

# INFLUENCE OF SELECTED MACROECONOMIC INDICATORS ON EMPLOYEE MOTIVATION

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**Abstract:** Motivation is considered one of the most important prerequisites for the success and effectiveness of the resulting performances. Usually, we meet only with a perspective of employee motivation from inside the company. However, the external environment, i.e. macro-environment, also influences the motivation of employees. We decided to focus on exploring how macroeconomic indicators evolution affects employee motivation. By means of the research conducted in Slovakia during the period from 2008 to 2019 on a sample of more than 30,000 respondents, we define the dependence of selected macroeconomic indicators and employee motivation. The research focuses on the analysis of average annual wage and household debt influence on the most important employees' motivational factors. Based on our findings, we can state that macroeconomic indicators affect the importance of motivational factors in Slovakia. Especially, the average annual wage strongly influences the six motivational factors (communication at the workplace, duties and type of work, working hours, working environment, superior approach, psychological burden). The results of the research also show that the seven motivational factors (atmosphere at the workplace, good team, communication at the workplace, working hours, working environment, superior approach, psychological burden) strongly depend on the macroeconomic indicator of household debt. Therefore, when creating incentive programs, business managers in Slovakia should take into account not only the effects of the company's microenvironment on motivation but also the effects of the macro-environment and thus macroeconomic changes in the state. The role of a manager is to keep balance between external environment influence on employee motivation and internal actions. The paper presents inspiring ideas in a field of employee motivation and the influence of external environment on motivation.

**Keywords:** Employee motivation, macroeconomic indicators, average annual wage, household debt.

**JEL Classification:** E71, M54.

**APA Style Citation:** Hitka, M., Ďurian, J., Lorincová, S., & Dúbravská, B. (2021). Influence of Selected Macroeconomic Indicators on Employee Motivation. *E&M Economics and Management*, 24(3), 4–22. <https://doi.org/10.15240/tul/001/2021-03-001>

## Introduction

In recent years, the importance of human resource management in companies has been growing unstoppably. It is related to the growth

of modern technologies, the education of the population, dynamic movements in the market of goods and labour, the democratisation of society, etc. However, in the face of growing pressure,

the complexity of change, and the competition they face on a daily basis, most executives have to cope with the growing conflict and divide between management and leadership requirements of organisations. Managers work under a lot of pressure and stress, so they do not have the time and sometimes the desire to be a leader, and conversely, leaders do not manage to be managers. Combining the two functions is extremely difficult. Because every company works first and foremost with people, there is always a large number of tasks that the company must successfully solve in order to exist. Since human resources are of strategic importance to everyone today, they are a prerequisite for the existence of the company and its further development. The management experience of top companies proves that what distinguishes them from average and below average is not commonly used technology or formal organisational and management procedures, but above all the ability to use people's creative potential and engage them in integrated efforts for business goals and at the same time personal expectations and attitudes arising from the needs of their employees. The employee's attitudes and behaviour are determined on the one hand by his views and upbringing, on the other hand, by the experience from the previous period, which shapes his future expectations. The conditions of his work and the expectations of the company are constantly confronted with these ideas and can lead to corrections of behaviour in a positive but also in a negative sense. In addition to internal factors that can be influenced by the company, there are also factors of the external environment that the company cannot influence. These are various social, political, technological and economic changes. The paper enriches the current level of knowledge of work motivation issues by macroeconomic factors influence analysis. The aim of the work is to define the dependence of selected macroeconomic indicators and motivation of employees of Slovak companies. The subject of the research is financial, macroeconomic indicators such as the average annual wage and household debt. We consider salary to be the most important financial motivating factor, which affects not only the level of motivation but also the involvement of employees, their performance and quality of work. From time immemorial, money has been a universal tool

that can serve a variety of needs. It can be about the needs of existential character, status character, the character of pleasure of surplus, etc. If the salary is adequate, an employee is able to satisfy existential and material needs, which is considered to be the strongest motive for human behaviour.

## 1. Theoretical Background

The business environment of the 21st century is characterised by an immense pace of various changes (Hajdúchová & Hlaváčková, 2014; Bajzikova et al., 2017; Kalina, 2020). Dynamic changes at product markets are influencing customer's expectations and demands (Ližbetinová, 2017; Halaj et al., 2018). Companies are under a big pressure (Sedliacikova et al., 2015). According to Jelačić et al. (2015), Strakova et al. (2016), Weberová and Ližbetinová (2016), Štarchoň et al. (2017), Bravena and Stara (2018), Kovaľová et al. (2018), Karpichev et al. (2019), Kohnová et al. (2019), Stacho et al. (2019), Paluš et al. (2019), Stachová et al. (2020), and Neykov et al. (2021), the existence of a company is mostly dependent on the use of different business activities, that are able to maintain the desired market share of the company and at the same time to achieve the planned company revenue. In this context, employee motivation is considered to be the company's primary competitive advantage (Zaborova & Markova, 2018; Bohorquez et al., 2020; Pogodina et al., 2020). There are several definitions of motivation that differ in the way they are expressed or formulated, but which are mostly similar in content. The designation motivation is used for virtually all the circumstances, facts or situations that people experience, perceive as important, and to which the question of why, for what reason, on what incentives and decision-making. In the business environment, it is essentially a process that fills in energy, directs and promotes employee behaviour and performance (Luthans, 1999). Concerning work motivation, Klopotan et al. (2018) state, that motivation has an impact on employees. It helps them reach the pinnacle of their abilities. Motivated employees are subsequently innovative, believe in themselves, which is beneficial to the success of the company (Yang & Jiang, 2010; Stacho & Stasiak-Betlejewska, 2014). According to research of Bowen and

