

# Analisis Motivasion of Management CHEMES A. S. HUMENNÉ

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*In this paper we analyze the motivating factors for the company management using the questionnaires. We apply the cluster analysis to divide the employees into similarly motivated and oriented groups. The resulting information concerning motivational factors can be later utilized in creation of a company motivational program..*

## 1. Introduction

Employees' motivation is a topic number one in most companies today. There are never enough employees who achieve excellent job performance so we have to motivate each of them properly. Motivation plays one of the most important roles in a system of company human resources management. Managers from the area of manpower management have to deal with and find a solution to the problem of why some employees work less and why the others are able to achieve excellent results. ([www.dieradosveta.sk](http://www.dieradosveta.sk)). To be motivated means more than just to be happy or satisfied at work; motivated people try to do their best – not for somebody else's sake but for themselves. Motivation is a feeling lying somewhere inside a man, something that cannot be enforced. Motivation is in hearts of managers and it means much more than praise for a well done work. (Heller, 2005)

So if we assume that human resources are the basis of the company development we can state that a key to success is the management of human resources. One of the primary tasks of human resources management is to ensure a positive employees' behaviour. By this we mean the behaviour of employees which will lead to a fulfillment of the company strategy and an effective achievement of its goals. Such effective behaviour of employees presupposes their systematic motivation and execution of motivational processes. A lot of different motivational factors affect the employees' motivation. In standard practice the topic of employees' motivation is often undervalued and perceived as something generally valid but not actually required in many companies. Its internal basis and depth is not paid due respect, on one side, and its very frequent utilization is not taken into consideration, on the other side. Despite all these, the emotivation of employees is one of the most significant tasks in the employees' behaviour regulation. (Bajcura, 1985).

## 2. The objective of the paper

Our aim in this work is to develop an effective system of employees' motivation which would include actual changes and modifications in the area of human resources management and at the same time respond to particular conditions in a company. This system tool of personnel work will provide an opportunity to learn the motivational factors of employees which mostly influence the increase in their work performance. We plan to achieve the above mentioned objective through the survey of motivational factors of employees in CHEMES, a. s. Humenné. We plan to do it using a questionnaires, and then use a cluster analysis to divide employees into similarly motivated and oriented groups (Hitka, 2004). The resulting information concerning motivational factors can be applied in the development of the company program of motivation.

### 2.1 Characteristics of the current state of motivation in the company

CHEMES, a. s. Humenné plays an important role in its region and is one of the most relevant companies in the area of power industry. According to the data of a yearbook Trend Top 2003, according to its turnover the company occupies the eighth position among the biggest companies of the Prešov region and the eleventh place in the section of the biggest companies of power industry. The company is responsible for the development of the Industrial zone of CHEMES and a town Humenné by energy and services provision.

The basic motivational factors which are currently used are financial factors of different types, education of the employees and social care of the employees. The employees in CHEMES are paid in accordance with the principles of financial remuneration which apply to all the employees of CHEMES a. s. however, they are partially restrictive for the employees paid a contractual wage/salary. All the above mentioned principles are stated and explained in detail in a collective agreement.

Education and training are provided based on the article 141 of the Labour Code and the directions of the managing director concerning planning, execution and documentation of employees education where also requirements for individual levels of managers, specialists and employees education as well as forms of training activities that they are supposed to go through are mentioned.

Within the scope of social care, the plant catering and health care exceed the regulations of the law, in that various types of recreational and sport activities, social assistance in serious cases, financial allowances to support culture, sport and services or recreation are organized and financed.

