

EMPLOYEES' MOTIVATION PREFERENCES IN FOREST AND WOOD-PROCESSING ENTERPRISES

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ABSTRACT

Employee performance and subsequently the enterprise performance is affected by human resource management. The impact of motivation and meeting employees' needs on improving the performance and delivering it to required standard is fundamental. Motivation factors as a part of employee motivation in wood-processing and forest enterprises based on the average values of motivational needs are defined in the paper. Following the research results and preferences mentioned by respondents, motivation factors included in the motivational programme in forest and wood-processing enterprises with respect to existing significant differences can be defined. The motivational needs of employees in forest and wood-processing enterprises in the Slovak Republic are similar. In forest enterprises, motivation factors might be focused especially on finances and then on relationships and social status. In wood-processing enterprises motivation factors might be focused on relationships and social status primarily and after that on finances.

Keywords: motivation factors, motivational programme, forest enterprises, wood-processing enterprises.

INTRODUCTION

Market economy and social changes create the environment suitable for business activity across all economic sectors in Slovakia, including forestry and wood-processing. Therefore, the forestry-wood sector is considered one of the most important in Slovak economy in terms of fulfilling social functions (LOUČANOVÁ *et al.* 2017, DUŠAK *et al.* 2017, BALÁŽOVÁ – LUPTÁKOVÁ 2016, FOREST EUROPE 2015). The contribution of the sector to GDP of the Slovak Republic is 0.33%. Due to historical development, it is male-dominated branch of the industry (average male to female ratio is 3:1) (ANKUDO-JANKOWSKA 2007). A slight increase in the number of highly educated employees can be observed (PALUŠ *et al.* 2011). It is specific physically demanding job affected by weather conditions. In terms of economic figures, the position of forest industry has been difficult for a long time (HAJDÚCHOVÁ *et al.* 2016). While social requirements for the wood production are met by running market, social requirements for other public functions of nonmarket character are not covered economically enough. Proceeds from timber distribution presenting more than 80% of total proceeds are the main source of income of the forest industry (LOUČANOVÁ *et al.* 2018).

Contribution of wood processing and furniture manufacturing industry to the GDP of the Slovak Republic is smaller with less than 1 per cent. It is manual and highly sophisticated work that need some sort of on-the-job training. The devaluation of technical and vocational education can result in a lack of skilled labour necessary for this industrial sector. As the

number of small and medium sized enterprises in the forest industry is high, forest sector employment as a percentage of total employment in the country is not so high. However, in several Slovak regions, it provides a spectrum of employment opportunities (ZELENÁ SPRÁVA 2017). Despite sufficient quantity of raw material and independence from the need to import materials, amount of products completed is very low. It is especially due to losing purchasing power of inhabitants. In comparison to the European standard, the opportunity to sell cheaper products of poor quality imported from countries of central Europe is encouraged (NEDELIAKOVA – PANAK 2015).

Human resource management is a work with people including the analysis of employee performance, planning ahead the needs of workforce, selecting the candidates, training the employees, their development, evaluation and motivation (ANDREWS 2016, VETRÁKOVÁ *et al.* 2016). It is aimed at ensuring the human resources, subsequently human potential in order to achieve company goals (PEDRAZA MELO – BERNAL GONZÁLEZ 2018, LORINCOVÁ *et al.* 2016, SÁNCHEZ-SELLERO – SÁNCHEZ-SELLERO 2016, TOKARČIKOVÁ – KUCHARČIKOVÁ 2015, OLŠOVSKÁ *et al.* 2013). Due to the uniqueness of human potential as a creator of all the values, the potential of all employees must be used and developed deliberately to deliver new values (STACHO *et al.* 2017, BAJZIKOVÁ *et al.* 2013). The effective development of employee potential is based on systematic evaluation and motivation.

Employee motivation plays an important role in achieving great results in organisations (KUCHARČIKOVÁ – MIČIAK 2018, DAVYDENKO *et al.* 2017, LUCAS *et al.* 2004, DUNFORD *et al.* 2001). Motivation encouraging an individual to work or to be interested in a specific branch of industry can be pragmatic and idealistic at the same time (ROSAK-SZYROCKA 2014). Motivation factors included in a motivational programme are important. Expectations and engagement are formed and the performance of an employee or the work groups is affected (JEONG – CHOI 2017, STACHO – STACHOVÁ 2017). Motives are parts of each personality inciting human activity to achieve specific goals (ARTZ 2008, STONE 2005). They can be considered “an engine” of human activities. Moreover, they are a driving force of the human personality, psychological factors and reasons associated with the behaviour of individuals can be explained by motives (STACHOVÁ *et al.* 2019, FERRARO *et al.* 2018, MINÁROVÁ 2015, ALMOBAIREEK – MANOLOVA 2013). Needs that can be considered the sources of intrinsic motivation together with interests, values and ideals are the strongest motives of human behaviour and relate to the structure of human motivation (GOSSELIN *et al.* 2017, KERTÉSZ *et al.* 2017, LIŽBETINOVÁ 2017). The motives like aspiration and ambition follow the simpler motives only in the case they are fulfilled, i.e. a hierarchy in human motives can be observed (XU *et al.* 2017, ŽUPERKIENĖ – ŽILINSKAS 2008). Due to the fact that the structure of human motivation is complex combination of individual motives, the issue of motivation is included in the motivational programme of enterprises (FEJFAROVÁ – URBANCOVÁ 2016). Motivational programme is focused on ensuring the optimum use of manpower in the process of meeting the enterprise goals (standard performance and ability when employees do not use their spare energy) and at the same time, on meeting the needs and developing human personality at work (BRADY – KING 2018, DAUD 2015, KANFER *et al.* 2012, ROBBINS *et al.* 2007). Creating the environment to support employee motivation in an enterprise is the main goal of the motivational programme (MURA *et al.* 2017). Designing the effective motivational programme is based on the assumption that the enterprise is able to concentrate on factors reporting lower level of employee satisfaction or those important for employee performance because of any other reasons (CSEH PAPP *et al.* 2018). At the same time, observing the changes must be in the centre of the attention as the motivation factors are not stable (VETRÁKOVÁ *et al.* 2017). They are affected by the age, gender, education, experience, environment, etc. (LORINCOVÁ *et al.* 2018, KAMPF *et al.* 2017, JELAČIĆ *et al.* 2010).