Radhakrishna (1991), Kropivšek et al. (2011), Rajhans (2012), Stacho et al. (2017), and Bohorquez et al. (2020), highly motivated employees are a valuable asset for businesses, because they bring value, new ideas and increase efficiency, quality and productivity of work. Motivated employees are able to create positive attitudes. They are more likely to accomplish better work performance (Crewson, 1997; Afsar & Umrani, 2020). They show a higher level of commitment to the enterprise. For this reason, the strength of motivation should never be underestimated, since it is an essential element that enables the enterprise to survive (Smith, 1994; Stachová et al., 2018; Anguelov et al., 2020; Olafsen & Bentzen, 2020).

Previous research (Joniaková & Blšťáková, 2015; Antov et al., 2017; Stalmasekova et al., 2017; Bellé & Cantarelli, 2018; Mahmoud et al., 2020; Ritala et al., 2020) point to a wide range of factors that influence employee motivation. According to the research of Achim et al. (2013), Srivastava (2014), Barreto et al. (2018), Renard and Snelgar (2018), and Ju (2020), money is the primary factor of motivation that motivates employees to efficiency. This factor has the ability to maintain and motivate individuals to do better, because an individual can use the money to meet their needs. Also, the research of Dahake (2018) confirms the fact, that financial remuneration is a key motivating factor, as it has a significant impact on the building of care and the commitment of employees to the company. Studies by Elton Mayo have found that employees are not motivated solely by money. According to Herzberg (1968), some employees are motivated by factors such as company policy and administration, supervision, salary, interpersonal relationships, and working conditions; some people may be motivated by factors relating to the content of their work and are therefore motivators themselves. Amabile and Kramer (2010) discovered that the most important factor is career growth. The results of Houston (2000) research show that meaningful work was the most important motivation for both public and private sector employees. Çinar et al. (2011) claim that employees are usually motivated by a combination of different factors. The staff of western economies are motivated primarily by salary and prestige, often complemented by meaning, creation, challenge, ownership, identity, etc (Damij et al.,

2015). According to Chatzopoulou et al. (2015), employees are motivated by work primarily and then by working conditions. The results of the research of Fakhruddinova et al. (2013) show that employees are motivated by factors such as bonuses, career growth, or obtaining the right to purchase shares of the company at a discounted price. Myint et al. (2016) claim that the 'supervisors', 'co-workers', 'compensation', and 'job contents', are factors that lead to job satisfaction.

Extensive attention is paid to motivation as one of the most important prerequisites for the success and effectiveness of the resulting performances. Previous research (Faletar et al., 2016) examines employee motivation in a wood processing company before and after restructuring. Ilea et al. (2020) performed similar research in hospitals. Houston (2000) examined the motivations of both public and private sector employees. Dick (2019) and Rožman et al. (2020) examine motivation in terms of the age of employees. However, when looking at the motivation of employees, we quite often only encounter a view from inside the company. There is no research dedicated to analysis of relationship between employee motivation and macroeconomic factors. This is the reason, why we are opening new knowledge 'niche' in the field of motivation. The external environment, i.e. the macro environment, affects employee motivation, even as internal company factors do. These are all external incentives that affect businesses. Because research conducted by Závadský (2015) shows that the motivation of employees also depends on the economic crisis, which affects the enterprise from the external environment and at the same time according to Jurečka (2013) the economic crisis is reflected in the values of macroeconomic indicators.

## 2. Research Methodology

Research on motivation was carried out in Slovakia. It took place between 2008 and 2019. Data were gathered by electronically distributed questionnaires. The questionnaires were submitted to randomly selected employees working in Slovakia in order to ensure variability and randomness of respondent selection necessary for relevant data acquisition. All part of Slovakia were covered by the research sampling unit. A total of 31,937 respondents participated in the composition, according to Tab. 1.

Tab. 1: Number of respondents in the years of research

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of respondents	339	780	1,822	686	1,054	7,009	4,314	4,099	4,470	3,720	2,104	1,540

Source: own

A questionnaire was developed to find out the level of motivation. Questionnaire consisted of 30 closed questions. We gathered information on the characteristics of the working environment, working conditions, the evaluation and remuneration system, staffing of the undertaking itself, the social welfare system and the employee benefits, as well as information on the value orientation of the employee, the relationship to work, to colleagues and the undertaking as a whole (Hitka, 2009). Respondents assigned one of five degrees of importance according to the Likert scale of importance to each motivation factor (Zumbo et al., 2007). The symmetrical scaler range is from 1 to 5 (value 5 = very important, 4 = important, 3 = neutral, 2 = low important, 1 = not important). We evaluated the level of importance by the arithmetic mean and other mathematical-statistical methods. In examining the influence of selected macroeconomic indicators on the level of employee motivation, a paired regression was used. A regression model (regression line) has a form of linear function (Pacáková, 2009):

$$f(a, b) = \sum (y_i - a - bx_i)^2 \quad (1)$$

The parameters of the formula of straight line  $a$ ,  $b$  were determined based on the following:

