
- Great importance is given to *communication and information* to carry out the transformation process.
- The *personnel* have great potential but it must be motivated and given more responsibility.
- The analysis has taken into consideration 16 factors that define three dimensions to analyse:
  - Company
  - Job position
  - Change process
- The global degree of integration and satisfaction in the company is 3.25[9], which is a middle-high range integration level, with the factors that define the process exhorting great influence over this index. The company dimension *integration and satisfaction index* is in the middle-low range at 2.78. Therefore the company must assume the development of *new action plans*.
- A single corporate culture within the company doesn't exist, since we have observed the existence of 4 large groups that may not differentiate themselves so much when it comes to orientation, but they do have significant differences in intensity.
- In regard to the *integration and satisfaction indexes* of the four groups, 50% of the personnel have a middle-high to high integration rate, whereas 38% take a more reactive position and the remaining 15% simply take a position of rejection.
- Therefore an important critical mass exists upon which the transformation process must focus in order to be successful. Hence, the company should waste no time in starting the change processes since personnel are aware and sensible to the possible changes.
- Personnel *identify with job position* more than with the company itself. So the existing relationship with superiors as well as the available information plays key roles.
- One of the problems faced by the organization is that each individual identifies the job position with the company, making them one and the same. This can potentially create problems. This identification of "*job position-company*" is due to the lack of a *global vision* as well global informational available. This is a direct consequence of having a functional division of labour that seeks personnel specialization, typical in the 70's and in closed environments. On the other hand

---

[9] 1 being the minimum value and 5 being the maximum value

this strong identification with the job helps to foster and nurture corporate values and therefore the ability to identify with the corporate project.

- Although the company has a great challenge ahead of it, it can also be said that it has a solid positive base to start from. Therefore, it must not delay in beginning the transformation process.

- The personnel is a resource with the potential to become a capacity, in the context of the theory of resources and capacities. Hence, the company should allocate resources to ensure the development of those potential capacities, which will give it a competitive advantage in the long run.

- As Daniel Goleman (Goleman, 1995/2008) stated in their models of emotional intelligence where the individual in addition to having not only self-awareness and self- motivation, needs to develop his empathetic social skills and establish his interpersonal relationships.

Bibliography

Albach, H., 1993. El papel del factor tiempo en la competitividad, *Working Paper IDOE (Serie Conferencias)*, No. 1, Madrid.

Baumgartner, W, 2001. Holderbank: Eine schneller lernende Gruppe, Thom, N; Zaugg, R.J. (Ed.): *Excellence durch Personal- und Organisationskompetenz*, Bern, pp. 291-306.

Gemünden, H.G., 2001. "Zusammenarbeit innerhalb und zwischen Teams. Erfolgsfaktoren des Innovationsmanagements" conference presented in OIP International Conference." "Excellence durch Personal- & Organisationskometenz", Bern, 23 May 2001.

Goleman, D., 1995/2008. *La inteligencia emocional, Madrid.*

Larramendi, I.H. de, 1995. Empresa y directivos en la España actual, *Working Paper IDOE (Serie Azul)*, No. 15/95, Madrid.

Luque Martínez, T (Coord), 2000. *Técnicas de análisis de datos en investigación de mercados*, Madrid.

Nestlé: *The basic Nestlé Management and Leadership Principles*, Vevey 1997.

Pink, D.H., 2010. *La sorprendente verdad sobre lo que nos motiva, Madrid.*

Thom, N., 2000. Management del cambio: Elementos básicos para un change management integrado y diferenciado, Working Paper – IDOE (Serie Azul), No. 266, Madrid.

Thom, N; Zaugg, R.J. (Ed.), 2001. *Excellence durch Personal- und Organisationskompetenz*, Berna.

Trendbüro De Hamburgo (empresa de investigación de tendencias), 2012. *Ventajas y desventajas del cambio.* Revista para el bienestar productivo Place 2.5. Nº 7/12.

Val Núñez, M.T. del, 1995. New perspectives in business organization: lean management, *Working Paper IDOE (Serie Azul)*, No. 225, Madrid.

Williams, M.; Byrne, J., 1999. *Cómo tangibilizar el liderazgo en nuestros directivos*, Madrid.