



TECHNICAL UNIVERSITY - SOFIA
FACULTY OF MANAGEMENT



SCIENTIFIC AND TECHNICAL UNION
OF MECHANICAL ENGINEERING

NATIONAL SCIENTIFIC AND TECHNICAL SOCIETY
"MANAGEMENT AND ENGINEERING"



CONFERENCE PROCEEDINGS

XVIII INTERNATIONAL
SCIENTIFIC CONFERENCE
"MANAGEMENT AND ENGINEERING '20"

DAYS OF SCIENCE
TU-SOFIA

13-16.09.2020
Sozopol

ANALYZING THE MOTIVATIONAL PROFILE OF MEDICAL REPRESENTATIVES OF A PHARMACEUTICAL COMPANY

АНАЛИЗ НА МОТИВАЦИОННИЯ ПРОФИЛ НА МЕДИЦИНСКИТЕ ПРЕДСТАВИТЕЛИ НА ФАРМАЦЕВТИЧНА КОМПАНИЯ

Silvia Baeva¹, Eleonora Nikolova²

¹*Department of Economics, Industrial Engineering and Management,
Technical University, Bulgaria,
E-mail: sbaeva@tu-sofia.bg*

²*Department of Human Resources and Social Protection,
University of National and World Economy, Bulgaria,
E-mail: eleonora.nikolova@outlook.com*

Abstract. Given the importance of motivation to achieve work efficiency, career growth and organizational development, in this study is shown that motivating human resources in the organization is a key contributing factor and has a decisive impact on achieving satisfaction. There is analyzed the applied motivational theories for achieving work efficiency and employee satisfaction, which guarantees success in the development of the organization. For the purposes of the study, fundamental scientific assumptions and methods of the theory of motivation, statistical analysis and weight method are used.

Keywords: Human Resources, staff motivation, motivational profile, statistical analysis, weight method.

1. Introduction

Labor productivity is one of the leading indicators of a company's economic performance. The analysis of productivity thus determines the efficiency of the corporate workforce and working hours.

The most important problem when analyzing and planning productivity is to identify and exploit reserves for growth. To do this one needs to determine opportunities for improvement in labor productivity. One way of doing this is to increase the motivation of employees.

The term motivation refers to a process of encouraging ourselves and others to take action, achieve personal aims or business objectives. The primary purpose of the motivational methods is to gain the maximum benefit from the use of the existing workforce, which improves the overall performance and profitability of a company.

Increasing employees' motivation is a complex and consistent process. When there is a motivational system, there is must take the technical, organizational, social and economic factors into consideration.

There are different approaches in modern staff motivation theories that affect the relationships of employees and managers within the organization. These theories serve not only as an incentive to perform specific work problems, but also as criteria for loyalty and a means of retaining highly skilled employees and integrating staff into the organization and the constantly changing production and market conditions. Many modern human resource management concepts are based on motivational theories and their knowledge is required to understand the relevant models and tools for managing the motivational process.

The achievement of high efficiency, productivity and competitiveness of the modern conditions is connected with the constant motivation and stimulation of the personnel in the organizations. The authors in [1] are extends the research and theory on work motivation by examining temporal stability and change in employees' self-determined work motivation profiles and their differential relations to various predictors and outcomes.

In [2] are deal with the problems of satisfaction with work, the working conditions of personnel, are revealed the main motivational factors that affect the loyalty of the staff, provided that they continue working at the enterprise or change their place of work. Based on the analysis of data collected during the study, ways are determined to increase the loyalty of personnel by improving the incentive system (incentive) at the enterprises of the oil and gas complex of the Khanty-Mansiysk. The most important motivational factor for respondents when changing jobs is career growth and pay growth. Subject to continuing work at the enterprise, the most important factor is immaterial motivation. A comprehensive approach is needed to improve the system of motivation (stimulation), which includes improving working conditions, developing the personnel reserve system (talent management), expanding the social package and other measures to improve material and non-material motivation (incentives) of staff.

The article [3] is explained the scheme of employee motivation tools, which meet the scientific requirements prescribed by human resource management science and the modern conditions of production enterprise operations. Furthermore, it is offered methodological solutions for its practical application.

