

ANALYSIS OF EMPLOYEES MOTIVATION FOR THE NEEDS OF CONTROLLING IN THE DEVELOPMENT OF COMPANY'S MOTIVATIONAL PROGRAM

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ABSTRACT

In our contribution we analyze motivation of the employees in Slovak Nuclear Plant a. s. Mochovce from the time and factual aspects. We carried out this analysis in years 2003–2005 and the order of motivators' importance was determined through the inquiry research based on averaged individual evaluations of the researched motivational factors. By means of a cluster analysis we distinguished two basic groups of employees whose motivational orientation was similar and so it was possible to define different programs of motivation for them. The result of our work was the finding that the importance and structure of motivational factors were changed within the analyzed years. That is why we recommend repeating of the motivational analysis at intervals of 12 months.

For the needs of controlling which plays an important role in coordination of systems of planning, management and inspection of many functional areas of the company, the analysis of motivational factors is really a significant sphere that helps in determination of company's motivational program.

Key words: Motivation, analysis of motivation, motivational factors, controlling.

1. Introduction

One of the basic conditions of human success and effective performance in a working process is motivation. It makes an essential part of theoretical management of human resources. Managers' ability to motivate employees is considered as one of the most important abilities since success of a business depends on it. Labour force potential in a business depends on many factors. One of them are internal factors which make a part of employees' characteristic and the other are external. Both groups of factors influence each other. Working activities are not directed only by motivation but also through information, assigned tasks, introduced technological processes and so on. This is a specific type of human activity and its sources can be found not only in internal incentives of individuals (needs, interests, values, attitudes, etc.) but also in external factors (motivators e.i. in stimulative means and methods of management), through which employees' behaviour is influenced (Koubek, 2002). All together it should be in accordance with company's strategy and helps it to reach its goals. Plant controlling can support companies to meet their goals, too. **Controlling** is a conception which provides general help and support to the system of management whereby „*controlling completes and integrates management in its conceptual, functional and institutional meaning as well as in personnel meaning* (Eschenbach, 2000). According to Horvóth controlling is a tool of management and its role is to **co-ordinate planning, inspection and ensure informative data base.**

Motivation is closely connected with controlling. Under this term we understand a system of electronic

management whose structure and functionality supports the execution of company's activities in a form of projects. Under the system of economic management we understand planning, monitoring, analyzing and assessment of company's activities with the aim to increase their productivity and improve motivation (www.contros.cz). The sphere of motivation becomes an important factor of plant controlling.

Systematic determination, utilization and motivation of human potential are conditions of formation and development of company's strengths and competitive advantages. It is necessary to realize that people present a motive power in a company which decides about performance quantity and quality, about company's operation and about its success or failure on competitive markets (Blašková, 2003).

2. Goals of work

Most of companies are interested in what they should do to achieve a permanent high level of human performance. That is why they emphasize a selection of the most suitable way of human motivation through the tools like different incentives, bonuses, management of people and work they execute. The problem of analysis of motivational factors development from the time and factual aspects was carried out in Slovak Nuclear Plant Mochovce a. s. in years 2003-2005. Its aim was to group company's employees into individual groups through the method of cluster analysis and underline motivators for groups of employees whose value orientation was the same. Based on the results we obtained we defined motivational factors which are the most important for work motivation in the company. Then we

compared the current situation to the situation which was found within last two years.

3. Material and methodology

With the aim to create groups of similarly oriented groups due to their motivation we applied a cluster analysis which presents a set of mathematical and statistical techniques for identification of similar groups. Its role is to merge objects (in our case employees) of observation into clusters (groups) so that their internal group homogeneity is as strong as possible and differences between the objects from different clusters are the biggest. In our case we applied Ward's method which is based on a formation of maximization of cross-clusters homogeneity and to find it out we utilize an inter-group value of sum of squares. It means that by Ward's method we try to find the lowest total value of sum of squares between groups or clusters. Clusters are created in each step and it brings the lower and lower value of squares sum.