$$a = \frac{\sum x_i^2 \sum y_i - \sum x_i \sum x_i y_i}{n \sum x_i^2 - (\sum x_i)^2} \quad (2)$$

$$b = \frac{n \sum x_i y_i - \sum x_i \sum y_i}{n \sum x_i^2 - (\sum x_i)^2}$$

The calculated parameters  $a$ ,  $b$  have been entered in the general shape of the straight-line formula:

$$\bar{y} = a + bxi \quad (3)$$

The degree of dependence between variables was characterised by rates of tightness of statistical dependence in the function (Pacáková, 2009):

$$r = \frac{cov(X, Y)}{S_x * S_y} = \dots = \frac{\sum x_i y_i - n \bar{x} \bar{y}}{\sqrt{\sum x_i^2 - n \bar{x}^2} * \sqrt{\sum y_i^2 - n \bar{y}^2}} \quad (4)$$

The correlation coefficient ( $r$ ) achieves the values from an interval of  $\{-1; 1\}$ . They determine the degree of linear dependence between the variables  $X$  and  $Y$ . The closer the value of the correlation coefficient is to 1, the stronger is the linear dependence and conversely (Pacáková, 2009):

$ r  < 0.3$	low dependency
$0.3 \leq  r  < 0.5$	mild dependency
$0.5 \leq  r  < 0.7$	significant dependency
$0.7 \leq  r  < 0.9$	high dependency
$0.9 \leq  r  <  r $	very high dependency

The coefficient of determination ( $r^2$ ) is the proportion of the variance in the dependent variable that is predictable from the independent variable. Theoretical values were estimated according the regression line. We stated the levels of correlation tightness by the coefficient of determination as follow (Pacáková, 2009):

$r^2 < 0.3$	low tightness
$0.3 \leq r^2 < 0.5$	mild tightness
$0.5 \leq r^2 < 0.7$	significant tightness
$0.7 \leq r^2 < 0.9$	high tightness
$0.9 \leq r^2 <  r $	very high tightness

**Tab. 2: Development of macroeconomic indicators in Slovakia**

Indicator	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Average annual wage (EUR)	10,980	11,089	11,462	11,967	11,861	11,730	11,819	12,048	12,494	12,915	13,201	
Household debt (% GDP)	SR	21.91	24.40	27.31	27.81	29.16	30.90	32.92	35.23	37.49	40.43	42.64
	EU 28	51.86	51.50	53.70	54.45	53.75	53.63	52.90	51.39	50.46	50.37	50.00

Source: Statistica.com; ceicdata.com

**Tab. 3: The importance of motivational factors between 2008 and 2019**

No.	Motivational factor	Arithmetic mean
1.	Basic salary	4.43
2.	The atmosphere at the workplace	4.40
3.	Good team	4.38
4.	Job assurance	4.35
5.	Fair employee assessment	4.33
6.	The supervisor's approach	4.33
7.	Financial incentives	4.28
8.	Communication at the workplace	4.22
9.	Working hours	4.13
10.	Work environment	4.12
11.	Job performance	4.09
12.	Social benefits	4.06
13.	Recognition	4.06
14.	Duties and type of work	4.03
15.	Stress (stress elimination at the workplace)	4.02
16.	Education and personal growth	4.01
17.	Leisure time	4.01
18.	Working procedures	3.99
19.	Opportunity to exercise abilities	3.98
20.	Independent decision making	3.94
21.	Self-actualization	3.93
22.	Feedback on individual performance	3.92
23.	Psychological burden	3.92
24.	Company reputation	3.89
25.	The company's attitude to the environment	3.87
26.	The vision of the company	3.86
27.	Competences	3.82
28.	The physical difficulty of work	3.76
29.	Development of the region	3.74
30.	Prestige	3.67

Source: own

Work hypotheses were subsequently defined:

*H1: We assume that there is a significant dependence between the macroeconomic indicators and the selected incentive factors.*

*H2: We assume that there is a significant dependence between the macroeconomic indicators examined with a 1-year time shift and the selected incentive factors in the current year.*

The data obtained from the research were processed in the program Statistica. The confidence interval of 95% was used.

### 3. Research Results

Based on the history of macroeconomic indicators in Slovakia (Tab. 2) we can conclude that, on the one hand, the average annual wage is rising, but on the other hand household debt is close to 50% of GDP, despite state remedies.

In the next step, we examined the importance of individual motivational factors. The results are presented in Tab. 3. The first 10 motivational factors are factors those employees considered most important during the years 2008–2019.

Based on the results achieved in Tab. 3, we can conclude, that the most important motivating factors are, in particular, financial (basic salary, fair assessment of the employee, financial incentives), relationship (workplace atmosphere, good team, supervisor's approach, communication at the workplace) and job (job security, working hours, working environment) motivational factors.

After most important motivational factors' identification, we can examine the dependence of motivational factors on macroeconomic indicators. The results achieved within the years 2008–2017 are presented in Tab. 4.

