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## THE DEGREE OF USE OF MOTIVATIONAL FACTORS DEPENDING ON THE SECTOR AND SIZE OF ENTERPRISES\*

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**Abstract.** The paper aims to examine the impact of an enterprise size (by the number of employees) and the enterprise's industry on the level of using individual types of motivation factors. For the set goal, a questionnaire survey was selected, which was distributed to the research sample. The formulated research questions were answered using the statistical relationships of the Chi-squared test, Shapiro-Wilk test, and Kruskal-Wallis test. In terms of the enterprise size by the number of employees, the validity of the expected trend was confirmed, i.e., the level of using individual motivation factors grows with the number of employees; enterprises with 250 and more employees most use motivation factors. Most of these enterprises chose between 4 and 5 points on the 5-point scale where 1 indicates the lowest level, while 5 the highest level using motivation factors. In terms of classification by industry, the impact of industry on the level of using motivation factors was analysed. The highest level of using motivation factors was identified in enterprises focused on transportation and logistics. For these enterprises, the level of using motivation factors was even higher than in manufacturing enterprises or enterprises active in the services industry. Furthermore, the results show that regarding the classification of enterprises by the number of employees, only career and social motivation factors are statistically significant. Statistical significance was confirmed only for relational motivation factors in the classification of enterprises by industries.

**Keywords:** employee motivation; company motivation; motivational factors; company size; company sector

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**JEL Classifications:** O35, L25, J21

### 1. Introduction

Motivation enhances the creativity, innovation, and professional development of employees. It is a key to high business standards (Žunac et al., 2019), especially work motivation is an essential factor affecting the overall performance of enterprises. If properly motivated, employees show better performance and are more effective and

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productive. Employee motivation is not of the same importance for every enterprise or organisation (Stefko et al., 2016). Management, remuneration, and motivation have a positive and important impact on employee performance (Gavurova et al., 2018; Mulyani et al., 2019; Agapito et al., 2022). Eliciting excellent employee performance is the major challenge for managers of organisations in the current hypercompetitive business environment. Although few studies have confirmed the influence of intrinsic motivation on work performance, the role of mediators, such as employee creativity, has not been sufficiently examined in this relationship (Inaneswar & Ranjit, 2022; Belas et al., 2022). Even though the most powerful employee motivation instrument might seem to be wage, research shows that is unambiguous and employees are motivated by many other motivation factors, such as the possibility for career growth or using suitable working conditions or working environment and atmosphere (Gavurova et al., 2020; Tahiri et al., 2022). For example, in terms of competition, manufacturing enterprises are increasingly more focused on employee performance and motivation, which seems to be a prerequisite for long-term employee performance and thus, the sustainable success of the enterprise (Olah et al. 2021; Krajčák, 2021). A demanding and most important task of managers is managerial decision-making, another phenomenon attracting scholars' attention (Belas et al., 2019; Habaník et al., 2020). Motivating employees and strengthening their confidence at work can also affect their perception of the working environment, especially if they work with others. In this context, Yoon (2020) states that the intensity of the mediated relationship between customer incivility and the performance of a given service by an employee varies based on employee self-evaluation. According to the author's research, the negative indirect effect of customer friendliness through intrinsic motivation on the performance of services was weaker for employees with a high level of self-esteem than employees with a low level of self-esteem.

The paper is the response to the current demand for examining motivation factors in the working environment and their impact on employee performance in different size categories, and industries enterprises operate in. Determining specific groups of motivation factors depending on the industry and size of enterprises can benefit these enterprises. It can help them motivate their employees to a large extent in a better and less costly way.

The paper aims to determine the currently most widely used motivation factor depending on the different size categories of enterprises and the industry they operate in.

1. What size category of enterprises uses motivation factors most?
2. What type of enterprises, by their line of business, use motivation factors most?