## 2.2 Formation of a questionnaire

We have selected a questionnaire as a method to gather information about the state of motivation in CHEMES, a.s., since it allows us to collect a vast amount of information within a short period of time. The questionnaire had two parts. Questions concerning the basic information about the respondents such as their age, sex, education, number of years spent in the company and occupation category were included in the first part. The second part listed thirty motivational factors and the employees were supposed to express their opinion on them from the point of view of the required and the actual state or they could say how they imagine motivation in the company and to what extent they are satisfied with the current state of individual motivational factors in the company. To assess the factors, they had a five grades scale at their dispos-

al and the importance of individual motivational factors and satisfaction with their actual state were listed down from number 5 to 1. The questionnaire had two functions: it provided information about an actual state of motivation in the company and at the same time it included the requirements of employees in this area. Based on this information we were in a position to evaluate the areas in which motivation should be improved as well as the areas in which it is satisfactory.

A target group to find out the state of motivation in the company was a group of workers, supervisors and technical and economic staff (abbreviated to THZ). We handed out the questionnaires to the respondents and we received 123 of them back. We consider this to be a success since the questionnaires were anonymous. From the total number of 123 questionnaires 69 were filled in by workers (from the total number of 157 workers in a division), 37 by THZ (total number of THZ in the company is 145) and 17 by supervisors (from their total number equal to 37). So the percentage representation of individual monitored groups is 33,9 % workers, 25,5 % THZ a 45,9 % supervisors.

## 3 Results and discussion

### 3.1 Analysis of motivational factors

Taking the differences into consideration we selected three positions – worker, THZ and supervisor. The analysis was based on the employees' responses to the second part of the questionnaire. As mentioned before the questionnaire contained 30 motivational factors listed in table 1.

*Table 1 Analysed motivational factors*

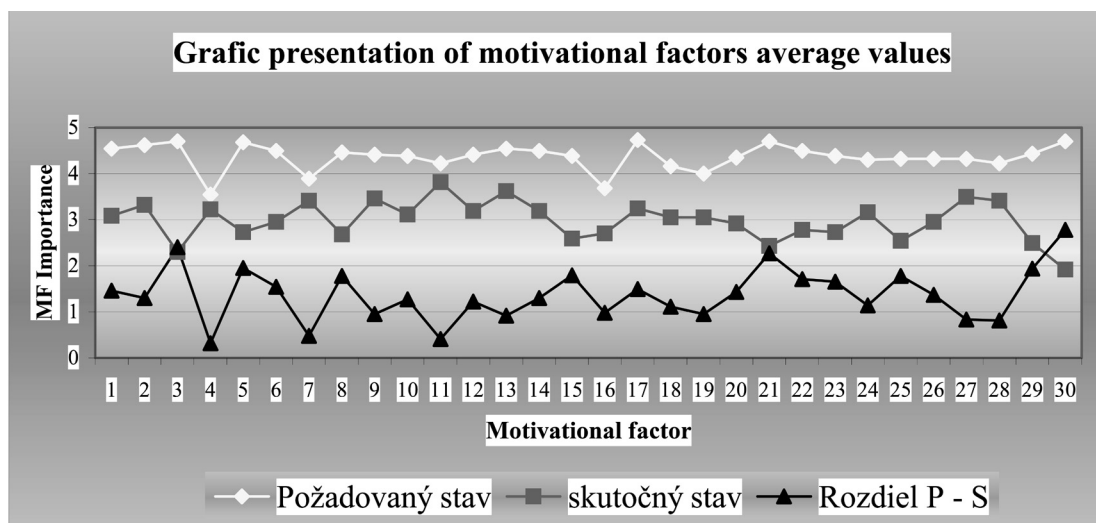
Seq. n.	Motivational factor	Seq. n.	Motivational factor
1.	Atmosphere at place of work	16.	Prestige
2.	Good working group	17.	Attitude of a supervisor
3.	Additional financial remuneration	18.	Individual decision making
4.	Physical intensity of work	19.	Self-realization
5.	Job security	20.	Social benefits
6.	Communication at place of work	21.	Fair assessment of an employee
7.	Trade name	22.	Stress /stress elimination at place of work
8.	Opportunity to utilize own abilities	23.	Mental stress
9.	Scope of employment and its type	24.	Company vision
10.	Acquaintance with working result	25.	Region development
11.	Working hours	26.	Education and personal development
12.	Working environment	27.	Relation of the company towards environment
13.	Working output	28.	Free time
14.	Working process	29.	Acknowledgement
15.	Powers	30.	Basic pay