**Tab. 4: Correlation of motivational factors and macroeconomic indicators in period 2008–2017 without a time shift – Part 1**

Motivational factor	Average annual wage	Household debt
The atmosphere at the workplace	0.582	<b>0.635</b>
Good team	0.601	<b>0.671</b>
Financial incentives	0.486	0.464
The physical difficulty of work	0.469	0.450
Job assurance	0.466	0.547
Communication at the workplace	<b>0.663</b>	<b>0.711</b>
Company reputation	-0.125	-0.148
Opportunity to exercise abilities	0.458	0.455
Duties and type of work	0.636	0.611
Feedback on individual performance	0.366	0.355
Working hours	<b>0.689</b>	<b>0.666</b>
Work environment	<b>0.677</b>	<b>0.635</b>
Job performance	0.541	0.551
Working procedures	0.403	0.363
Competences	0.275	0.236
Prestige	0.499	0.487
The supervisor's approach	<b>0.713</b>	<b>0.710</b>
Independent decision making	0.280	0.326
Self-actualization	0.483	0.465
Social benefits	0.564	0.574
Fair employee assessment	0.368	0.376
Stress (stress elimination at the workplace)	0.545	0.559

**Tab. 4: Correlation of motivational factors and macroeconomic indicators in period 2008–2017 without a time shift – Part 2**

Motivational factor	Average annual wage	Household debt
Psychological burden	<b>0.795</b>	<b>0.808</b>
The vision of the company	0.172	0.191
Development of the region	0.299	0.349
Education and personal growth	0.276	0.289
The company's attitude to the environment	0.526	0.531
Leisure time	0.615	0.620
Recognition	0.489	0.511
Basic salary	0.475	0.540

Source: own

Note: Statistically significant dependencies are highlighted in bold.

The results presented in Tab. 4 show that the dependence between the six motivational factors (communication at the workplace, duties and type of work, working hours, working environment, superior approach, psychological burden) and the average annual wage is confirmed. From the statistical evaluation of the achieved results, we can state that a high tightness was recorded for all examined factors. The results also show that the seven motivational factors (atmosphere at the workplace, good team, communication at the workplace, working hours, working environment, superior approach, psychological burden) depend on the macroeconomic indicator of household debt. In almost all examined cases, it was a high tightness except for the motivational factor psychological burden, where a very high tightness was recorded. Based on the achieved results, we can state that we confirm *H1*. We conclude that there is a significant dependence between selected macroeconomic indicators and selected motivational factors in the current year.

Sometimes macroeconomic indicators immediately affect the employee's behaviour. In some cases, macroeconomic indicators will only become apparent over time. The comparison of motivational factors and macroeconomic indicators valid in previous year was the subject of analysis related to *H2*. We monitored dependencies from 2008–2018. We compared the motivational factors for the years 2008–2018 with the macroeconomic indicators for the years 2007–2017. For this reason, the scope of the statistical population has been increased

to 11. Tab. 5 presents the achieved results of the summary correlation.

After applying a time shift in motivational factors 1 year ahead, a larger number of statistically significant dependencies was recorded (Tab. 5). The average annual wage affects in total 13 motivational factors (workplace atmosphere, good team, financial incentives, physical difficulty of work, duties and type of work, working hours, working environment, superior approach, social benefits, stress elimination at the workplace, psychological burden, the company's attitude to the environment, leisure time). In all cases, high tightness was confirmed, except for the motivational factor psychological burden, where a very high tightness was confirmed. The macroeconomic indicator household debt affects in total 11 motivational factors (atmosphere at the workplace, good team, communication at the workplace, duties and type of work, working hours, working environment, superior approach, social benefits, psychological burden, the company's attitude to the environment, leisure time). As in previous cases, high tightness has now been confirmed, in addition to the motivational factor of psychological burden, in which a very high tightness has been confirmed. Based on the achieved results, we accept hypothesis *H2*. We can state, that there is a significant dependence between selected macroeconomic indicators in the current year and selected motivating factors at time shift of 1 year.

The subject of further research will be the 10 most important motivating factors and their

**Tab. 5: Correlation of motivational factors and macroeconomic indicators in period 2008–2018 with a time shift of 1 year**

Motivational factor	Average annual wage	Household debt
The atmosphere at the workplace	<b>0.717</b>	<b>0.615</b>
Good team	<b>0.704</b>	<b>0.676</b>
Financial incentives	<b>0.624</b>	0.519
The physical difficulty of work	<b>0.635</b>	0.533
Job assurance	0.486	0.452
Communication at the workplace	0.722	<b>0.693</b>
Company reputation	-0.097	-0.254
Opportunity to exercise abilities	0.485	0.382
Duties and type of work	<b>0.687</b>	<b>0.616</b>
Feedback on individual performance	0.494	0.386
Working hours	<b>0.748</b>	<b>0.697</b>
Work environment	<b>0.705</b>	<b>0.651</b>
Job performance	0.564	0.489
Working procedures	0.468	0.337
Competences	0.344	0.245
Prestige	0.543	0.448
The supervisor's approach	<b>0.758</b>	<b>0.740</b>
Independent decision making	0.460	0.376
Self-actualization	0.568	0.496
Social benefits	<b>0.686</b>	<b>0.628</b>
Fair employee assessment	0.480	0.404
Stress (stress elimination at the workplace)	<b>0.631</b>	0.598
Psychological burden	<b>0.818</b>	<b>0.828</b>
The vision of the company	0.234	0.112
Development of the region	0.397	0.326
Education and personal growth	0.372	0.254
The company's attitude to the environment	<b>0.704</b>	<b>0.657</b>
Leisure time	<b>0.686</b>	<b>0.653</b>
Recognition	0.533	0.476
Basic salary	0.569	0.550

Source: own

Note: Statistically significant dependencies are highlighted in bold.

dependence on macroeconomic indicators. Dependencies will be analysed after applying a shift of 1 year. This is taken into account in Tab. 6.