## **2. Theoretical background**

Entrepreneurship is essential for a country's economic growth and wealth (Wang et al., 2022a; Wang et al. 2022b; Xu et al., 2021). Entrepreneurs are responsible for generating income for themselves as well as for others in the form of creating job opportunities (Khairuddin et al., 2019; Hur and Bae, 2021; Košč et al., 2021). An enterprise is where an activity contributing to the enterprise's success takes place. When an enterprise wants to succeed and achieve its goals and development, employees must be the focus of its attention. The current trends indicate that human resources are considered the most important of all enterprises' assets. Employee motivation may lead to high performance, effectiveness, quality, and subsequent success of the organisation and its development (Hitka et al., 2020; Kovaříková et al., 2021). Organisations need to improve and increase employee self-development in the rapidly changing business world to achieve sustainable development. The study by Zhou et al. (2019) aims to determine how and under which circumstances job autonomy enhances employee self-development. Human energy is often perceived as a limited source consumed by the efforts expended at work and thus needs to be replenished during or after work. However, according to the self-determination theory of motivation, individuals differ in the degree to which they perceive work as exhausting; autonomous motivation makes work seem effortless, while controlled motivation is perceived as effortful (Parker et al., 2021).

Work motivation plays an essential role in the development of organisations, as it increases employee productivity and effectiveness (Privara 2019a; Lavičková et al., 2021; Kmecová, 2021; Vo et al., 2022). Employee motivation is critical for a successful organisation; therefore, every company should focus on motivating human resources to remain competitive in the market and avoid problems such as losing employees, which would negatively affect its business. A successful company should thus have established effective motivation practices. Implementing motivational methods adjusted to the environment of a given organisation and its employees increases the satisfaction of its employees, who will feel more motivated to top performance (Ližbetinová et al., 2017; Parjoleanu, 2021; Kabir, 2021). Motivation plays a crucial role in employee productivity (Škare et al., 2013; Grumstrup et al., 2021; Al-Omoush et al., 2022). Although organisations are generally interested in motivating their employees, they are not always aware of what motivates them (Privara et al., 2018; Uka & Prendi, 2021; Nováková et al., 2022).

Motivation is considered one of the essential prerequisites of success and effectiveness of the resulting performance. In a company, it usually applies only the perspective of employee motivation from the side of the enterprise. However, employee motivation is also influenced by the external environment, i.e., the macro environment (Hitka et al., 2021). The performance of employees and, thus, the whole enterprise is determined by human resources management. A crucial factor is the impact of motivation and satisfaction of the needs of employees on improving performance at the desired level (Hitka et al., 2020; Přívara & Rievajová, 2021; Liu et al., 2021).

Superiors and managers play an increasingly more critical role in employee motivation (Kaabomeir et al., 2022; Privara, 2022; Habes et al., 2021; Rowland et al., 2021). Theoretically and practically, it is vital to understand how leaders can enhance the pro-social motivation of pro-active employees and encourage them to support organisations by taking the lead (Xu et al., 2021; Galstyan et al., 2021; Nikolova et al., 2022). Employee relations arise from "working relationships" in the industrial environment. The industry provides the environment for employee relationships. Production and productivity depend on the type of employee relationships within a given organisation. Existing positive employee relationships influence the overall performance of an organisation. The key factors affecting relationships include the internal communication system, trust among employees, best HR/IR management policies, leadership style, and goals of individuals and organisations (Koneru, 2019; Přívara, 2019b; Vorobeve & Dana, 2021; Sun et al., 2022). In his research, Umarani (2022) confirmed a direct relationship between employee motivation and job performance. Enterprises should focus on motivating employees by all possible means to improve their performance.