The respondents assessed the required and the actually perceived level of motivation of individual motivational factors by the means of a grade scale from one to five. For the three groups we calculated the average values of all motivational factors and a difference between a required and actual state. Graphs 1 and 2 present the required and the actual state of motivation and a difference between them. On axis *x* are presented the individual motivational factors, whereas on axis *y* the average values of required and actual state of motivation of particular motivational factors are given. Based on the comparison of individual curves it is possible to determine which areas of motivation are the most problematic and in which areas the employees are satisfied.

The biggest variance between the requirements and the actual situation can be observed for motivational factors such as basic pay, additional financial remuneration and a fair assessment of an employee. The workers group proved to be least satisfied with the total financial remuneration. Motivationally weak are also factors such as working environment, atmosphere at the working place and the stress resulting from it. The employees in the production segment consider acknowledgement, working process, vision of the company or regional development also important. The respondents expressed total satisfaction with physical intensity of work, trade name and working output.

**Table 2** Comparison of required and actually perceived motivation by THZ

Seq. n.	Motivational factor	Required state	Actual state	Difference P - S
1.	Atmosphere at place of work	4,54	3,08	1,46
2.	Good working group	4,62	3,32	1,30
3.	Additional financial remuneration	4,70	2,30	2,40
4.	Physical intensity of work	3,54	3,22	0,32
5.	Job security	4,68	2,73	1,95
6.	Communication at a place of work	4,49	2,95	1,54
7.	Trade name	3,89	3,41	0,48
8.	Opportunity to utilize own abilities	4,46	2,68	1,78
9.	Scope of employment and its type	4,41	3,46	0,95
10.	Acquaintance with working result	4,38	3,11	1,27
11.	Working hours	4,22	3,81	0,41
12.	Working environment	4,41	3,19	1,22
13.	Working output	4,54	3,62	0,92
14.	Working process	4,49	3,19	1,30
15.	Powers	4,38	2,59	1,79
16.	Prestige	3,68	2,70	0,98
17.	Attitude of a supervisor	4,73	3,24	1,50
18.	Individual decision making	4,16	3,05	1,10
19.	Self-realization	4,00	3,05	0,95
20.	Social benefits	4,35	2,92	1,43
21.	Fair assessment of an employee	4,70	2,43	2,27
22.	Stress / stress elimination at a place of work	4,49	2,78	1,71
23.	Mental stress	4,38	2,73	1,65
24.	Company vision	4,30	3,16	1,14
25.	Region development	4,32	2,54	1,78
26.	Education and personal development	4,32	2,95	1,37
27.	Relation of the company towards environment	4,32	3,49	0,83
28.	Free time	4,22	3,41	0,81
29.	Acknowledgement	4,43	2,49	1,90
30.	Basic pay	4,70	1,92	2,78