To recognize individual results we prepared a universal questionnaire which was utilized for all categories of employees and through which we

defined scales of evaluation of individual motivational factors. From the point of view of personnel management the questionnaire brings several advantages in comparison with other analytical methods. One of the most important is bigger openness, directness and freedom in expressiveness of respondents due to questionnaires anonymity. In contrast to personal interviews questionnaires are less stressful and responses are not influenced by atmosphere, environment and relationships. By means of a questionnaire it is possible to analyze basic information concerning the respondents, e.g. their age, sex, employment, education, etc. The questions create the atmosphere of concentration and enable to get more objective results. The disadvantage of a questionnaire in some cases is its relatively low and uncertain return because it depends on a decision of a respondent if he/she is willing to fill in the questionnaire and to send it back. An important task is a way of questionnaires evaluation. In our situation we applied 9 – level scale on base of which our respondents were supposed to assign one of nine levels of importance to each motivational factor (pict. 1).

1	2	3	4	5	6	7	8	9
Extremely unimportant	Strongly unimportant	Mediumly unimportant	Slightly unimportant	Neutral	Slightly important	Mediumly important	Strongly important	Extremely important

Pict. 1 Questionnaires evaluation scale

The questionnaire utilized to analyze motivational factors was prepared in a unique form for all occupation categories of employees so that it was simple, understandable and transparent. Its form and content were in accordance with questionnaires utilized with the same aims in SE Mochovce, a.s. in 2003, 2004 and 2005 so that it was possible to compare the results obtained within individual years (*Hitka, 2004, Hitka, Sedmák, 2002*).

4. RESULTS

4.1. Analysis of motivational factors from time and factual aspects

Analysis of motivational factors was carried out in the company during three consecutive years (in October 2003, October 2004 and in November 2005) and its role was to mention the development of

motivation of technical and economic employees from the time and factual aspect. Based on the results which were found out it is possible to suggest measurements which will ensure the increase of employees' motivation and consecutive rise of productivity performance in the company. Based on a cluster analysis groups of similarly motivated employees were formed. Next step was to process obtained sub-clusters to graphs and tables and to compare the newest results with the previous ones. The total number of analysis respondents in years 2003-2005 was 288 (see tab. 1). We can definitely state that the development of motivation in individual years was influenced by prepared personnel changes and similarity of importance of motivational factors in particular years is very low. In each year it is possible to define four basic similar groups of employees (see graphs 1 – 3).

Table 1. Number of analysed respondents

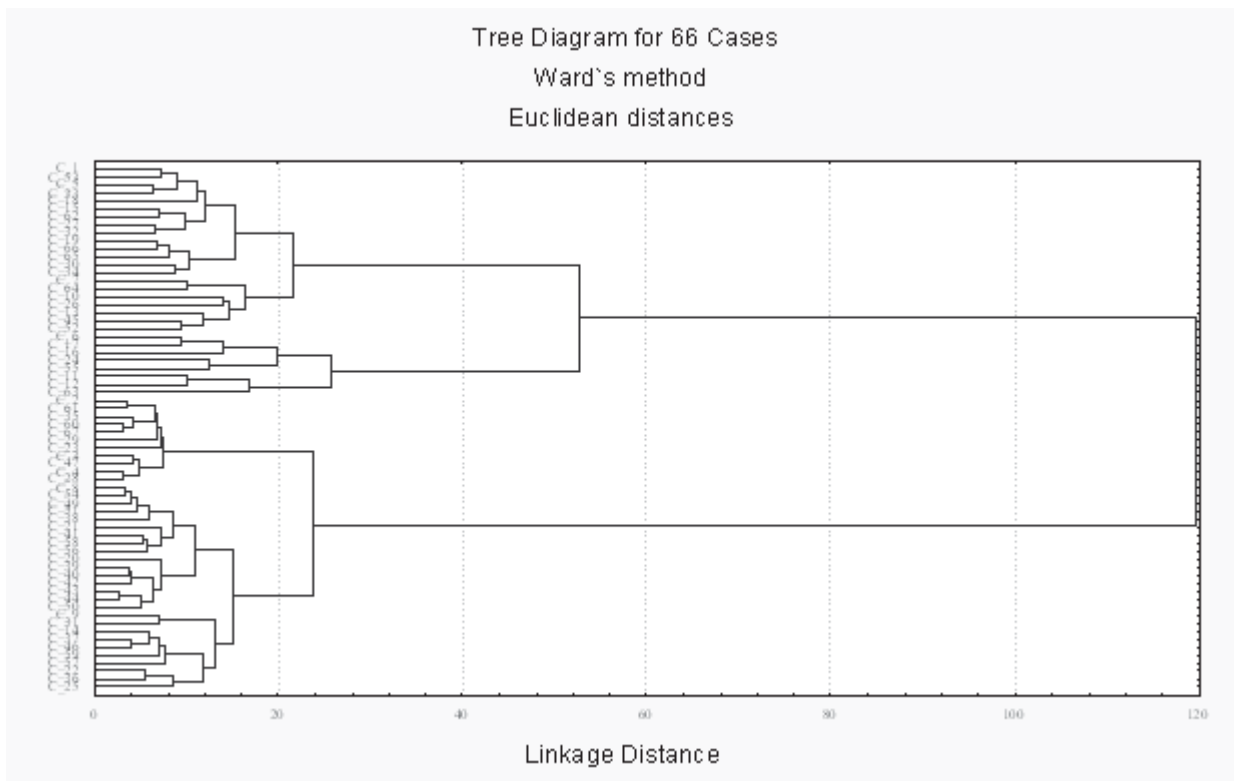
Occupation category	Number of respondents in 2003	Number of respondents in 2004	Number of respondents in 2005
Technical and economic employees	100	122	66