Employee perception of the organisation has a substantial effect on their motivation for public service. Literature on the inspiration for public service is focused mainly on how motivation for public service influences the results related to an organisation's performance and public service outcomes (van der Voet & Steijn, 2019; Sahoo & Pradhan, 2021; Klatt & Fairholm, 2022). How does the perception of working people influence their intrinsic motivation? It has been found that working non-standard hours (weekends/holidays) vs standard working hours (Monday–Friday, 9–5) undermines people's intrinsic motivation for their professional and academic pursuits. Working non-standard hours decreases intrinsic motivation because it makes people consider better use of their time. This means that people generate more upward counterfactual thoughts, which causes working hours to reduce intrinsic motivation (Přívara, 2021; Vochozka et al., 2021; Giurge & Woolley, 2022). Appropriate leadership has a positive effect on innovative employee behaviour through autonomous motivation. It has been found that a positive relationship between spiritual leadership and autonomous motivation was more robust if the focus on remote working employees was high (Zhang, 2020; Vochozka et al., 2020; Štefančík et al., 2021).

According to Manzoor et al. (2021), intrinsic rewards positively and significantly impact employee performance. Specifically, employee motivation mediates the relationship between intrinsic motivation and employee performance. Paais and Pattiruhu (2020) state that work motivation and organisational culture have a positive and

important effect on performance but do not significantly influence employee job satisfaction, while leadership positively and significantly influences employee job satisfaction but does not have an important effect on performance. Al Altheeb (2020) argues that leaders motivate employees by employing implementing structures aimed at fully exploiting the employee potential, organisational resources, and directing, which, however, can cause difficulties in instilling trust, achieving corporate goals, promoting alignment, and fostering the environment for cooperation.

### 3. Research objective and methodology

The data for this paper were obtained through a questionnaire survey conducted in SMEs in the Czech Republic and through research activities (Industry 4.0) implemented in cooperation with the Slovak Academic Association for Personal Management (SAAPM). A total of 610 enterprises participated in the research. The data collection was conducted in the first half of 2020 using the method of interviewing. The questionnaire comprised 8 areas (A – H), with each area including scaled questions. For each set of questions, its actual applicability and importance for the future of the company was assessed.

The data obtained from all 610 enterprises were analysed. Out of the 610 enterprises, three did not specify the industry they operate in, and 26 enterprises stated they operate in more than one industry. These enterprises will be excluded from the sample to increase the informative value of the analysis results. The resulting sample thus consists of 581 enterprises.

The results will be developed based on the formulas below:

Chi-square test of independence:

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^s \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad (1)$$

where  $O_{ij}$  = observed cell frequencies a  $E_{ij}$  = expected (expected) cell frequencies and the sum goes over all  $s \times r$  cells in the table, where  $r$  = number of rows and  $s$  = number of columns in the table.

Shapiro-Wilk test:

$$W = \frac{(\sum_{i=1}^n a_i x_{(i)})^2}{\sum_{i=1}^n (x_i - \bar{x})^2}, \quad (2)$$

where  $x_{(i)}$  (with parentheses enclosing the index of index  $i$ ; not to be confused with  $x_i$ ) is  $i$ th order statistics, i.e.  $i$ th- the smallest number in the sample;  $\bar{x} = (x_1 + \dots + x_n) / n$  is the sample mean.

Kruskal-Wallis test:

$$H = \frac{12}{N(N+1)} \sum_{i=1}^C \frac{R_i^2}{n_i} - 3(N+1) \quad (3)$$

where  $C$  = number of classes,  $n_i$  = number of observations in the  $i$ -th class,  $N = \sum n_i$ , number of observations in all classes,  $R_i$  = the sum of ranks in the  $i$ -th class.

#### 4. Results and discussion

##### 4.1 The effect of company size on the use of motivational factors

The enterprise's size and the assessment of motivational factors are categorical variables. Their relationship will be verified using the chi-square test of independence. Good approximation conditions must be met for this test. These conditions were verified using tables of expected frequencies (see Table 1).