The aim of the paper is to compare the level of motivation of forest and wood-processing enterprises in Slovakia. Defining the similarities or differences in motivational programmes in forest and wood-processing enterprises in Slovakia and possibilities to create a unified motivational programme taking into account specifics of the forest-wood complex will be considered the result of the research.

EXPERIMENTAL PART

A questionnaire consisting of 30 closed-end questions was used to determine the level of motivation in the enterprise at the actual time (HITKA 2009). The questionnaire was divided into two parts. Socio-demographic and qualification characteristics of employees were investigated in the first part. Basic data on respondents about their age, gender, seniority, completed education and job position were gathered in this part. Individual motivation factors used to find out the characteristics of the work environment, working conditions, appraisal system and remuneration in the enterprise, personnel work in the company, social care system and employee benefits as well as information about employee satisfaction or dissatisfaction, their value orientation, attitude to work, to colleagues and to the enterprise were mentioned in the second part. Motivation factors were arranged in alphabetical order not to affect the respondents. Employees were asked to assign one point of five points of importance from the Likert scale to each question. The level of motivation of the desired and real state was determined by respondents. In the case of desired state, ideas of respondents are used determine the motivation in the future. On the other hand, in the case of the real state, satisfaction with the real-time motivation is presented and highlighted.

The data gathered were processed using the STATISTICA 12.0 software (Dell, Oklahoma City, Oklahoma). Firstly, descriptive statistics was used to define basic differences between selected sample sets consisting of employees in wood-processing and forest enterprises. The research was conducted in the course of four years, from 2016 to 2019. Representativeness was achieved with the number of respondents, 1,114 in total. 609 respondents were from wood-processing enterprises and 505 from forest enterprises. Detailed description of respondents is given in Table 1.

Tab. 1 Description of the sample set.

Enterprises	Wood-processing enterprises		Forest enterprises		Respondents' participation in %
	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency	
Gender					
Male	378	62.07	315	62.38	62.21
Female	231	37.93	190	37.62	37.79
Age					
Up to 30	154	25.29	133	26.34	25.76
31-40	242	39.74	172	34.06	37.16
41-50	157	25.78	138	27.33	26.48
51+	56	9.20	62	12.28	10.59
Completed education					
Primary	82	13.46	99	19.60	16.25
Lower secondary	161	26.44	94	18.61	22.89
Upper secondary	229	37.60	155	30.69	34.47
Higher	137	22.50	157	31.09	26.39

Years of working in the enterprise	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency	
Less than 1 year	60	9.85	47	9.31	9.61
1-3 years	125	20.53	154	30.50	25.04
4-6 years	90	14.78	115	22.77	18.40
7-9 years	200	32.84	45	8.91	21.99
10 years and more	134	22.00	144	28.51	24.96
Job position	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency	
Manager	86	14.12	82	16.24	15.08
Blue-collar worker	296	48.60	212	41.98	45.60
White-collar worker	227	37.27	211	41.78	39.32

Subsequently, hypothesis were defined as follows:

WH1 = It is assumed that in the employee motivation in wood-processing and forest enterprises in Slovakia, there are same motivation factors from the 30 given in top positions.

WH2 = It is assumed that the level of motivation factors in top positions mentioned by respondents in forest and wood-processing enterprises in Slovakia will be similar.

Due to the independence of sample sets, the significance of difference in the level of importance was evaluated using the two-sample t-test for independent samples when variances are equal or unequal.

Null hypotheses about the agreement of two means of two compared sets were tested. The level of significance $\alpha = 0.05$ was used in testing null hypothesis about the equality of average values of individual motivation factors (MASON – LIND 1990).

RESULTS AND DISCUSSION

Following the results of perceiving the importance of motivation factors by the employees, the order of importance of motivation factors in wood-processing and forest enterprises could be determined (Table 2) and motivational programme tailored to the needs of employees could be created. When determining the motivational needs of the employees in wood-processing and forest enterprises in Slovakia, motivation factors *atmosphere in the workplace, communication in the workplace, good work team, fringe benefits, work environment, supervisor's approach, fair appraisal system, job security, basic salary and workload and type of work* were preferred by the employees in wood processing enterprises. The focus is put on factors related to relationship, finances and social needs. The employees of forest enterprises were motivated especially by the factors like *fringe benefits, enough free time, basic salary, good work team, fair appraisal system, working hours, workload and type of work, job security, atmosphere in the workplace and individual decision making, i.e. mainly factors related to finances, relationship and social needs.*

Tab. 2 The motivation factors as a part of employee motivation in wood-processing and forest enterprises based on average values of motivational needs.

WOOD-PROCESSING ENTERPRISES		FOREST ENTERPRISES	
Motivation factor	mean	Motivation factor	mean
Atmosphere in the workplace	4.33	Fringe benefits	4.45
Communication in the workplace	4.20	Free time	4.32
Good work team	4.19	Basic salary	4.29
Fringe benefits	4.18	Good work team	4.30
Work environment	4.17	Fair appraisal system	4.25

Supervisor's approach	4.14	Working hours	4.28
Job security	4.06	Job security	4.26
Basic salary	4.06	Atmosphere in the workplace	4.23
Workload and type of work	4.04	Individual decision-making	4.23
Fair appraisal system	4.00	Workload and type of work	4.27
Prestige	4.00	Name of the company	4.21
Job performance	4.00	Communication in the workplace	4.19
Selfactualisation	4.00	Work environment	4.14
Social benefits	3.99	Supervisor's approach	4.13
Information about performance result	3.98	Social benefits	4.12
Opportunity to apply one's own ability	3.98	Information about performance result	4.12
Region's development	3.98	Selfactualisation	4.12
Mental effort	3.97	Competences	4.11
Competences	3.97	Relation to the environment	4.11
Individual decision-making	3.96	Job performance	4.10
Working hours	3.95	Education and personal growth	4.09
Job safety	3.94	Physical effort at work	4.09
Career advancement	3.93	Opportunity to apply one's own ability	4.06
Physical effort at work	3.93	Recognition	4.04
Company mission	3.88	Career advancement	3.99
Name of the company	3.87	Prestige	3.92
Relation to the environment	3.64	Company mission	3.87
Education and personal growth	3.63	Job safety	3.87
Recognition	3.59	Region's development	3.84
Free time	3.54	Mental effort	3.82

Tab. 3 Frequency of evaluation and differences in significant motivation factors.