**Graph 1** Required and actually perceived level of motivation by THZ

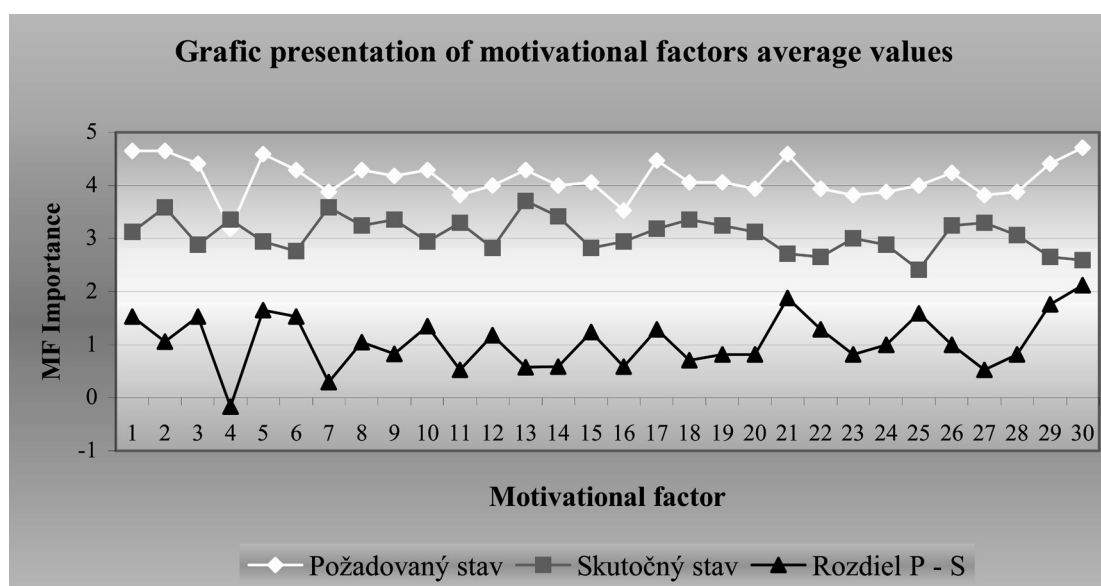
The THZ working in CHEMES a. s., Humenné also marked the basic pay, fair assessment of an employee and additional financial remuneration as poor motivational factors. Other motivators where we can observe a big variance between the required and the actual state of

motivation are the job security and powers. Employees are not satisfied with the opportunity to utilize their abilities nor with their acknowledgement. On contrary, THZ are most satisfied with working hours, physical intensity of work and trade name (company name).

**Table 3** Comparison of required and actually perceived motivation by supervisors

Seq. n.	Motivational factor	Required state	Actual state	Difference P - S
1.	Atmosphere at a place of work	4,65	3,12	1,53
2.	Good working group	4,65	3,59	1,06
3.	Additional financial remuneration	4,41	2,88	1,53
4.	Physical intensity of work	3,18	3,35	-0,17
5.	Job security	4,59	2,94	1,65
6.	Communication at place of work	4,29	2,76	1,53
7.	Trade name	3,88	3,59	0,29
8.	Opportunity to utilize own abilities	4,29	3,24	1,05
9.	Scope of employment and its type	4,18	3,35	0,83
10.	Acquaintance with working result	4,29	2,94	1,35
11.	Working hours	3,82	3,29	0,53
12.	Working environment	4,00	2,82	1,18
13.	Working output	4,29	3,71	0,58
14.	Working process	4,00	3,41	0,59
15.	Powers	4,06	2,82	1,24
16.	Prestige	3,53	2,94	0,59
17.	Attitude of a supervisor	4,47	3,18	1,29
18.	Individual decision making	4,06	3,35	0,71
19.	Self-realization	4,06	3,24	0,82
20.	Social benefits	3,94	3,12	0,82
21.	Fair assessment of an employee	4,59	2,71	1,88
22.	Stress / stress elimination at a place of work	3,94	2,65	1,29

Seq. n.	Motivational factor	Required state	Actual state	Difference P - S
23.	Mental stress	3,82	3,00	0,82
24.	Company vision	3,88	2,88	1,00
25.	Region development	4,00	2,41	1,59
26.	Education and personal development	4,24	3,24	1,00
27.	Relation of the company towards environment	3,82	3,29	0,53
28.	Free time	3,88	3,06	0,82
29.	Acknowledgement	4,41	2,65	1,76
30.	Basic pay	4,71	2,59	2,12



*Graph 2 Required and actually perceived level of motivation by supervisors*

In the relationship between the importance of motivators and employees' satisfaction we observed the dissatisfaction in the group of supervisors as well as in the groups of THZ and workers with issues such as basic pay, additional financial remuneration and fair assessment. Communication at the place of work, atmosphere at work, job security and regional development do not correspond with the requirements affecting the level of motivation. Supervisors were quite satisfied with physical intensity of work, company name – trade name, working hours and the attitude of the company towards environment.