**Table 1.** Contingency tables of observed frequencies: Company size x Career motivation factors

Contingency tables of observed frequencies: Company size x Career motivation factors								
Point evaluation			1	2	3	4	5	Total
Size of the company	1-9	The number of % depending on the size of the company	11	15	23	39	17	105
			11%	14%	22%	37%	16%	100%
	10-49		5	26	25	66	15	137
			4%	19%	18%	48%	11%	100%
	50-249		3	27	40	60	19	149
			2%	18%	27%	40%	13%	100%
	250 and above		2	24	33	77	54	190
			1%	13%	17%	41%	28%	100%
	Total		21	92	121	242	105	581
			4%	16%	21%	42%	18%	100%

Source: own

Depending on the number of employees, all types of companies apply career motivation, most often partially. It is always around 40% of businesses with a given number of employees. Companies with more than 250 employees usually apply this motivation (see Table 2).

**Table 2.** Contingency tables of observed frequencies: Company size x Work motivation factors

Contingency tables of observed frequencies: Company size x Work motivation factors								
Point evaluation			1	2	3	4	5	Total
Size of the company	1-9	The number of % depending on the size of the company	1	8	23	44	29	105
			1%	8%	22%	42%	28%	100%
	10-49		3	8	32	59	35	137
			2%	6%	23%	43%	26%	100%
	50-249		1	9	24	76	39	149
			1%	6%	16%	51%	26%	100%
	250 and above		6	8	24	85	67	190
			3%	4%	13%	45%	35%	100%
			Total		11	33	103	264
2%	6%				18%	45%	29%	100%

Source: own

Depending on the number of employees, all types of enterprises apply work motivation, most often partially. For companies with 50-249 employees, even more, than half of the companies partly use the work motivation factor. Companies with more than 250 employees often apply this motivation (Table 3).

**Table 3.** Contingency tables of observed frequencies: Company size x Social motivation factors

Contingency tables of observed frequencies: Company size x Social motivation factors								
Point evaluation			1	2	3	4	5	Total
Size of the company	1-9	The number of % depending on the size of the company	4	17	27	36	21	105
			4%	16%	26%	34%	20%	100%
	10-49		5	17	45	52	18	137
			4%	12%	33%	38%	13%	100%
	50-249		7	23	43	47	29	149
			5%	15%	29%	32%	20%	100%
	250 and above		1	22	38	76	53	190
			1%	12%	20%	40%	28%	100%
Total			17	79	153	211	121	581
			3%	14%	26%	36%	21%	100%

Source: own

Depending on the number of employees, all types of enterprises apply social motivation, most often partially. It is always at least above 30% of companies of a given size. Companies with more than 250 employees often apply this motivation (Table 4).

**Table 4.** Contingency tables of observed frequencies: Company size x Financial motivation factors

Contingency tables of observed frequencies: Company size x Financial motivation factors								
Point evaluation			1	2	3	4	5	Total
Size of the company	1-9	The number of % depending on the size of the company	2	9	19	41	34	105
			2%	9%	18%	39%	32%	100%
	10-49		4	10	21	54	47	136
			3%	7%	15%	40%	35%	100%
	50-249		3	19	18	69	40	149
			2%	13%	12%	46%	27%	100%
	250 and above		4	9	26	73	78	190
			2%	5%	14%	38%	41%	100%
	Total		13	47	84	237	199	580
2%			8%	15%	41%	34%	100%	

Source: own

Depending on the number of employees, all businesses apply financial incentives, most often partially. It is always at least around 40% of companies of a given size. Companies with more than 250 employees usually apply this motivation (Table 5).

**Table 5.** Contingency tables of observed frequencies: Company size x Relationship motivation factors

Contingency tables of observed frequencies: Company size x Relationship motivation factors								
Point evaluation			1	2	3	4	5	Total
Size of the company	1-9	The number of % depending on the size of the company	2	4	17	42	40	105
			2%	4%	16%	40%	38%	100%
	10-49		3	13	25	52	43	136
			2%	10%	18%	38%	32%	100%
	50-249		2	21	25	60	41	149
			1%	14%	17%	40%	28%	100%
	250 and above		1	14	26	85	64	190
			1%	7%	14%	45%	34%	100%
Total			8	52	93	239	188	580
			1%	9%	16%	41%	32%	100%

Source: own

Depending on the number of employees, all companies apply relational motivation, most often partially. It is always at least around 40% of companies of a given size. Companies with more than 250 employees usually apply this motivation (Table 6).