Fringe benefits	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency
	Forest enterprises		Wood-processing enterprises	
1	4	0.79	3	0.49
2	15	2.97	28	4.60
3	45	8.91	88	14.45
4	128	25.35	227	37.27
5	313	61.98	263	43.19
Total	505	100.00	609	100.00
Work environment	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency
	Forest enterprises		Wood-processing enterprises	
1	14	2.77	12	1.97
2	13	2.57	20	3.28
3	79	15.64	127	20.85
4	148	29.31	211	34.65
5	251	49.70	239	39.24
Total	505	100.00	609	100.00
Fair appraisal system	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency
	Forest enterprises		Wood-processing enterprises	
1	3	0.59	6	0.99
2	12	2.38	23	3.78
3	71	14.06	121	19.87
4	178	35.25	250	41.05
5	241	47.72	209	34.32
Total	505	100.00	609	100.00
Basic salary	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency
	Forest enterprises		Wood-processing enterprises	

1	9	1.78	10	1.64
2	16	3.17	29	4.76
3	68	13.47	126	20.69
4	206	40.79	242	39.74
5	206	40.79	202	33.17
Total	505	100.00	609	100.00
Workload and type of work	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency
	Forest enterprises		Wood-processing enterprises	
1	3	0.59	11	1.81
2	13	2.57	35	5.75
3	69	13.66	143	23.48
4	175	34.65	204	33.50
5	245	48.51	216	35.47
Total	505	100.00	609	100.00

Following descriptive statistics, the fact that the motivation factors corresponding with the needs of employees in forest and wood-processing enterprises are similar can be anticipated. It follows our hypothesis WH1. Further analysis is devoted to comparing the level of importance of ten most important motivation factors in wood-processing enterprises with identical motivation factors in forest enterprises using the t-test (Table 4).

Tab. 4 Significant motivation factors in wood-processing and forest enterprises.

Motivation factor	Frequency forest enterprises	Frequency wood-processing enterprises	Mean forest enterprises	Mean wood-processing enterprises	Standard deviation forest enterprises	Standard deviation wood-processing enterprises	t-test	p-level
Atmosphere in the workplace	505	609	4.23	4.33	0.837	0.879	5.155	0.165
Communication in the workplace	505	609	4.16	4.20	1.091	0.980	1.215	0.225
Good work team	505	609	4.30	4.19	0.963	0.876	0.172	0.864
Fringe benefits	505	609	4.45	4.18	0.833	0.884	4.473	0.000
Supervisor's approach	505	609	4.13	4.14	0.893	0.901	0.278	0.781
Basic salary	505	609	4.14	4.29	0.891	0.953	4.646	0.000
Job security	505	609	4.26	4.06	1.027	0.925	0.693	0.488
Workload and type of work	505	609	4.27	4.04	0.922	0.939	2.732	0.006
Fair appraisal system	505	609	4.25	4.00	0.929	0.948	2.992	0.003
Work environment	505	609	4.14	3.97	0.898	0.937	3.182	0.002

Note: Statistically significant differences are in bold.

Following the results of the t-test, the fact that in the motivation factors *fringe benefits*, *work environment*, *fair appraisal system*, *basic salary*, *workload and the type of work* there are statistically significant differences in perceiving the importance of motivation between the employees in wood-processing and forest enterprises can be stated. Therefore, the hypothesis WH2 is refused.

The motivation factor *fringe benefits* was assigned with the highest number of points of importance most often (Table 3). Average values of the level of importance, we worked with, were dependent on the quantity of respondents' responses at individual levels of the Likert scale. 61.98% was the highest level of importance assigned by the employees in forest enterprises. The second highest level of importance was assigned by the employees in wood-processing enterprises – 37.27%, in comparison to 25.35% in forest enterprises.