### **3.2 Creation of groups of motivationally oriented employees**

We made a statistic verification of motivational factors by means of cluster analysis. In order to analyze the similarities in the motivational profiles of employees for individual job groups (worker, THZ, supervisor) we applied the method of agglomerate hierarchic

clustering. Its principle is that a group of elements gradually converge together, the nearest elements converge and in next steps more and more far-distant ones join. We processed the data gathered from the questionnaires and generated dendrograms, which helped us class the employees into similarly motivationally oriented groups – clusters, according the range of importance of individual motivational factors allocated by the employees. The result is that employees assigned into individual groups have similar opinions on individual motivational factors, therefore they are motivated by similar motivational factors.

The other group of motivators with average values 4,80 – 4,32 are the motivators concerning working environment such as atmosphere and communication at the work place, a good working group but also an attitude of a supervisor and the possibility of stress elimination at work place. The importance assigned to these motivational factors by the respondents of all groups show that they realize a negative impact of bad

relations in a working group. There are many ways to make relations in a working group better, so the supervisor plays a very important role influencing the behaviour of his subordinates in either a positive or a negative way in the course of managing them.

When comparing the importance of motivational factors we were also in a position to observe the workers' fear of losing their jobs. This is especially evident in the fourth group of respondents since the top position among the motivators belongs to job security motivator and its average value is 5.

There are results of a group which included both a group of THZ employees and supervisors in graph 6, where individual respondents are presented on the vertical axis (supervisors as A1 to A17 and THZ as B1 to B37) and there is a scope of variance in their responses presented on the horizontal axis. It was interesting to observe how employees from both groups mixed together in individual groups. Only one homo-

geneous group was formed, its members are THZ employees.

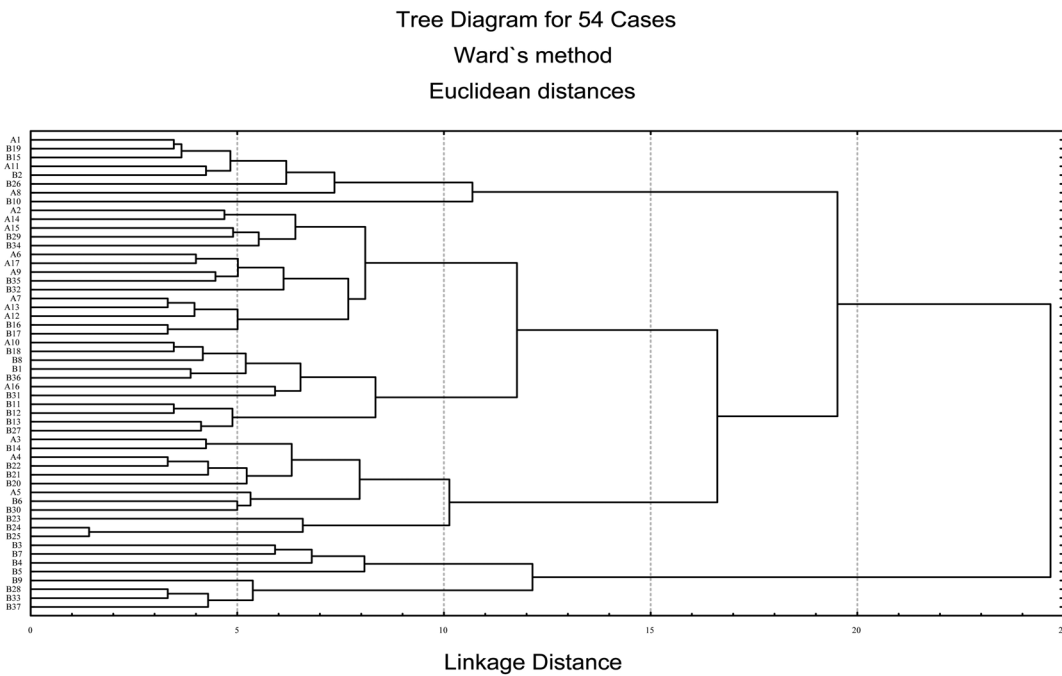
There are only five THZ members in the first group (19, 15, 2, 26 and 10) and three supervisors (1, 11 and 8).