**Table 6.** Results of chi-square tests - company size

Chi-square test results		
Motivational factors	Test criterion value	p-value
Career	44,785	0,000
Working	16,342	0,176
Social	23,421	0,024
Financial	15,405	0,220
Relational	14,345	0,279

Source: own

A statistically significant dependence on the size of the company and the application of the motivation factor was confirmed for the career and social motivation factors ( $p < 0.05$ ). The size of the business, therefore, matters for these two factors.

According to the contingency tables, the career motivation factor is applied significantly more often by large enterprises with more than 250 employees than by smaller enterprises. Furthermore, companies differ according to the application of the social factor. Completely is applied significantly more often by companies with more than 250 employees than companies with up to 49 employees. Among enterprises with more than 250 employees and from 50 to 249 employees, the application of the social factor at the highest level was not confirmed.

### Overall assessment of the application of motivational factors concerning the size of the enterprise

First, we verify the assumption of a normal distribution of the average assessment of the application of motivational factors in groups according to company size using the Shapiro-Wilk test (Table 7).

**Table 7.** Tests of Normality – company size

Tests of Normality				
	Size of the company	Shapir-Wilk		
		Statistic	df	Sig.
Motivational factors	1-9	0,971	105	0,022
	10-49	0,958	137	0
	50 - 249	0,976	149	0,011
	250 and above	0,945	190	0

Source: own

All p-values (Sig.) are lower than the chosen significance level of 0.05, and the assumption of normality for parametric tests is not met. We will use the non-parametric Kruskal-Wallis test to verify the relationship (Table 8).

**Table 8.** Ranks – company size

Ranks			
	Size of the company	N	
		105	273,5
Motivational factors	10-49	137	271,04
	50 - 249	149	265,33
	250 and above	190	335,19
	Total	581	

Source: own

According to the average rating, motivational factors are the most applied by companies with more than 250 employees (Table 9).

**Table 9.** Test Statistics<sup>a,b</sup> – company size

Test Statistics <sup>a,b</sup>	
Motivational factors	
Kruskal-Wallis H	19,886
df	3
Asymp. Sig.	0

a. Kruskal Wallis Test

b. Grouping Variable: Company size

Source: own

According to the p-value (Sig.) of the test, which is smaller than the chosen significance level of 0.05, we confirm a statistically significant difference between at least one pair of enterprises according to size in the average rating of motivational factors. We will determine which businesses differ using multiple comparison tests (Table 10).

**Table 10.** Pairwise Comparisons of Company Size

Pairwise Comparisons of Company Size				
Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.
50 - 249-10 - 49	5,718	19,792	0,289	0,773
50 - 249-1 - 9	8,179	21,305	0,384	0,701
50 - 249-250 a vice	-69,867	18,297	-3,818	0
10 - 49-1 - 9	2,461	21,687	0,113	0,91
10 - 49-250 a vice	-64,148	18,741	-3,423	0,001
1 - 9-250 a vice	-61,687	20,333	-3,034	0,002

Source: own

Companies with 250 or more employees evaluate the application of motivational factors statistically significantly better than companies with fewer employees.

#### 4.2 The influence of the business sector on the use of motivational factors

Both industry and rating of motivational factors are categorical variables. We will verify their relationship again using the chi-square test of independence. Good approximation conditions must be met for this test. These were verified using tables of expected frequencies. Assessment variants 1 and 2 had to be combined for two motivational factors due to low frequencies (Table 11 and Table 12).