The purpose of authors in [4] have been to investigated the interrelation and impact of the PDR process, and its elements, on staff motivation. The study is based on a case study research approach carried out in two large manufacturing-engineering departments of a world-class manufacturing organization. The study's results are indicated that in most of the cases, a PDR process does not by itself motivate staff. But it is argued that a poorly designed and conducted PDR process may make motivation, through personal development, difficult to achieve. This paper provides manufacturing managers with an opportunity to understand whether

a common business process (i.e. PDR), and the elements that comprise it, can be employed as a method to aid in the motivation of their staff.

In the paper [5] is compared the level of employee motivation in Hungary and Slovakia. Total of 30 motivation factors are divided into 5 groups of motivation factors. There is analyzed motivation factors relating to mutual relationships, to career aspiration, to finance, to work conditions and to social needs. Significantly different preferences are observed in 4 of 5 groups of motivation factors preferred by Hungarian and Slovak respondents (motivation factors relating to mutual relationships, to career aspiration, to work conditions and to social needs).

In [6] is applied the Herzberg two-factor theory in the perspective of the administrative staff of the telecom sector of Pakistan. There is investigated whether the motivational (intrinsic) factors and hygiene (extrinsic) factors affect the job satisfaction of administrative staff and their influence on telecommunication sectors. The results show that the motivational and hygiene factors do not affect the job satisfaction of administrative staff. However, job satisfaction seems to be connected to career development, compensation and benefits and good working environment in the telecom sector in Pakistan.

The authors in [7] are assessed the level of employee motivation in a trading company and its relation to work performance. There is used statistical processing and the research results is illustrated by a Pareto chart.

In [8] is examined how work motivation, specifically intrinsic motivation, identified motivation, introjected motivation, and external motivation, influences service employees' job performance. The purpose of this study is to reveal the mechanism through which work motivation affects the job performance of service employees. The results of this research suggest that intrinsic motivation and identified motivation are positively related to service employees' job creativity, while external motivation is negatively related to service employees' job creativity; service employees' job creativity is positively related to customer orientation; customer orientation is positively related to job performance. Furthermore, the relationship between intrinsic motivation/identified motivation and job performance are sequentially and fully mediated by service employees' job creativity and customer orientation. This study is attempted to develop an understanding of the underlying mechanism through which work motivation affects service employees' job performance through job creativity and customer orientation.

The article [9] is examined staff motivation, satisfaction, and job performance among the librarians and library staff in six selected university libraries in Nigeria. The target population for the study includes the professionals and nonprofessional library staff. Significant correlation exists between staff motivation and job performance and between job satisfaction and job performance. In addition, the two factors (motivation and satisfaction) are exerted significant contribution to the determinant of librarians and library staff job performance. Based on the findings, the study recommended improvement in the level of motivation of

nonprofessionals so that the significant difference with the professional counterpart would not be so much pronounced.

Always the topic of staff motivation has been relevant. Common theoretical methodology for the influence of various factors on motivation, as well as methods for its investigation and analysis, are also discussed in [10, 11, 12, 13, 14, 15] and etc. Motivational problems in the sense of insufficient motivation of the human resources of the companies exist, but the tools for their accurate and specific diagnosis are not sufficiently used in the practice of the companies. Given the importance of motivation to achieve work efficiency, career growth and organizational development, we will show that motivating human resources in the organization is a key contributing factor and has a decisive impact on achieving satisfaction.

The object of the study is Pharmaceutical Company.

The subject of the development is the applicable motivational theories and methods for motivating the staff to make a contribution and achieve satisfaction, applicable to the object of study.

The main aim is to analyze the applied motivational theories for achieving work efficiency and employee satisfaction, which guarantees success in the development of the organization. The purpose of the research is to find and retrieve information related to the working conditions in the company; what is the motivational environment; on the basis of which a system should be created to provide the necessary conditions to motivate and stimulate the company staff. By defining the directions and anchor points in the management of the motivation process, the manager can maximize the potential of human resources in the company's activities.