Based on the results presented in Tab. 6, scatter plots were created in the next step for those motivational factors for which a statistically significant dependence occurred. We were the

first to examine the macroeconomic indicator average annual wage and its impact on the importance of motivational factors workplace atmosphere, good work team, further financial evaluation, communication in the workplace, working hours, working environment and the approach of a superior. The results obtained are presented in Tab. 7 and Fig. 1.

**Tab. 6: Correlation between the 10 most important motivational factors and selected macroeconomic indicators in a period 2008–2018 with a time shift of 1 year**

Motivational factor	Average annual wage	Household debt
The atmosphere at the workplace	<b>0.717</b>	<b>0.615</b>
Good team	<b>0.704</b>	<b>0.676</b>
Financial incentives	<b>0.624</b>	0.519
Job assurance	0.486	0.452
Communication at the workplace	<b>0.722</b>	<b>0.693</b>
Working hours	<b>0.748</b>	<b>0.697</b>
Work environment	<b>0.705</b>	<b>0.651</b>
The supervisor's approach	<b>0.758</b>	<b>0.740</b>
Fair employee assessment	0.480	0.404
Basic salary	0.569	0.550

Source: own

**Tab. 7: Correlation of selected motivational factors and average annual wage**

Motivational factor statistical indicator	Average	St. dev.	r	r <sup>2</sup>	t	p	N	Inercept	Reg. coeff.
Average annual wage	11,960.55	692.44							
The atmosphere at the workplace	4.39	0.12	0.72	0.51	3.09	0.013	11	2.85	0.0001
Good team	4.38	0.12	0.70	0.50	2.97	0.016	11	2.90	0.0000
Financial incentives	4.27	0.25	0.62	0.39	2.39	0.040	11	1.57	0.0002
Communication at the workplace	4.21	0.13	0.72	0.52	3.13	0.012	11	2.56	0.0001
Working hours	4.13	0.18	0.75	0.56	3.38	0.008	11	1.78	0.0002
Work environment	4.11	0.16	0.71	0.50	2.99	0.015	11	2.11	0.0002
The supervisor's approach	4.33	0.12	0.76	0.57	3.49	0.007	11	2.81	0.0001