Based on similarities of their responses six THZ were included to the second group (29, 34, 35, 32, 16 and 17) and nine supervisors (2, 14, 15, 6, 17, 9, 7, 13 and 12).

The third group that was analysed consisted from nine THZ (18, 8, 1, 36, 31, 11, 12, 13 and 27) and two supervisors (10 and 16).

The fourth group, slightly bigger compared to the third one is formed from 12 employees. Nine of them are THZ (14, 22, 21, 20, 6, 30, 23, 24 and 25) and three are supervisors (3, 4 and 5).

There are only eight THZ in the last group – the respondents with numbers: 3, 7, 4, 5, 9, 28, 33 and 37.



**Graph 3** Hierarchic cluster analyses of motivational profiles of THZ and supervisors of CHEMES, a. s., Humenné

Motivators of individual groups are very similar. One of the most essential factors for the group of workers is a factor of money. It is related to welfare, the standard of living and the financial needs. It was affected by the basic pay, the additional financial remuneration and the fair assessment of the employee, which were all assigned

high average values. The basic pay as a motivator occupies the top position in almost all groups, in groups number 4 and 5 its average value is 5. The members of the fifth group consider the factor of money the most important one, all three motivators are positioned at the top of the list and have a maximum average value 5.

Job security as a motivational factor which can be found in all groups and is one of the most relevant. It results from the actual situation in the region and the opportunity to prove oneself with the same qualification in a similar company.

The next group of motivators at top positions in the THZ group are the motivators concerning working environment. A good working group, the attitude of the supervisor, the communication and atmosphere at work place but also the working hours and stress elimination at work place indicated a negative influence of disturbing factors which may cause stressful situations in a collective as a whole and may have an impact on the overall working comfort. It is necessary to realize that if there are bad working relations at work place, the employees do not feel good in their collective and

they are stressed, it influences their work performance and finally the business results of the company.

Form the individual group analysis it is clear that it is possible to group all the employees in the company under consideration according to their motivational requirements by means of cluster analyses. As we could see it was not so efficient to create or develop only one motivational programme and apply it for all the employees as it was supposed. On the contrary, if a company wanted to create individual motivational programmes for all its employees it would be very costly and uneconomic. That is why we recommend the implementation of the method of cluster analyses where clusters of employees sharing similar opinions about motivational factors can be created and the company can form motivational programmes for individual groups.