**Table 11.** Contingency tables of observed frequencies: Company sector x Career motivation factors

Contingency tables of observed frequencies: Company sector x Career motivation factors								
Point evaluation			1	2	3	4	5	Total
Company sector	Production	The number of % depending on the size of the company	6	40	45	83	36	210
			3%	19%	21%	40%	17%	100%
	Services		8	28	49	108	45	238
			3%	12%	21%	45%	19%	100%
	Transport and logistics		2	9	9	16	12	48
			4%	19%	19%	33%	25%	100%
	Other		5	15	18	35	12	85
			6%	18%	21%	41%	14%	100%
	Total		21	92	121	242	105	581
		1%	9%	16%	41%	32%	100%	

Source: own

Companies of all surveyed industries most often rate the application of the career factor as partial. They are most often rated as completely applied by companies operating in transport and logistics (25%).

**Table 12.** Contingency tables of observed frequencies: Company sector x Work motivation factors

Contingency tables of observed frequencies: Company sector x Work motivation factors							
Point evaluation			1-2	3	4	5	Total
Company sector	Production	The number of % depending on the size of the company	14	35	93	68	210
			7%	17%	44%	32%	100%
	Services		16	56	101	65	238
			7%	24%	42%	27%	100%
	Transport and logistics		5	5	24	14	48
			10%	10%	50%	29%	100%
	Other		9	7	46	23	85
			11%	8%	54%	27%	100%
	Total		44	103	264	170	581
		8%	18%	45%	29%	100%	

Source: own

Companies of all surveyed industries most often rate the application of the labour factor as partial. They are consistently rated as partial by more than 40% of surveyed companies across fields. Companies operating in transport and logistics (29%) most often place them as wholly applied (Table 13 and Table 14).

**Table 13.** Contingency tables of observed frequencies: Company sector x Social motivation factors

Contingency tables of observed frequencies: Company sector x Social motivation factors								
Point evaluation			Point evaluation	2	3	4	5	Total
Company sector	Company sector	The number of % depending on the size of the company	7	34	58	69	42	210
			3%	16%	28%	33%	20%	100%
	Services		6	32	60	91	49	238
			3%	13%	25%	38%	21%	100%
	Transport and logistics		1	5	14	15	13	48
			2%	10%	29%	31%	27%	100%
	Ostatní		3	8	21	36	17	85
			4%	9%	25%	42%	20%	100%
Total			17	79	153	211	121	581
			3%	14%	26%	36%	21%	100%

Source: own

Companies of all surveyed industries most often rate the application of the social factor as partial. They are consistently rated as partial by more than 30% of surveyed companies across fields. Companies operating in transport and logistics (27%) often place them as wholly applied.

**Table 14.** Contingency tables of observed frequencies: Company sector x Financial motivation factors

Contingency tables of observed frequencies: Company sector x Financial motivation factors								
Point evaluation			Point evaluation	2	3	4	5	Total
Company sector	Company sector	The number of % depending on the size of the company	5	19	32	82	71	209
			2%	9%	15%	39%	34%	100%
	Services		6	19	36	100	77	238
			3%	8%	15%	42%	32%	100%
	Transport and logisti		0	4	4	24	16	48
			0%	8%	8%	50%	33%	100%
	Other		2	5	12	31	35	85
			2%	6%	14%	37%	41%	100%
	Total		13	47	84	237	199	580
2%			8%	15%	41%	34%	100%	

Source: own

Companies of all surveyed industries most often rate the application of the financial factor as partial. Around 40% of surveyed companies across fields consistently place them as partial. In transport and logistics, it is even half of the companies. They are most often rated as completely applied by companies doing business in other fields (41%) (Table 15).