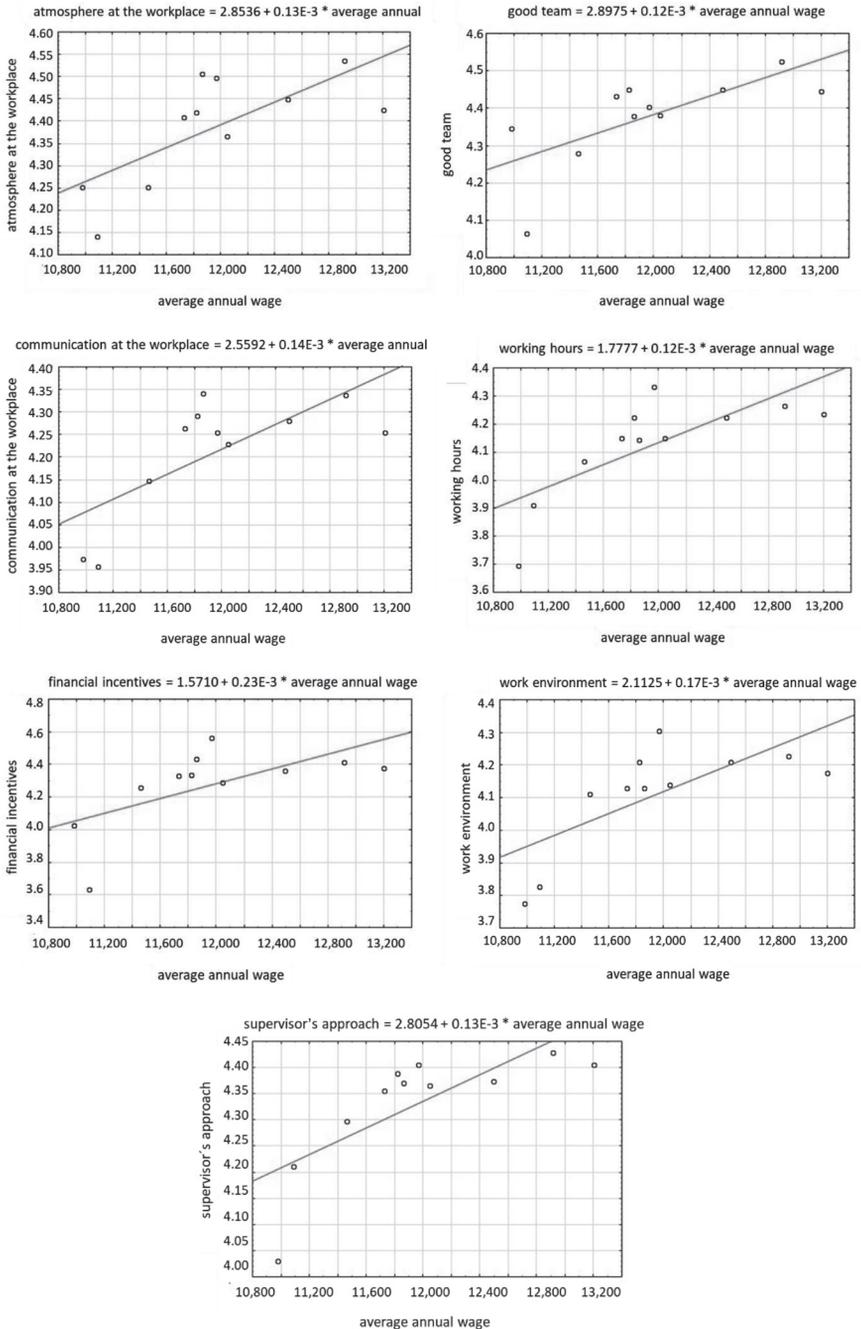
Source: own

When analysing the dependence of the importance of motivational factors and the macroeconomic indicator of average annual salary, a statistically high direct dependence was recorded for the motivational factors of the atmosphere at the workplace ( $r = 0.72$ ), good team ( $r = 0.70$ ), communication at the workplace ( $r = 0.72$ ), working hours ( $r = 0.75$ ) working environment ( $r = 0.71$ ) and the superior approach ( $r = 0.76$ ). Significant dependence was confirmed in the analysis of the importance of motivational factor financial incentives ( $r = 0.62$ ). Based on the results, we can state that with the growing average annual salary, the

importance of the examined motivational factors grows. The degree of causal dependence of the motivational factors atmosphere at the workplace ( $r^2 = 0.51$ ), communication at the workplace ( $r^2 = 0.52$ ), working hours ( $r^2 = 0.56$ ) and approach of the superior ( $r^2 = 0.57$ ) are in high tightness. In the case of the motivational factor the atmosphere at the workplace, we can say that 51% of variability is caused by linear relationship with the variable of average annual wage. The remaining 49% variability can be explained by other reasons than the linear dependence of these two variables. The degree of causal dependence of the motivational

Fig. 1:

Linear correlation of motivational factors and macroeconomic indicator of average annual wage



Source: own

**Tab. 8: Correlation of selected motivational factors and household debt**

Motivational factor statistical indicator	Average	St. dev.	r	r <sup>2</sup>	t	p	N	Inercept	Reg. coeff.
Household debt	31.84	6.59							
The atmosphere at the workplace	4.39	0.12	0.61	0.38	2.34	0.044	11	4.02	0.01
Good team	4.38	0.12	0.68	0.46	2.75	0.023	11	3.98	0.01
Communication at the workplace	4.21	0.13	0.69	0.48	2.88	0.018	11	3.77	0.01
Working hours	4.13	0.18	0.70	0.49	2.92	0.017	11	3.51	0.02
Work environment	4.11	0.16	0.65	0.42	2.57	0.030	11	3.60	0.02
The supervisor's approach	4.33	0.12	0.74	0.55	3.30	0.009	11	3.91	0.01

Source: own

factors good team ( $r^2 = 0.50$ ), financial benefits ( $r^2 = 0.39$ ) and working environment ( $r^2 = 0.50$ ) are in significant tightness. In the case of the motivational factor good team, we can say that 50% of variability is caused by linear relationship with the variable of average annual wage. The remaining 50% of variability can be explained by other reasons than the linear dependence of these two variables.

In the next step, household debt and its impact on motivational factor is the subject of analysis. According to the findings in Tab. 6, we have focused on the following motivational factors: the atmosphere at the workplace, good team, communication at the workplace, working hours, work environment and the supervisor's approach. The results obtained are presented in Tab. 8 and Fig. 2.