For the purposes of the study, fundamental scientific assumptions and methods of the theory of motivation, statistical analysis and weight method are used.

2. Creating of motivation profile of medical representatives of a Pharmaceutical Company

This study is conducted among 14 medical representatives of a Pharmaceutical Company.

The research is done in two stages: the first stage is determined the importance of the main factors for motivation; in the second stage - the degree of satisfaction of the most significant factors.

The factors studied are:

1. Remuneration according to results and performance;
2. Evaluation of work;
3. Assignment of tasks;
4. Career development;
5. Developing abilities;
6. Decision-making autonomy;
7. The importance of the work;
8. Distribution of work tasks;
9. Socio-psychological climate in the team;
10. Relations in the team;
11. Feedback;
12. Awareness of organization and work.

For the implementation of the first stage, a questionnaire is made and released among the medical representatives, who determined the significance of the factors listed above according to them. The results of the survey are presented in Table 1.

Table 1 Data from the first questionnaire - Absolute frequency of occurrence of factors by degrees of significance

Degree of importance of motivation factors	№	Motivation factors												Σ
		1	2	3	4	5	6	7	8	9	10	11	12	
1	14	0	0	0	0	0	0	0	0	0	0	0	0	14
2	0	0	1	5	0	1	1	0	3	1	1	1	14	
3	0	1	1	4	0	0	1	1	1	1	0	4	14	
4	0	0	0	1	5	0	1	1	2	2	1	1	14	
5	0	3	1	1	1	1	2	2	1	0	0	2	14	
6	0	1	3	0	1	3	1	1	3	1	0	0	14	
7	0	2	1	0	1	1	3	2	0	1	1	2	14	
8	0	1	2	0	2	1	1	1	2	4	0	0	14	
9	0	0	1	3	0	1	3	2	0	1	3	0	14	
10	0	2	1	0	1	2	0	1	0	1	4	2	14	
11	0	3	3	0	1	2	0	1	0	2	1	1	14	
12	0	1	0	0	2	2	1	2	2	0	3	1	14	
Σ	14	14	14	14	14	14	14	14	14	14	14	14		
Σ	14	5	5	11	7	5	6	5	9	5	2	8	55	

The data from Table 1 are statistically processed and the frequency Table 2 of the six most important motivation factors obtained is compiled and for each factor j , $j = 1, \dots, 6$, the relative frequency is:

$$w_j = \frac{n_j}{N}, j = 1, \dots, 6, \tag{1}$$

where: n_j is the absolute frequency of the factor j , $j = 1, \dots, 6$;

N is the total number of all items in the sample ($N=55$).

Table 2 Frequency table of the six most important motivation factors obtained

№	The most significant six factors	Absolute frequency n_j	Relative frequency w_j	
1.	1. Remuneration according to results and performance	14	0.25	25%
2.	4. Career development	11	0.20	20%
3.	9. Socio-psychological climate in the team	9	0.16	16%
4.	12. Awareness of organization and work	8	0.15	15%
5.	5. Developing abilities	7	0.13	13%
6.	7. The importance of the work	6	0.11	11%
	Σ	$N=55$	1.00	100%

The results of Table 2 are presented graphically in Fig. 1.

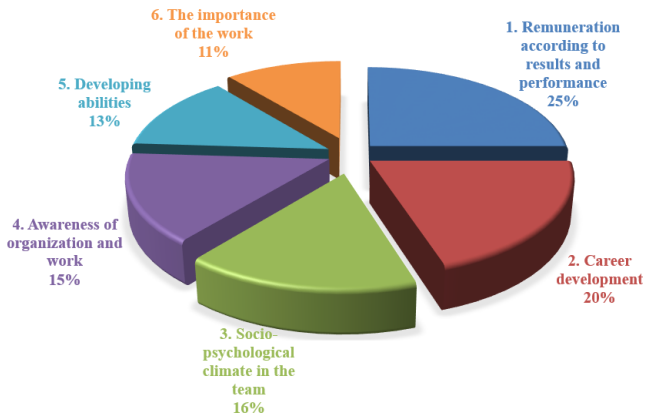


Fig. 1 Diagram of the results of Table 2

In the second stage of the research, a second questionnaire was released among the surveyed staff. This determines the degrees of satisfaction for the six motivational factors of highest significance. The data from the second questionnaire are given in Table 3.