Graph. 1 THP employees (year 2003)



Graph. 2 THP employees (year 2004)

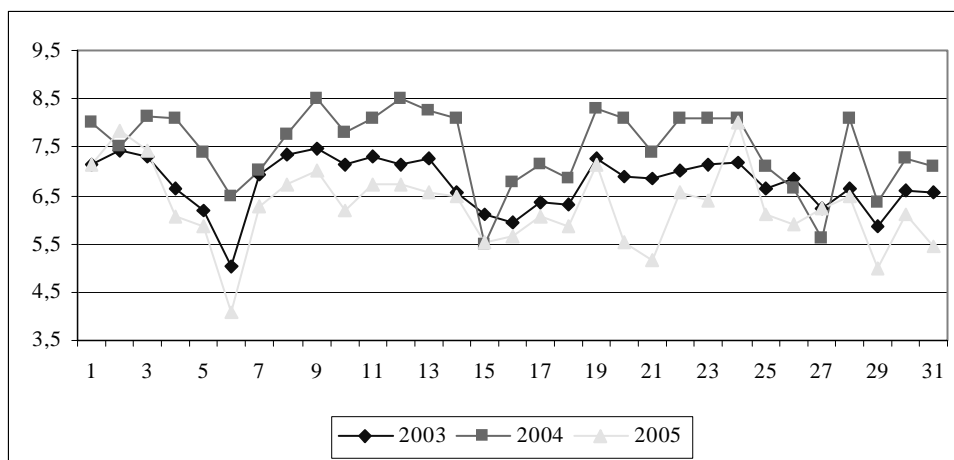


Graph. 3 THP employees (year 2005)

We can see a substantial decrease of motivation in the first two selected groups of THP employees in 2005 (*graphs no. 4 and 5*) and its cause was fear of the employees concerning the future development of the company and job loss. It is a little bit strange and interesting at the same time that motivation in the first group of THP employees was the highest in 2004 when other employees were pessimistic due to the company privatization. They realized that the

situation is quite serious next year and their motivation went down as well.

In the second group THP employees' almost all motivational factors show diametrically different values in 2005 when we compare them to the values from previous years and this fact confirms that the employees lost confidence in a positive development of the company.