**Table 15.** Contingency tables of observed frequencies: Company sector x Relationship motivation factors

Contingency tables of observed frequencies: Company sector x Relationship motivation factors							
Point evaluation			Point evaluation	3	4	5	Total
Company sector	Company sector	The number of % depending on the size of the company	32	34	89	54	209
			15%	16%	43%	26%	100%
	Services		18	41	94	85	238
			8%	17%	40%	36%	100%
	Transport and logistics		7	5	13	23	48
			15%	10%	27%	48%	100%
	Other		3	13	43	26	85
			4%	15%	51%	31%	100%
	Total		60	93	239	188	580
		10%	16%	41%	32%	100%	

Source: own

Companies operating in production, services and other fields often rate the relationship factor application as partial. Companies operating in transport and logistics evaluate the application of the relationship factor most often as fully applied (Table 16).

**Table 16.** Results of chi-square tests - business sector

Results of chi-square tests		
Motivational factors	The value of the test criterion p-value	The value of the test criterion p-value
Career	10,092	0,608
Working	15,719	0,073
Social	6,578	0,884
Financial	6,439	0,892
Relational	24,245	0,004

Source: own

A statistically significant dependence of the sector and application of the motivation factor was confirmed only for the relational motivation factor ( $p < 0.05$ ). So this factor depends on the industry.

Companies doing business in transport and logistics evaluate the relational motivation factor as partial significantly less often than companies doing business in other surveyed fields. Companies doing transport and logistics rate the relational motivation factor as completely applied significantly more often than companies doing business in other surveyed areas.

### Overall assessment of the application of motivational factors concerning the size of the enterprise

First, we verify the assumption of a normal distribution of the average rating of the application of motivational factors in groups by industry using the Shapiro-Wilk test (Table 17).

**Table 17.** Tests of Normality – a company sector

Tests of Normality				
	Industry	Shapiro-Wilk		
		Statistic	df	Sig.
Motivational factors	Production	0,974	210	0,001
	Services	0,966	238	0,000
	Transport and logistics	0,908	48	0,001
	Other	0,971	85	0,052

Source: own

All p-values (Sig.) except one are below the chosen significance level of 0.05; the assumption of normality for parametric tests is not met. To verify the relationship, we will use the non-parametric |Kruskal-Wallis test (Table 18).

**Table 18.** Ranks – a company sector

Ranks			
	Industry	N	Mean Rank
Motivational factors	Production	210	278,22
	Services	238	295,03
	Transport and logistics	48	318,58
	Other	85	295,70
	Total	581	

Source: own

According to the average rating, motivational factors are the most applied by companies engaged in transport and logistics (Table 19).

**Table 19.** Test Statistics<sup>a,b</sup> – company sector

Test Statistics <sup>a,b</sup>	
Motivational factors	
Kruskal-Wallis H	2,738
df	3
Asymp. Sig.	0,434

a. Kruskal Wallis Test

b. Grouping Variable: Company sector

Source: own

According to the p-value (Sig.) of the test, which is higher than the chosen significance level of 0.05, we do not confirm a statistically significant difference between companies by sector in the average rating of motivational factors.

The first set of results concerns the relationship between enterprise size and the level of using individual motivation factors.

The results indicate that career motivation factors are used in both small and large enterprises; however, there is a difference in the level of using career motivation actors. According to the results, the highest level of using career motivation factors was recorded mainly in enterprises with 250 and more employees, with more than 65 % of the enterprises selecting the value 4 or 5.

Career motivation factors are used mostly in enterprises with 50–249 employees, which mostly chose the value 4, and in large enterprises with 250 and more employees, which mostly chose the value of 4 or 5.

The third type of motivation factors, social motivation factors, is again used mainly in large enterprises, and its use decreases proportionally with the decreasing number of employees. Nearly 80 % of the addressed large enterprises with more than 250 employees chose 4 or 5 points in the responses to this set of questions.

The analysis of the use of financial motivation factors provided clear results. Even this type of motivation factors is used mainly in large enterprises with more than 250 employees when a point score 4 or 5 was chosen by nearly 80 % of them.