Table 3 Absolute frequency S_{jk} , of occurrence of each of the degrees of satisfaction k under each of the factors j , $j = 1, \dots, 6$, $k = 1, \dots, 6$

Factors	Degrees of satisfaction						Σ
	Totally satisfied	Satisfied	Can not decide	Dissatisfied	Rather dissatisfied	Totally dissatisfied	
1. Remuneration according to results and performance	0	6	3	5	0	0	14
2. Career development	1	0	1	4	6	2	14
3. Socio-psychological climate in the team	0	1	2	2	5	4	14
4. Awareness of organization and work	0	1	0	2	3	8	14
5. Developing abilities	0	1	4	3	3	3	14
6. The importance of the work	0	1	4	3	3	3	14

Table 3 is processed and the weights of satisfaction levels for each of the motivational factors are obtained as follows: The weight of each factor j , $j = 1, \dots, 6$, for each degree k , $k = 1, \dots, 6$, is

$$v_{jk} = \frac{S_{jk}}{P}, \quad j = 1, \dots, 6, \quad k = 1, \dots, 6 \quad (2)$$

where: S_{jk} is the absolute frequency of the j^{th} factor by the k^{th} degree of satisfaction, $j = 1, \dots, 6, k = 1, \dots, 6$;

P is the total number of staff surveyed, $P=14$.

The weights obtained are presented in Table 4.

Table 4 Weight table

Factors	Degrees of satisfaction						Σ
	Totally satisfied	Satisfied	Can not decide	Dissatisfied	Rather dissatisfied	Totally dissatisfied	
1. Remuneration according to results and performance	0.00	0.43	0.21	0.36	0.00	0.00	1.00
2. Career development	0.07	0.00	0.07	0.29	0.43	0.14	1.00
3. Socio-psychological climate in the team	0.00	0.07	0.14	0.14	0.36	0.29	1.00
4. Awareness of organization and work	0.00	0.07	0.00	0.14	0.21	0.57	1.00
5. Developing abilities	0.00	0.07	0.29	0.21	0.21	0.21	1.00
6. The importance of the work	0.00	0.07	0.29	0.21	0.21	0.21	1.00

The results of Table 4 are graphically presented in Fig. 2.

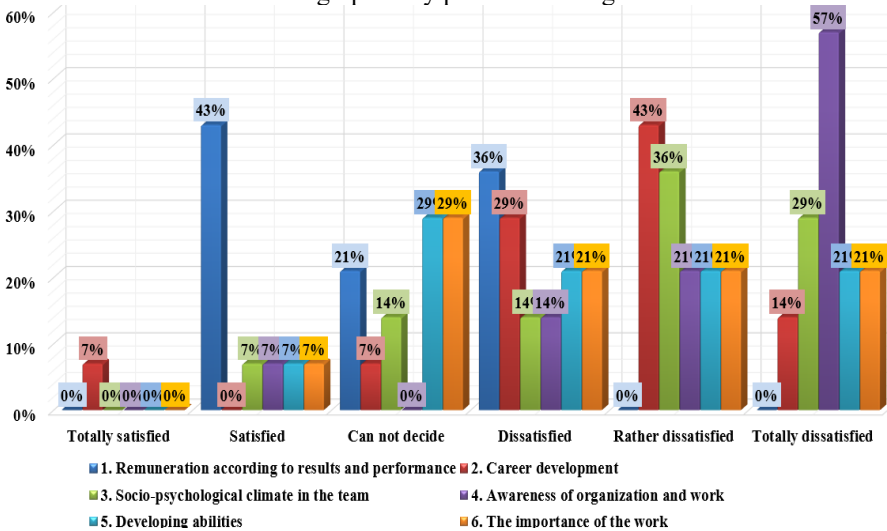


Fig. 2 Histogram of the results of Table 4

The methods used to process the data in the study are statistical and weight based on fundamental scientific assumptions and methods of the theory of motivation.