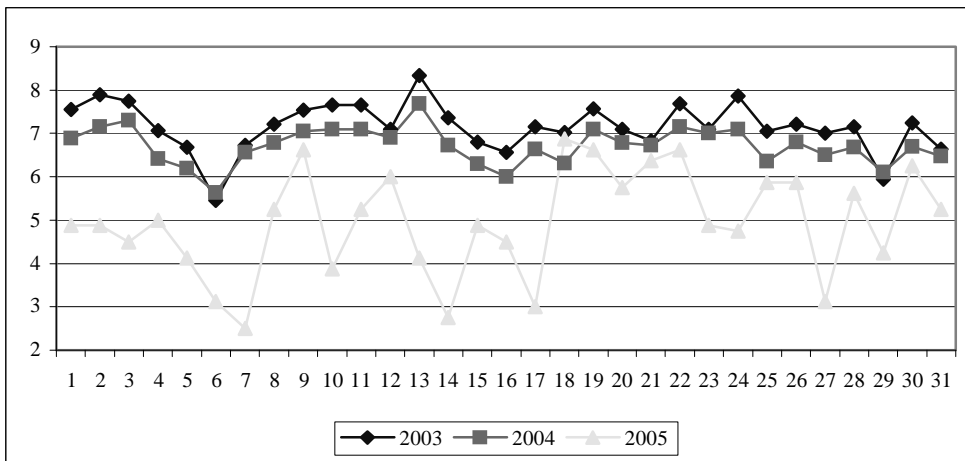
Graph. 4 Comparison of THP employees motivational factors average values – 1st cluster (years 2003-2004-2005)

In the first group of THP employees a motivator (**base pay**) gets the top position in 2005. This motivator did not show so high level of importance during previous years so a visible change in the

structure of motivation can be seen. The motivator **rate of responsibility** was considered as an important motivational factor during all three years.

Tab. 2 Comparison of motivational factors importance in the first group of THP employees (years 2003-2004-2005)

Year 2003	Year 2004	Year 2005
Independence at work	Financial benefits	Base pay
Supervisor's personality	Certainty at work	Financial benefits
Authority	Independence at work	Certainty at work
Mutual communication	Supervisor's personality	Rate of responsibility
Rate of responsibility	Rate of responsibility	Atmosphere at work



Graph. 5 Comparison of motivational factors average values of THP employees – 2nd cluster (years 2003-2004-2005)

A very important motivational factor in the second group of THP employees during the whole monitored period is **labour protection**.

The third cluster of THP employees shows a decline of motivation in 2004 and its increase in the

following year when the level of motivation was the same as in 2003 (*graph no. 6*). This development of motivation emphasizes the influence of changes which were executed in the company in 2004 and caused a substantial decline of motivation in this year.

Tab. 3 Comparison of motivational factors importance in the second group of THP employees (years 2003-2004-2005)

Year 2003	Year 2004	Year 2005
Financial benefits	Financial benefits	Work hours
Certainty at work	Certainty at work	Labour protection
Good informedness	Mutual communication	Independence at work
Mutual communication	Labour protection	Rate of responsibility
Labour protection	Base pay	Ecology of the company



Graph.6 Comparison of motivational factors average values of THP employees – 3rd cluster (years 2003-2004-2005)

Complicated situation in the company in 2005 caused the complete change of the order of motivational factors. This group of employees paid

attention to the only factor during three years and it was **labour protection**.

Tab. 4 Comparison of motivational factors importance in the third group of THP employees (years 2003-2004-2005)

Year 2003	Year 2004	Year 2005
Identification with work	Certainty at work	Base pay
Independence at work	Independence at work	Certainty at work
Supervisor's personality	Good informedness	Financial benefits
Rate of responsibility	Authority	Stress at work
Company's image	Mutual communication	Atmosphere at work
Labour protection	Labour protection	Labour protection
Information concerning own work	Style of leadership	Good informedness