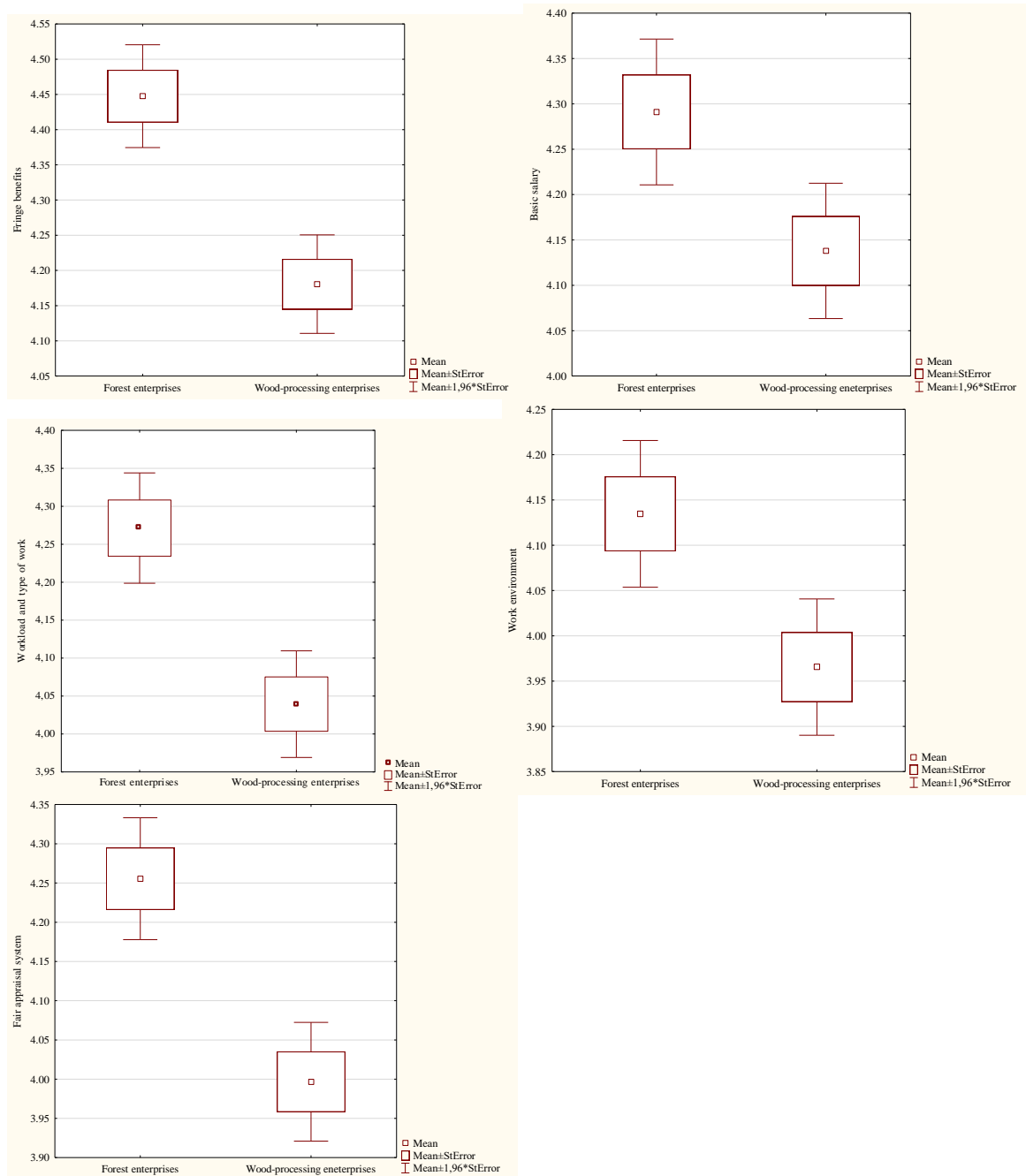


Fig. 1 Box-plots for significant differences in motivation factors in wood-processing and forest enterprises.

In the case of the motivation factor *work environment*, the fact that the average value of the level of motivation of investigated factor in forest enterprises was 4.18, whereby in wood-processing enterprises it was 4.17 was observed. Therefore, the fact that higher motivational power relating to the mentioned factor was in forest enterprises can be stated. When investigating the dependence of the motivation factor *name of the company*, statistically significant differences between forest and wood-processing enterprises were observed.

The motivation factor *fair appraisal system* was evaluated by 47.72% of the respondents with the highest points. In wood-processing enterprises, mentioned factor was considered important by most respondents. It was assigned with four points by 41.05% of the respondents.

When evaluating the motivation factor *basic salary*, the fact that the mentioned factor was assigned with the two highest points of importance by the same number of respondents in forest enterprises can be stated. In the case of wood-processing enterprises, the factor was assigned with the four points by most of the employees, 39.74% of the respondents.

The analysis of the motivation factor *work environment* shows that there were statistically significant differences between the employees in forest and wood-processing enterprises. In forest enterprises, the mentioned factor was considered very important for the future motivation by higher number of respondents evaluating the level of motivation in comparison to the employees in wood-processing enterprises assigning the factor with 3-5 points.

Tab. 5 Significant differences in groups of motivation factors in wood-processing and forest enterprises.

Groups of motivation factors	Frequency forest enterprises	Frequency wood-processing enterprises	Mean forest enterprises	Mean wood-processing enterprises	Standard deviation forest enterprises	Standard deviation wood-processing enterprises	t-test	degrees of freedom	p-level
relating to mutual relationship	1,060	2,436	4.33	4.21	0.810	0.930	3.715	2,293.701	0.000
relating to career aspiration	2,120	4,872	3.98	3.88	1.025	1.000	3.776	6,990.000	0.000
relating to finance	795	1,827	3.81	4.06	1.089	0.991	-5.597	1,391.199	0.000
relating to work conditions	2,385	5,481	4.23	4.01	0.878	0.956	10.189	4,909.395	0.000
relating to social needs	1,590	3,654	3.86	3.85	1.089	1.065	0.398	5,242.000	0.691

Note: Statistically significant differences are in bold.

Following the results of the research and quantity of respondents' responses, the motivational programme for forest and wood-processing enterprises can be defined as follows: motivation factors in forest enterprises must be primarily focused on relationship and work conditions and only secondarily on the career advancement and finances. In wood-processing enterprises the focus must be primarily put on relationship and finances and secondarily on work conditions and career advancement (Figure 2). Subsequently, specific factors affecting the level of motivation in individual branches of industry will be selected. However, the fact that a lot of enterprises are not prepared to implement creative solutions of their managers and lots of managers are not familiar with the impact of motivation factors on the enterprise performance must be mentioned. When the managers' skills improve and their performance optimises, trends in creating motivational programmes will be implemented in practice.