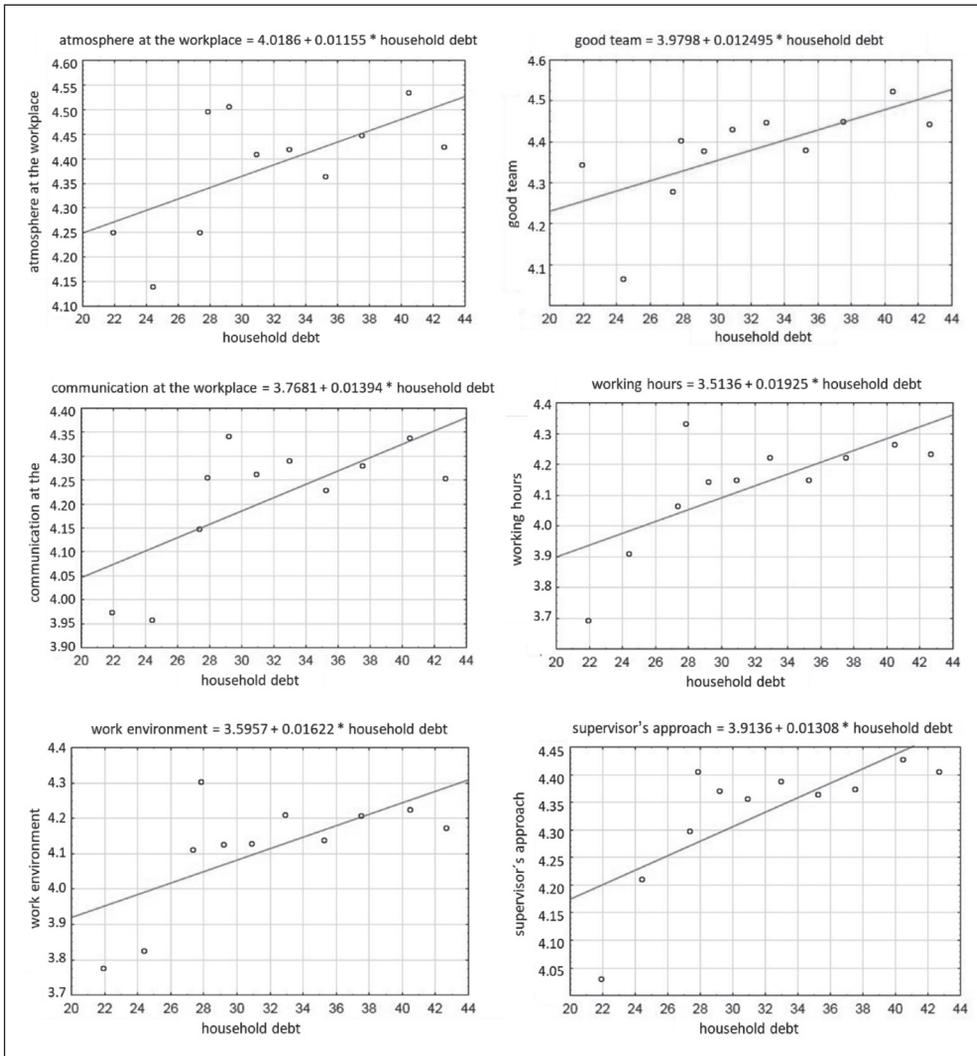
When analysing the dependence of the importance of motivational factors and the macroeconomic indicator of household debt, a statistically high direct dependence was recorded only for the motivational factor of the superior approach ( $r = 0.74$ ). Significant dependence was confirmed in the analysis of the importance of motivational factors atmosphere at the workplace ( $r = 0.61$ ), good team ( $r = 0.68$ ), communication at the workplace ( $r = 0.69$ ), working hours ( $r = 0.70$ ), working environment ( $r = 0.65$ ). Based on the results, we can state that with the growing household debt, the importance of the examined motivational factors grows. The degree of causal dependence of the motivational factor approach of the superior ( $r^2 = 0.55$ ) is in high tightness. Degree of causal dependence of motivational factors

atmosphere at the workplace ( $r^2 = 0.38$ ), good work team ( $r^2 = 0.46$ ), communication at the workplace ( $r^2 = 0.48$ ), working hours ( $r^2 = 0.49$ ) and working environment ( $r^2 = 0.42$ ) is in significant tightness. In the case of the incentive factor of the superior approach, it follows from this that 55% of the variability of the superior approach variable can be explained by a linear relationship with the household debt variable. The remaining 45% variability of the parent access variable can be explained by other reasons than the linear dependence of these two variables.

#### 4. Discussion

According to Němec et al. (2017), Kucharčíková and Mičiak (2018), Piotrowska (2019), Jung et al. (2020), and Pogodina et al. (2020), more than the capital strength and technological capabilities of a company, employees are a decisive factor in business success. These are considered to be the most important and most expensive source of production for a company, its main asset, which, if the company wants to exist, function, develop and continue at all, must be used with careful consideration to achieve set business goals (Kucharčíková et al., 2015; Stacho et al., 2017; Chulanova, 2019). The motivation of employees has become an essential part of the management of every company. Based on the knowledge that the quality of motivation of human potential fundamentally determines the quality of business operations, the motivation of individuals and groups has its positives and

**Fig. 2:** Linear correlation of motivational factors and macroeconomic indicator of household debt



Source: own

limitations. The positives include the fact that individuals and groups with high motivation are able to work better, more efficiently, inventively, and more responsibly than individuals and groups with low motivation (Yang & Jiang, 2010; Stacho & Stasiak-Betlejewska, 2014). On the other hand, however high the motivation is, it is permanently confronted and weakened not only by internal factors (excessive stress,

conflict, work and interpersonal failures) but also by external ones (economic, political, environmental, social, technological factors, economic crisis, macroenvironmental development) (Joniaková & Bištáková, 2015; Stalmasekova et al., 2017; Bellé & Cantarelli, 2018; Mahmoud et al., 2020; Ritala et al., 2020). This fact is the limitation. It is by combining all factors that are possible to create

and strengthen the enthusiasm, enthusiasm, conviction and willingness of employees to engage in processes and activities that contribute to fulfilling the company's vision, mission and goals and at the same time the goals and aspirations of themselves.