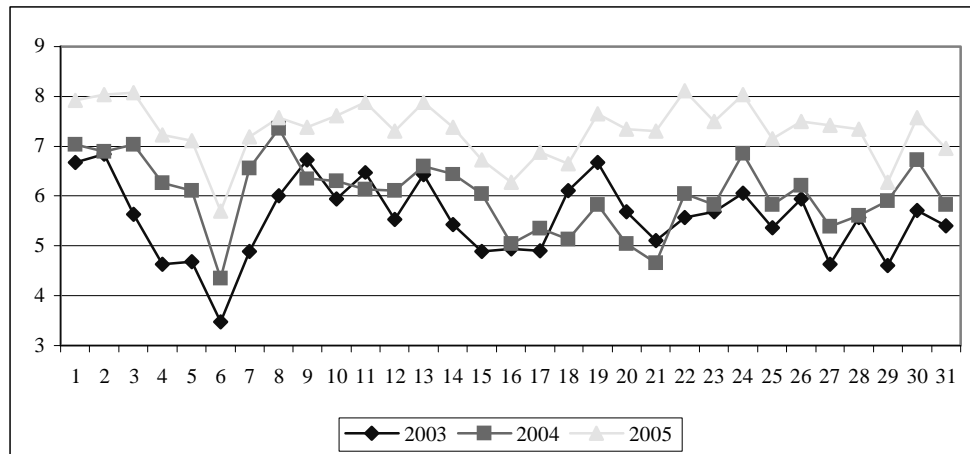
Development of motivation in the fourth group of THP employees was different from other monitored groups of this occupation category. While in the first two groups of THP employees we could notice a clear decline of motivation in 2005 here the motivation increased considerably. Such a different development of motivation carried out within one occupation category can prove that various changes in a company have a different impact on individual groups. A cause of such a variety can be catego-

risation to a different working area, influence of managers, atmosphere at work and human relationships in a company.

Based on a table 5 we can state that motivational factors which motivated the group number four of THP employees and at the same time they kept their importance during the whole monitored period are **atmosphere at work and financial benefits** (even if in 2005 they did not get such a uniquely determined importance).

Tab. 5 Comparison of motivational factors importance in the fourth group of THP employees (years 2003-2004-2005)

Year 2003	Year 2004	Year 2005
Atmosphere at work	Atmosphere at work	Labour protection
Financial benefits	Financial benefits	Certainty at work
Certainty at work	Independence at work	Base pay
Identification with work	Supervisor's personality	Financial benefits
Base pay	Mutual communication	Atmosphere at work
Information about negative consequences	Rate of responsibility	Mutual communication



Graph.7 Comparison of motivational factors average values of THP employees – 4th cluster (years 2003-2004-2005)

5. Discussion and conclusion

Based on our three year analysis we can state that the development of motivation depends on microeconomic and macroeconomic aspects and conditions in which SE Mochovece, a. s. exists and operates its business. Even if you know internal and external conditions well it is quite difficult to forecast the development of motivation from a long-term view. Our analysis can be a proof of that.

Results we found out are in some cases diametrically different even if we compare them within the same occupation categories. Some of distinguished groups are motivated at almost the same level during a long period of time especially when we compare average values of individual motivational factors of one occupation category as a whole. Other groups present a substantial decrease of motivation and its cause is fear of the employees of losing their jobs and future development of the company.

Next clusters of employees show the decline of motivation in 2004 and its repeated increase in the following year to the level of 2003. Strong differences in the development of motivation whether from time of factual aspects can be the results of company's restructuralization which was executed in 2004 and its result was a sharp total decrease of motivation in comparison to the situation in 2003. Personnel changes that were supposed to happen were known as a threat by the employees and they were losing their certainty, started to become pessimistic and of course the total performance of the company went down as well. Based on the graphs we can say that in 2005 motivation rose again and the situation in the company was stabilized.

Due to the fact that the situation of privatization of SE, a.s. by an Italian company ENEL is not stabilized enough even now and significant changes concerning motivational factors may occur we recommend to do a similar research about employees' motivation in the future. On the base of its results we will be able to find out modified requirements of employees and utilize them in determination of motivational program.

The problem of work motivation belongs among very important areas of systematic studies of organizational behaviour. Its importance is underlined by the fact that if we want to direct behaviour of individuals and groups or teams we have to know and be able to influence their motivation. Valuable information today is a fact that *motivation of each individual is a picture of his/her personality*. This idea brings an opportunity and at the same time a duty for managers, personnel experts and employees to be aware of the motivation and to strengthen it through the aspect of individual differences of particular personalities.

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