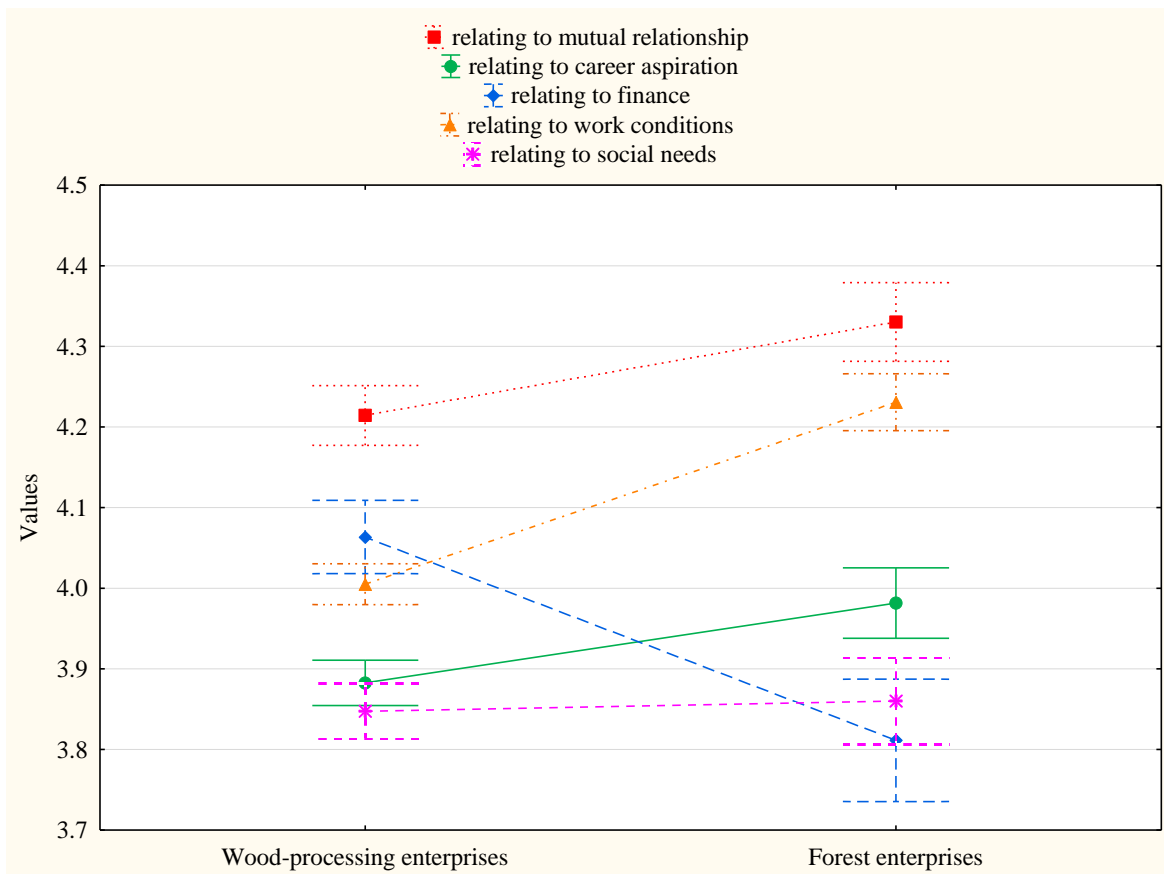


Fig. 2 Box-plots for significant differences in groups of motivation factors in wood-processing and forest enterprises.

CONCLUSION

Essential part of the economy in each country is generated by small and medium-sized enterprises with their huge potential for growth and effect on stabilising the economy and regional development. They are one of the greatest driving power of regional development because of their importance in creating the jobs and business ambitions (KOVALOVÁ *et al.* 2018, BORISOV *et al.* 2018, NEMEC *et al.* 2017, LORINCOVÁ 2015, MUSOVÁ 2015, PALUŠ *et al.* 2015, HAJDUKOVÁ 2014, SCHULER 1992). Progress in economic growth is accompanied with the progress in human resource management and motivational programme (ZHU – WARNER 2019, LORINCOVÁ *et al.* 2018, STACHOVÁ *et al.* 2017, KAMPF *et al.* 2017, KRIŽANOVÁ *et al.* 2017, LIŽBETINOVÁ *et al.* 2016, POLIAČIKOVÁ 2016, GREŇČAY *et al.* 2015, STACHOVÁ – STACHO 2015, SUCHOMEL *et al.* 2012, DEWETTINCK – REMUE 2011, DECI – RYAN 2008, RYAN *et al.* 2006, WRIGHT *et al.* 2001). Motivating employees in the right way is one of the prerequisite for the success of each enterprise (AYDIN – TIRYAKI 2018, MÉSZÁROS 2018).

Following the research, the fact that motivational needs associated with the most important motivation factors of the employees in forest and wood-processing enterprises are partially similar can be stated. The mentioned findings cannot be used in the case of the unified motivational programmes. The employees in wood-processing enterprises were motivated more by the motivation factors relating to relationship and finances. On the other hand, the motivation factors relating to finances and relationship were considered important by the employees in forest enterprises. At the same time, there were significant differences

between individual motivation factors evaluated by the employees in forest and wood-processing enterprises. Following the results, it is clear that motivational programme in specific branches of industry must be created differently.

As creating the motivational programme is very hard and money consuming activity, it must be effective with positive impact on the enterprise economy. Therefore, systematic, thorough analysis of motivational needs of employees is necessary. At the present time, motivational programme can be created following the average importance of individual motivation factors in individual branches of industry in a unified way. In the future, employees' requirements can change. Therefore, the motivational programme should be updated regularly according to the needs of an enterprise. At the same time, the fact that further research studies into motivational needs of employees in terms of gender, age, education, job position and seniority must be carried out can be stated, i.e. further research into this area focused on regional or international differences is expected.