MS Excel and MS Excel Solver are used for the numerical realization.

3. Analyzing the motivational profile of medical representatives of a Pharmaceutical Company and recommendations

The main motivating factors for the team of medical representatives are remuneration according to results and work, career development, social and psychological climate in the team, awareness of the organization and work, development of abilities and training and the importance of work.

Performance-based pay is one of the factors that is highly valued by most employees. At the pharmaceutical company, this is not a problematic factor as many of the employees have noted that they are satisfied. The bonus system works and there is no need to make changes in this direction. Career development is a much bigger problem for employees. This is also the first problem with higher levels of dissatisfaction.

In many studies across the EU, employees cite career development as a major motivating factor when choosing a job. It is crucial that managers have regular meetings with employees and direct them to advanced training. They should be interested in their interests, ambitions and desires for development. In 2019 three long-term representatives with over 5 years of experience and good product knowledge have left the company and despite the proposal for better pay, they prefer another company because of their career opportunities. This confirms the result of the survey. The following recommendation can be made: when opening a new position in the company, one must first be recommended by a team member who has the desire and the necessary qualities for development. This would encourage team members to be loyal employees and to feel valued.

Awareness of the organization and the work involved with the employees concerned is the second factor with unmet need. Hiding information about what's happening in an organization always has only negative consequences. It is good to keep employees informed of the news and changes that directly affect their work. Lack of sufficient awareness can lead to lower efficiency of their work.

This factor usually contributes negatively to the social and psychological climate of the company. Human emotions have a great influence on choices, decisions and behavior. It is for this reason that it can even lead to a job change and the loss of highly qualified employees. The effectively working team is psychologically whole. Here, employee satisfaction is again unsatisfactory. The peculiarities of the psychological climate affect all processes throughout the organization.

In order to improve the social and psychological climate in the team, the following may be recommended: to be monitored several times a year for analysis of the working environment; team building would help bring the team together.

Developing capabilities and training, like all other factors, is one of the important things for a company. This is where the largest percentage of the answers is the column 'Can not decide'. Learning and development is an important process for everyone. Although no degree of satisfaction is indicated, this may be a problem as employees can not decide whether they need training. In the presence of such a large competition, each representative must have a sufficiently large set of knowledge. Investing in human capital, in the form of presentation, sales and language training, will contribute to the growth of the company. The establishment of an internal system for training and development of the personnel will lead to the re-qualification of employees, specialists planned for management positions, management personnel of the company.

The importance of work is a factor again defined by a high degree of 'Can not decide' going to dissatisfaction. Everyone has the need to make their work significant, even if it is not realized. Every employee needs to do things that he or she considers important and useful, only then can he / she be satisfied with the job.

Based on all the factors in this study, it can be seen that the level of dissatisfaction is much higher than the level of staff satisfaction. If not taken, this may lead to internal company problems and a drop in sales.

In this article, a study is conducted that shows what are the important factors that motivate research staff. Diagnoses problems and recommends the creation of a stronger team based on them. The motivational profile of the surveyed staff reflects the overall impact of the motivational factors and their level of satisfaction. As with any company, there are problems here. The research methodology does not solve the motivational problems. The surveyed motivational profile identifies weaknesses in the motivation for staff work and directs in what direction work can be done to improve employee performance.

4. Conclusion

Creating a motivation profile captures the problem areas and gives the manager direction to improve staff motivation. The motivation of human resources in the organization is a key contributor and has a decisive effect on achieving satisfaction. With the advent of more research and practice in the application of theories of motivation and their methods, managers are becoming increasingly aware of the process of motivation. Every company strives for high efficiency, productivity and competitiveness. In today's context, this is related to the constant motivation and stimulation of staff in organizations. This is a complex problem that requires extremely careful and thorough research and analysis.