An important starting point is a fact that a properly motivated employee works better than one who is not motivated. A motivated employee is willing to work, systematically, precisely, disciplined, with the full weight of responsibility and devote his energy, intellect and time to extremely demanding tasks when he sees that his work is appreciated. The key to success is truly motivating individuals and groups. Knowledge of what motivates employees enables managers to prepare conditions for continuous improvement and improvement of work performance. The manager must, therefore, know, use and strengthen the motivation of individuals, i.e. know what motivates employees and through appropriate approaches, motivational tools, positive communication, etc, motivation to address employees, match the motivation of individuals, groups and the whole company and purposefully develop and move it constantly. To a higher and higher quality level. The results of the research, which we carried out in the period from 2008 to 2019, show that the most important motivating factors were employees' basic salary, the atmosphere in the workplace, good work team, job security, fair evaluation of the employee, superior approach, further financial evaluation, communication at work, working hours and working environment. The fact that the basic salary has long been the most important motivating factor is also confirmed by previous research (Wiley, 1997; Rynes et al., 2004; Casuneanu, 2011; Kropivšek et al., 2011; Pruneda, 2014). Motivational factors basic salary, fair evaluation of the employee and other financial evaluation were considered the most important financial motivational factors. Relational, motivational factors atmosphere in the workplace, a good work team, the approach of a superior and communication in the workplace were placed in the top ten most important factors. According to research, job security, working hours and the working environment were considered the most important work motivators. The same results are presented by Al Madi's (2017) research, which concluded that the most important

motivating factors are considered to be financial and relational motivating factors. It is clear that various motivating factors have a great influence on the motivation of employees. For this reason, it is necessary to know currently right motivational factors, continuously monitor them and periodically evaluate in order to know the true state of the motivation of employees. It is mainly important to predict the further development of the creation of incentive programs.

A lot of research discovers the world of employee motivation. Even this paper makes a use of the secondary data for identification of relevant motivational factors from internal company environment. We did not identify any research focused on analysis of macroeconomic environment in relation with employee motivation. This paper is enriching the research in the field of motivation by analysis of relationship between macroeconomic factors (as a part of external company environment) and employee motivation. The results of the research show that we have confirmed a significant statistical dependence on the importance of motivational factors on macroeconomic indicators in the real year. At the same time, the research results confirmed a significant statistical dependence on the importance of motivational factors on macroeconomic indicators, even in a shift of one year. Correlation coefficients confirmed a statistically significant linear dependence in the shift of one year in the following cases:

- workplace atmosphere and reasonable annual wage ( $r = 0.72$ ), household debt ( $r = 0.61$ );
- good staff and average annual wage ( $r = 0.70$ ), household debt ( $r = 0.68$ );
- further financial evaluation and average annual salary ( $r = 0.62$ );
- workplace communication and average annual wage ( $r = 0.72$ ), household debt ( $r = 0.69$ );
- working time and average annual wage ( $r = 0.75$ ), household debt ( $r = 0.70$ );
- working environment and average annual wage ( $r = 0.71$ ), household debt ( $r = 0.65$ );
- superior approach and average annual wage ( $r = 0.76$ ), household debt ( $r = 0.74$ ).

As a result of a shift in the importance of motivational factors a year ahead of

macroeconomic indicators, we found a higher incidence of dependencies. The results of the research further confirmed that the examined macroeconomic indicators influence the importance of motivational factors in direct linear dependence. Based on the achieved results, we can state that we confirmed both working hypotheses. Similar findings are presented by the research of Pavelka (2007) and Jureček (2013), who found that macroeconomic indicators reflect the course of the crisis. Similarly, Hitka and Vacek (2010) and Závadský et al. (2015) argue that motivation has changed since the economic crisis. Based on the achieved results, we believe that employees are affected not only by their income from work but also by their expenses when assessing the importance of motivational factors. The results further indicate that in some cases, there is scope to influence motivation with other variables along with macroeconomic indicators. Therefore, we recommend business managers to take into account not only the effects of the micro-environment on motivation but also the effects of the macro-environment and thus macroeconomic changes in the country when creating incentive programs. How managers should enter into the struggle for the motivation of the individual, the team and the company should be different, depending on the development of microeconomic and macroeconomic factors.

Further research of macroeconomic factors influence on motivation is needed. There are other macroeconomic indicators e.g. unemployment rate, social spending and others, with possible impact on employee motivation. Continuous research and analysis results cumulation will enrich the knowledge of factors affecting employee motivation in positive or negative way.

## Conclusions

The 21st century is characterised by an immense pace of various changes, ever-increasing demands and expectations. These dynamic features and requirements constantly affect employees and managers, undermine the strength/intensity of motivation, and even often weaken it. For this reason, it is necessary to constantly strengthen the motivation, improve, adapt, harmonise and orient in the right direction, to fulfil the vision and goals of the company. It is necessary

to motivate individuals and groups and thus apply intentional motivation. If employees have the perspective and specific opportunities for professional development, functional progress and are evaluated for work in a way that corresponds to the quantity and quality of work performed, we can expect long-term and quality work performance from them. Important prerequisites for the long-term performance of employees, their willingness and satisfaction include the fact that employees perform work that is meaningful, important for the company, is interesting to them, to be reasonably demanding, fairly evaluated and provides opportunities for personal development. To maintain the required performance, it is necessary to continuously motivate the employee. Because motivation is influenced by various factors, it is necessary to continuously analyse the motivational needs of employees and, if necessary, update the content of the company's motivational programs. The incentive program is one of the tools for attracting employees, and in this area, companies should be creative enough to become interesting and attractive employers for current as well as future employees. Today's competition is not only regional but also demanding and increasingly transnational due to globalisation. The position of the company on the labour market must, therefore, be systemic in nature, must be complex and must be of a long-term nature.

**Acknowledgement:** *This research was supported by projects KEGA 005TU Z-4/2020 "Economics, Management and Enterprising in Wood Industry Companies – university textbook with visualization support in virtual space", and VEGA 1/0161/21 "Dependence of the type of corporate culture on the industries of Slovak enterprises and selected socio-demographic factors".*

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