REFERENCES

- ALMOBAIREEK, W., MANOLOVA, T. 2013. Entrepreneurial motivations among female university youth in Saudi Arabia. In *Journal of Business Economics and Management*, 2013, 14(1): S56–S75. (DOI: 10.3846/16111699.2012.711364).
- ANDREWS, C. 2016. Integrating public service motivation and self-determination theory: A framework. In *International Journal of Public Sector Management*, 2016, 29(3): 238–254. (DOI: 10.1108/IJPSM-10-2015-0176).
- ARTZ, B. 2008. The role of firm size and performance pay in determining employee job satisfaction brief: Firm size, performance pay, and job satisfaction. In *Labour*, 2008, 22(2): 315–343. (DOI: 10.1111/j.1467-9914.2007.00398.x).
- AYDIN, A., TIRYAKI, S. 2018. Impact of performance appraisal on employee motivation and productivity in Turkish forest products industry: A structural equation modeling analysis. In *Drvna Industrija*, 2018, 69(2): 101–111. (DOI: 10.5552/drind.2018.1710).
- BAJZIKOVA, L., SAJGALIKOVA, H., WOJCAK, E., POLAKOVA, M. 2013. Are flexible work arrangements attractive enough for knowledge-intensive businesses? In *Procedia Social and Behavioral Sciences*, 2013, 99: 771–783. (DOI: 10.1016/j.sbspro.2013.10.549).
- BALÁŽOVÁ, E., LUPTÁKOVÁ, J. 2016. Application of the economic value added index in the performance evaluation of forest enterprise. In *Journal of Forest Science*, 2013, 62(5): 191–197. (DOI: 10.17221/48/2015-JFS).
- BORISOV, A., NAROZHNAIA, D., TARANDO, E., VORONTOV, A., PRUEL, N., NIKIFOROVA, O. 2018. Destructive motivation of personnel: A case study of russian commercial companies. In *Entrepreneurship and Sustainability Issues*, 2018, 6(1): 253–267. (DOI: 10.9770/jesi.2018.6.1(16)).
- BRADY, P. Q., KING, W. R. 2018. Brass satisfaction: Identifying the personal and work-related factors associated with job satisfaction among police chiefs. In *Police Quarterly*, 2018, 21: 250–277. (DOI: 10.1177/1098611118759475).
- CSEH PAPP, I., VARGA, E., SCHWARCZOVÁ, L., HAJÓS, L. 2018. Public work in an international and Hungarian context. In *Central European Journal of Labour Law and Personnel Management*, 2018, 1(1): 6–16. (DOI: 10.33382/cejllpm.2018.01.01).
- DAUD, N. 2015. Determinants of job satisfaction: How satisfied are the new generation employees in Malaysia? In *The 3rd Global conference on Business and Social Science-2015*. Kuala Lumpur, Malaysia, 2015.
- DAVYDENKO, V. A., KAŹMIERCZYK, J., ROMASHKINA, G. F., ŹELICHOWSKA, E. 2017. Diversity of employee incentives from the perspective of banks employees in Poland - Empirical approach. In *Entrepreneurship and Sustainability Issues*, 2017, 5(1): 116–126. (DOI: 10.9770/jesi.2017.5.1(9)).
- DECI, E. L., RYAN, R. M. 2008. Self-determination theory: A macrotheory of human motivation, development, and health. In *Canadian Psychology/Psychologie Canadienne*, 2008, 49(3): 182.

- DEWETTINCK, K., REMUE, J. 2011. Contextualizing HRM in comparative research: The role of the Cranet network. In *Human Resource Management Review*, 2011, 21: 37–49. (DOI: 10.1016/j.hrmr.2010.09.010).
- DUNFORD, B. B., SNELL, S. A., WRIGHT, P. M. 2001. Human resources and the resource based view of the firm. In *Journal of Management*, 2001, 27: 701–721.
- DUŠAK, M., JELAČIČ, D., BARČIČ, A. P., NOVAKOVA, R. 2017. Improvements to the production management system of wood-processing in small and medium enterprises in southeast Europe. In *BioResources*, 2017, 12(2): 3303–3315. (DOI: 10.15376/biores.12.2.3303-3315).
- FEJFAROVÁ, M., URBANCOVÁ, H. 2016. Human resource management in small and medium-sized enterprises in the Czech Republic. In *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration*, 2016, 36: 79–90.
- FERRARO, T., MOREIRA, J. M., DOS SANTOS, N. R., PAIS, L., SEDMAK, C. 2018. Decent work, work motivation and psychological capital: An empirical research. In *Work*, 2018, 60: 339–354. (DOI: 10.3233/WOR-182732).
- FOREST EUROPE. 2015. State of Europe's Forests 2015. Forest Europe. p. 314, online: www.foresteuropa.org.
- GOSSELIN, A., BLANCHET, P., LEHOUX, N., CIMON, Y. 2017. Main motivations and barriers for using wood in multi-story and non-residential construction projects. In *BioResources*, 2017, 12(1): 546–570. (DOI: 10.15376/biores.12.1.546-570).
- GRANČAY, M., GRANČAY, N., DRUTAROVSKÁ, J., MURA, L. 2015. Gravity model of trade of the Czech and Slovak republics 1995-2012: How have determinants of trade changed. In *Politická Ekonomie*, 2015, 63: 759–777. (DOI: 10.18267/j.polek.1025).
- HAJDÚCHOVÁ, I., SEDLIAČIKOVÁ, M., HALAJ, D., KRISTOFÍK, P., MUSA, H., VISZLAI, I. 2016. The Slovakian forest-based sector in the context of globalization. In *BioResources*, 2016, 11(2), 4808–4820. (DOI: 10.15376/biores.11.1.4808-4820).
- HAJDUKOVÁ, A. 2014. Impact of regional differences on apprehending of the significance of labour factors motivating the employees of woodworking industry on Slovakia. In *Acta Facultatis Xylogologiae*, 2014, 56(1):119–128.
- HITKA, M. 2009. Model analýzy motivácie zamestnancov výrobných podnikov. Zvolen, Slovakia: Technická univerzita vo Zvolene, 2009. 149 s. ISBN 978-80-228-1998-5.
- JELAČIČ, D., GRADINOVIČ, T., PIRC, A., OBLAK, L. 2010. Motivation factors analysis in industrial plants. In *Strojárstvo*, 2010, 52: 349–361.
- JEONG, J., CHOI, M. 2017. The expected job satisfaction affecting entrepreneurial intention as career choice in the cultural and artistic industry. In *Sustainability*, 2017, 9(10): 1–16. (DOI: 10.3390/su9101689).
- KAMPF, R., LIŽBETINOVÁ, L., TIŠLEROVÁ, K. 2017. Management of customer service in terms of logistics information systems. In *Open Engineering*, 2017, 7(1): 26–30. (DOI: 10.1515/eng-2017-0006).
- KAMPF, R., LORINCOVÁ, S., KAPUSTINA L. M., LIŽBETINOVÁ L. 2017. Motivation level and its comparison between senior managers and blue-collar workers in small and medium-sized transport enterprises. In *Communications: Scientific letters of the University of Žilina*, 2017, 19(4): 43–49.
- KANFER, R., CHEN, G., PRITCHARD, R. D. 2012. *Work Motivation: Past, Present and Future*. New York, NY: Routledge, 2012.
- KERTÉSZ, A., SÉLLEI, B., IZSÓ, L. 2017. Key factors of disabled people's working motivation: An empirical study based on a Hungarian sample. In *Periodica Polytechnica Social and Management Sciences*, 2017, 25(2): 108–116. (DOI: 10.3311/PPso.10459).
- KOVALOVÁ, M., HVOLKOVÁ, L., KLEMENT, L., KLEMENTOVÁ, V. 2018. Innovation strategies in the Slovak enterprises. In *Acta Oeconomica Universitatis Selye*, 2018, 7(1): 79–89.
- KRIZANOVA, A., GAJANOVA, L., NADANYIOVA, M. 2017. Design of a CRM level and performance measurement model. In *Sustainability*, 2017, 10(7). (DOI: 10.3390/SU10072567).
- KUCHARČIKOVÁ, A. 2015. The importance of identification and analysis of educational needs for investment in human capital. In *Komunikácie*, 2015, 16(3): 86–92.
- KUCHARČIKOVÁ, A., MIČIAK, M. 2018. Human capital management in transport enterprises with the acceptance of sustainable development in the Slovak Republic. In *Sustainability*, 2018, 10(7). (DOI: 10.3390/su10072530).