**Table 4** Summary of most motivating factors for a group of THZ employees + supervisors

<b>1<sup>st</sup> group of THZ + supervisors</b>					
<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>	<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>
1.	Atmosphere at a place of work	4,88	6.	Scope of employment and its type	4,63
2.	Fair assessment of an employee	4,88	7.	Working output	4,63
3.	Good working group	4,75	8.	Company vision	4,63
4.	Attitude of a supervisor	4,75	9.	Additional financial remuneration	4,50
5.	Communication at a place of work	4,63	10.	Job security	4,50
<b>2<sup>nd</sup> group of THZ + supervisors</b>					
<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>	<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>
1.	Good working group	4,67	6.	Additional financial remuneration	4,47
2.	Job security	4,60	7.	Opportunity to utilize own abilities	4,47
3.	Basic pay	4,60	8.	Fair assessment of an employee	4,47
4.	Atmosphere at a place of work	4,53	9.	Acknowledgement	4,40
5.	Attitude of a supervisor	4,53	10.	Acquaintance with working result	4,33
<b>3<sup>rd</sup> group of THZ + supervisors</b>					
<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>	<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>
1.	Basic pay	4,64	6.	Fair assessment of an employee	4,45
2.	Opportunity to utilize own abilities	4,55	7.	Additional financial remuneration	4,36
3.	Communication at a place of work	4,55	8.	Job security	4,36
4.	Working output	4,45	9.	Attitude of a supervisor	4,36
5.	Individual decision making	4,45	10.	Powers	4,27
<b>4<sup>th</sup> group of THZ + supervisors</b>					
<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>	<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>
1.	Basic pay	5,00	6.	Attitude of a supervisor	4,83
2.	Job security	4,92	7.	Fair assessment of an employee	4,75
3.	Good working group	4,83	8.	Atmosphere at a working place	4,67
4.	Additional financial remuneration	4,83	9.	Communication at a working place	4,67
5.	Acknowledgement	4,83	10.	Education and personal development	4,67
<b>5<sup>th</sup> group of THZ + supervisors</b>					
<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>	<b>s. n.</b>	<b>Motivational factor</b>	<b>Average</b>
1.	Additional financial remuneration	5,00	6.	Working hours	4,88
2.	Fair assessment of an employee	5,00	7.	Attitude of a supervisor	4,88
3.	Basic pay	5,00	8.	Opportunity to utilize own abilities	4,75
4.	Good working group	4,88	9.	Mental stress	4,75
5.	Job security	4,88	10.	Stress / stress elimination at a place of work	4,63

## 4 Conclusion

If the process is to be effective enough it should reflect the needs of employees and in a way it should influence their behaviour and performance in a direction which was defined beforehand. So it is necessary to work out an integral motivational programme in which the requirements of the company and its employees are put together. When the motivational programme is being created it is important to find out which and how motivational factors can influence individual employees and adapt them to the company possibilities. If the motivational programme in a company is worked out in this way it should encourage employees towards a higher performance, creativity, self-sacrifice, orderliness and match their value orientation with the goals of the company. Every single employee works motivated by a unique set of motivational factors, reacts to some of them in a positive and to the others in a negative way, sometimes with some objections. People working in a team are different. It is up to each company to find out what makes every member of a team give a maximum output. It is necessary to listen to the employees, to acknowledge and apply the motivational factors which are considered to be relevant.

The aim of our analyses was to find out the requirements concerning the required and the actual motivations of employees for selected motivational factors and consequently point out an opportunity to form motivationally similarly oriented groups. Based on the analysis of motivational factors in which we compared the required and the actually perceived levels of motivation we came to a conclusion that employees do not feel the level of motivational factors satisfactory. The results of the questionnaire analyses exactly say that employees consider the most important factors to be: basic pay, additional financial remuneration and also a fair assessment of an employee. All these factors belong to a group of wage motivators. But job security and factors concerning working environment are very important, too. For these motivators we found the biggest differences between the actual and the required state, as stated by the employees. According to the results it is clear that each employee should feel that he is helpful and conducive to the company and that his work in the company has a future, perspective and that it is equally financially compensated. He should be sure that he can stay in a company for a longer time. We recommend that the employees should be motivated through an opportunity to acquire a share in the profit, since this can encourage the entrepreneurial thinking and lead the employ-

ees to initiative to fight against unthrift but also to increase the profit and the earning capacity of the company. The employees participation in the profit makes them feel that the results are distributed in a fair way and that they are shared because they see that the company profit does not belong only to the company owners but that a part of it is divided among the employees.

The results of cluster analyses showed that not only currently implemented motivational factors must be developed but also it is necessary to create some space for application of other critical motivators. At present the company motivates all its employees in the same way and implements the motivational factors such as: remuneration and assessment, education and communication. By means of our survey we found out that not all the employees have the same needs and that not for all of them the above mentioned motivational factors are important. It resulted from the analyses that other motivators are also relevant for the employees: the atmosphere and communication at work place, a good working group, the attitude of a supervisor, the stress elimination work place, actually, the motivational factors concerning the working environment. For the time being, the company does not pay enough attention to the last mentioned factors. The company management should approach employees in a different way, continuously analyzing the individual motivational factors through a statistic method and create different motivational programmes for them.

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