Литература

1. FERNETA, C., LITALIENB, D., MORINC, A., AUSTINA, S., GAGNÉD, M., LAVOIE-TREMBLAYE, M., FORESTF, J., On the temporal stability of self-determined work motivation profiles: a latent transition analysis, *European Journal of Work and*

- Organizational Psychology, Informa UK Limited, trading as Taylor & Francis, <https://doi.org/10.1080/1359432X.2019.1688301>, 2019.
2. CHULANOVA, O., RYNGACH, OLGA, L., VINICHENKO, M., KAUROVA, O., DEMCHENKO, M., DEMCHENKO, T., Increase Of Staff Loyalty By Improving The Motivation (Stimulation) System In Enterprises Oil And Gas Complex Of The Khanty-Mansiy Autonomous District-Ugra, *Modern Journal of Language Teaching Methods*, Vol. 8, Issue 8, pp. 39-47, August 2018.
 3. KLUPŠAS, F., VASILIAUSKAIT, I., Development and evaluation of company staff motivation scheme: meat processing company case study, *Economics and Rural Development*, Vol.5, No. 1, 2009.
 4. BALDWIN, C., GARZA-REYES, J., KUMAR, V., ROCHA-LONA, L., Personal development review (PDR) process and engineering staff motivation: A case study investigation in a manufacturing firm, *Journal of Manufacturing Technology Management*, Vol. 25 No. 6, pp. 827-847, Emerald Group Publishing Limited, <https://doi.org/10.1108/jmtm-01-2013-000>, 2014.
 5. HITKA, M., LORINCOVÁ, S., LIŽBETINOVÁ, L., SCHMIDTOVÁ, J., Motivation Preferences of Hungarian and Slovak Employees are Significantly Different, *Periodica Polytechnica Social and Management Sciences*, <https://doi.org/10.3311/PPso.10052>, 25(2), pp. 117-126, 2017.
 6. WEN, X., BUTT, R., KHAN, R., MURAD, M., ASHRAF, S., MICHAEL, A., Effect of Motivational Factors on Job Satisfaction of Administrative Staff in Telecom Sector of Pakistan, <https://doi.org/10.5296/hrr.v2i1.13672>, *Human Resource Research*, Vol. 2, No. 1, 2018.
 7. GREŇČÍKOVÁ, A., GUŠČINSKIENĚ, J., ŠPANKOVÁ, J., The Role of Leadership in Motivating Employees in a Trading Company, *Journal of Security and Sustainability Issues*, Volume 7, Number 2, [https://doi.org/10.9770/jssi.2017.7.2\(6\)](https://doi.org/10.9770/jssi.2017.7.2(6)), 2017.
 8. MOON, T., HUR, W., HYUN S., How Service Employees' Work Motivations Lead to Job Performance: the Role of Service Employees Job Creativity and Customer Orientation, *Curr Psychol*, # Springer Science+Business Media, LLC, 2017.
 9. TELLAA, A., IBINAIYEA, O., Correlates of staff motivation, satisfaction, and job performance of library staff in selected Nigerian University libraries, *International Information & Library Review*, Published with license by Taylor & Francis Group, LLC, <https://doi.org/10.1080/10572317.2019.1631691>, 2019.
 10. MACHADO, C., DAVIM, J., *Organizational Behaviour and Human Resource Management, Management and Industrial Engineering*, © Springer International Publishing AG 2018.], [David G. Collings, Hugh Scullion, Paula M. Caligiuri, 'Global Talent Management', Second Edition, Taylor & Francis Group © 2019.
 11. COLLINGS, D., SCULLION, H., CALIGIURI, P., *Global Talent Management*, Second Edition, Taylor & Francis Group, 2019.
 12. STOREY, J., ULRICH, D., WRIGHT, P., *Strategic Human Resource Management A Research Overview*, Taylor & Francis Group, 2019.
 13. ARMSTRONG, M., *Handbook of Human Resource Management Practice*, Thirteenth edition, Printed and bound in the UK by Ashford Colour press Ltd, 2014.
 14. REED, S., *A Guide to the Human Resource Body of Knowledge*, Published by John Wiley & Sons, Inc., Hoboken, New Jersey, Published simultaneously in Canada, 2017.
 15. RAY, J., *Staff motivation and its impact on performance in a retail environment*, Dublin Business School, Dissertation submitted as part of Ordinary Bachelor Degree, 2016.