- LIŽBETINOVÁ, L. 2017. Clusters of Czech consumers with focus on domestic brands. In *The 29th International Business Information Management Association Conference - Education Excellence and Innovation Management through Vision 2020: From Regional Development Sustainability to Global Economic Growth*. Vienna, Austria, 2017, pp. 1703–1718.
- LIŽBETINOVÁ, L., LORINCOVÁ, S., CAHA, Z. 2016. The application of the Organizational Culture Assessment Instrument (OCAI) to logistics enterprises. In *Nase More*, 2016, 63(3): 170–176. (DOI: 10.17818/NM/2016/SI17).
- LORINCOVÁ, S. 2015. The improvement of the effectiveness in the recruitment process in the Slovak public administration. In *The 9th International Scientific Conference on Business Economics and Management (BEM)*. Zvolen, Izmir, Turkey, 2015, pp. 382–389.
- LORINCOVÁ, S., LIŽBETINOVÁ, L., BRODSKÝ, Z. 2018. Social networks as a tool for job search. In *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration*, 2018, 25(42): 140–151.
- LORINCOVÁ, S., SCHMIDTOVÁ, J., BALÁŽOVÁ, Ž. 2016. Perception of the corporate culture by managers and blue collar workers in Slovak wood-processing businesses. In *Acta Facultatis Xylogiae Zvolen*, 2016, 58(2): 149–163. (DOI: 10.17423/afx.2016.58.2.16).
- LORINCOVÁ, S., SCHMIDTOVÁ, J., JAVORČIKOVÁ, J. (2018). The impact of the working position on the level of employee motivation in Slovak furniture companies. In *Acta Facultatis Xylogiae Zvolen*, 2018, 60(2): 209–221. (DOI: 10.17423/afx.2018.60.2.20).
- LOUČANOVÁ, E., OLŠIAKOVÁ, M., DZIAN, M. 2018. Suitability of innovative marketing communication forms in the furniture industry. In *Acta Facultatis Xylogiae* 2018, 60(2): 159–171. (DOI: 10.17423/afx.2018.60.1.17).
- LOUCANOVA, E., PALUS, H., DZIAN, M. 2017. A course of innovations in wood processing industry within the forestry-wood chain in Slovakia: A Q methodology study to identify future orientation in the sector. In *Forests*, 2017, 8(6): 210. (DOI: 10.3390/f8060210).
- LUCAS, R., MARINOVA, M., KUCEROVA, J., VETRAKOVA, M. 2004. HRM practice in emerging economies: A long way to go in the Slovak hotel industry? In *International Journal of Human Resource Management*, 2004, 15: 1262–1279.
- MASON, R. D., LIND, D. A. 1990. *Statistical Techniques in Business and Economics*. Boston, MA, USA: Irwin, 1990.
- MÉSZÁROS, M. 2018. Employing' of self-employed persons. In *Central European Journal of Labour Law and Personnel Management*, 2018, 1(1): 46–67.
- MINÁROVÁ, M. 2015. Managers in SMEs and their emotional abilities. In *Acta Oeconomica Universitatis Selye*, 2015, 4(1): 83–92.
- MURA, L., KLJUČNIKOV, A., TVARONAVIČIENĚ, M., ANDRONICEANU, A. 2017. Development trends in human resource management in small and medium enterprises in the Visegrad Group. In *Acta Polytechnica Hungarica*, 2017, 14: 105–122. (DOI: 10.12700/APH.14.7.2017.7.7).
- MUSOVÁ, Z. 2015. Responsible behavior of businesses and its impact on consumer behavior. In *Acta Oeconomica Universitatis Selye*, 2015, 4(2): 138–147.
- NEDELIAKOVA, E., PANAK, M. 2015. New trends in process-oriented quality management. In *Procedia Economics and Finance*, 2015, 34:172–179. (DOI: 10.1016/S2212-5671(15)01616-0).
- NEMEC, M., KRISTAK, L., HOCKICKO, P., DANIHELOVA, Z., VELMOVSKA, K. 2017. Application of innovative P&E method at Technical Universities in Slovakia. In *Eurasia Journal of Mathematics Science and Technology Education*, 2017, 13(6): 2329–2349. (DOI: 10.12973/eurasia.2017.01228aa).
- OLŠOVSKÁ, A., MURA, L., ŠVEC, M. 2016. Personnel management in Slovakia: An explanation of the latent issues. In *Polish Journal of Management Studies*, 2016, 13(2): 110–120. (DOI: 10.17512/pjms.2016.13.2.11).
- PALUŠ, H., KAPUTA, V., PAROBEK, J., ŠUPÍN, M., HALAJ, D., ŠULEK, R., FODREK, L. 2011. *Trh s lesníckymi službami*. Zvolen, Slovakia: Technická univerzita vo Zvolene, 2011. 45 s.
- PALUS, H., PAROBEK, J., LIKER, B. 2015. Trade performance and competitiveness of the Slovak wood processing industry within the Visegrad group countries. In *Drvna Industrija*, 2015, 66(3): 195–203. (DOI: 10.5552/drind.2015.1431).
- PEDRAZA MELO, N. A., BERNAL GONZÁLEZ, I. 2018. The organizational climate in the public and business sector from the perception of its human capital. In *Espacios*, 2018, 39.