The last type of motivation factors, relational factors, showed the same results, i.e., even this motivation factor was most used in large enterprises with more than 250 employees, with almost 80 % of responses scoring 4 or 5.

The subsequent summary analysis confirmed the statistical significance of the statement that the use of career and social motivation factors depends on company size.

Another finding is that large enterprises with more than 250 employees generally use individual motivation factors to a much greater extent than enterprises with a smaller number of employees.

In conclusion of this section, the statistically significant difference between at least one pair of enterprises by size in terms of the average rating of motivation factors depending on the size has been confirmed.

The second part of the results deals with analysing the effect of industry on the level of using individual types of motivation factors.

The results show that in the case of career motivation factors, their dominant use was recorded in enterprises operating in the transport and logistics industries, with a percentage of responses with 4 and 5 points is higher than 50 %.

Work motivation factors are similar to career motivation factors, achieving very similar results. Even in this case, the level of using this type of motivation is highest in enterprises operating in the transport and logistics sectors, with the percentage share of responses with a point score 4 or 5 exceeding 75 %.

The level of using social motivation factors follows the trend set by the above motivation factors. It has again been confirmed that the highest level of using this type of factors is in enterprises operating in the transport and logistics industries, with the percentage of responses with a point score of 4 or 5 exceeds 50 %.

As for financial motivation factors, a different trend is noticed, as this type of motivation factors is most used in enterprises operating in other industries. The percentage of responses with a point score of 4 and 5 exceeds 80 %. In contrast, as for relational motivation factors, the level of their use was again highest in the transport and logistic companies.

However, the summary analysis shows that only the use of relational motivation factors is significantly essential. This means that the kind of industry an enterprise operates in is meaningful only in this type of motivation factor. It has also been found that transport and logistic enterprises generally use any motivation factors to a much larger extent compared to enterprises operating in other industries.

The identified difference in the average use of various motivational factors in dependence on the industry is thus not statistically significant.

#### 1. What size category of enterprises uses motivation factors most?

The above results confirm that the overall level of using all types of motivation factors in enterprises grows with the size of an enterprise (by the number of employees). The finding that the above motivation factors are used most in enterprises with 250 and more employees confirms this trend.

#### 2. What type of enterprises by their line of business use motivation factors most?

In general, in terms of the classification of enterprises by the industry they operate in, motivation factors are used similarly. However, the results have shown that transport and logistic enterprises use the above motivational factors to the greatest extent.

Similar results were also found by (van der Voet and Steijn., 2019; Klatt and Fairholm, 2022), who found that it is also crucial to how the employees perceive the efforts of the company they work for to educate them.

### **5. Conclusions**

The paper aimed to determine the currently most widely used motivation factor depending on size, category and industry.

The first step to achieving the set goal was formulating research questions and data collection. The data were further analysed and divided according to the selected methodology of the paper. The data were collected

through a questionnaire in the context of Industry 4.0. The collected data were subject to statistical analysis and evaluated using Chi-squared test, Shapiro-Wilk test, and Kruskal-Wallis test.

The results of the research show that motivation factors are generally used in enterprises to a large extent, regardless of the size of the company or the industry it operates in. Regarding the classification of enterprises by their size, it has been found that the level of using motivation factors grows with the company size (by the number of employees). These results had been anticipated; the reason could be the higher budget for human resources management in larger enterprises, which means larger enterprises can offer their employees interesting training. As for the classification of enterprises by their line of business, interesting findings have been obtained, indicating that the highest level of using motivation factors is in enterprises operating in the transport and logistics industries. This is an astonishing finding, as the higher level of using motivational factors had been anticipated for other industries, especially the manufacturing sector and services.

The results can be used to get a general overview of motivation factors in enterprises. They can help small enterprises realise that employee motivation is essential even in small enterprises and that investment in quality training programs can increase the company's profit. The research's limitation is the selected method, a questionnaire survey, precisely the number of questions and respondents).

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