- POLIAČIKOVÁ, E. 2016. Category management as an effective instrument of relationship management. In *Acta Oeconomica Universitatis Selye*, 2016, 5(1): 119–127.
- ROBBINS, S. P., ODENDAAL, A., ROODT, G. 2007. *Organizational Behaviour: Global and Southern African Perspectives*. Cape Town: Pearson Education, 2007.
- ROSAK-SZYROCKA, J. 2014. Employees motivation at hospital as a factor of the organizational success. In *Human Resources Management & Ergonomics*, 2014, 8(2): 102–111.
- RYAN, R. M., RIGBY, C. S., PRZYBYLSKI, A. 2006. The motivational pull of video games: A self-determination theory approach. In *Motivation and Emotion*, 2006, 30: 344–360.
- SÁNCHEZ-SELLERO, M. C., SÁNCHEZ-SELLERO, P. 2016. Determinants of job satisfaction in Spain before and during the economic crisis of 2008. In *Intangible Capital*, 2016, 12(5): 1192–1220. (DOI: 10.3926/ic.844).
- SCHULER, R. S. 1992. Strategic human resources management: Linking the people with the strategic needs of the business. In *Organizational Dynamics*, 1992, 21(1): 18–32.
- STACHO, Z., STACHOVÁ, K., HUDÁKOVÁ, M., STASIAK-BETLEJEWSKA, R. 2017. Employee adaptation as key activity in human resource management upon implementing and maintaining desired organisational culture. In *Serbian Journal of Management*, 2017, 12(2): 303–313.
- STACHO, Z., STACHOVA, K., VICEN, V. 2017. Education of employees during dismissal process. In *The 14th International Conference Efficiency and Responsibility in Education 2017 (ERIE)*. Prague, Czech Republic, 2017, pp. 388–395.
- STACHOVÁ, K., PAPULA, J., STACHO, Z., KOHNOVÁ, L. 2019. External partnerships in employee education and development as the key to facing industry 4.0 challenges. In *Sustainability*, 2019, 11(2). (DOI: 10.3390/su11020345).
- STACHOVÁ, K., STACHO, Z. 2015. Outplacement as part of human resource management. In *Procedia Economics and Finance*, 2015, 34, 19–26. (DOI: 10.1016/S2212-5671(15)01596-8).
- STACHOVÁ, K., STACHO, Z., VICEN, V. 2017. Efficient involvement of human resources in innovations through effective communication. In *Business: Theory and Practice*, 2017, 18: 33–42.
- STONE, R. J. 2005. *Human Resource Management*. Milton: John Wiley and Sons, 2005.
- SUCHOMEL, J., GEJDOŠ, M., AMBRUŠOVÁ, L., ŠULEK, R. 2012. Analysis of price changes of selected roundwood assortments in some central Europe countries. In *Journal of Forest Science*, 2012, 58(11): 483–491. (DOI: 10.17221/98/2011-JFS).
- TOKARČIKOVÁ, E., KUCHARČIKOVÁ, A. 2015. Diffusion of innovation: The case of the Slovak mobile communication market. In *International Journal of Innovation and Learning*, 2015, 17(3): 359–370. (DOI: 10.1504/IJIL.2015.068467).
- VETRÁKOVÁ, M., ĎURIAN, J., SEKOVÁ, M., KAŠČÁKOVÁ, A. 2016. Employee retention and development in pulp and paper companies. In *BioResources*, 2016, 11(4): 9231–9243. (DOI: 10.15376/biores.11.4.9231-9243).
- VETRÁKOVÁ, M., SMEREK, L., SEKOVÁ, M. 2017. The importance of human resources management in business practice in Slovakia. In *The 30th International Business Information Management Association Conference, IBIMA 2017 - Vision 2020: Sustainable Economic development, Innovation Management, and Global Growth*. Madrid, Spain, 2017, pp. 2481–2487.
- WRIGHT, P. M., DUNFORD, B. B., SNELL, S. A. 2001. Human resources and the resource based view of the firm. In *Journal of Management*, 2001, 27: 701–721.
- XU, Y., WANG, Y., TAO, X., LIŽBETINOVÁ, L. 2017. Evidence of Chinese income dynamics and its effects on income scaling law. In *Physica A: Statistical Mechanics and its Applications*, 2017, 487: 143–152. (DOI: 10.1016/j.physa.2017.06.020).
- ZELENÁ SPRÁVA. Zvolen, Slovakia: Národné lesnícke centrum, 2017. 68 s.
- ZHU, C. J., WARNER, M. 2019. The emergence of human resource management in China: Convergence, divergence and contextualization. In *Human Resource Management Review*, 2019, 29(1): 87–97. (DOI: 10.1016/j.hrmr.2017.11.002).
- ŽUPERKIENĚ, E., ŽILINSKAS, V. J. 2008. Analysis of factors motivating the managers' career. In *Engineering Economics*, 2008, 2(57): 85–91. (DOI: 10.5755/j01.ee.57.2.11536).

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