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# THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE CHANGING WORK ENVIRONMENT BASED ON THE VIEWS OF INDIVIDUALS IN SLOVAKIA - A PILOT STUDY

**Abstract:** The aim of the research is to investigate the opinions of employees working at Slovakian enterprises with different educational backgrounds, work type and job positions about the impact of artificial intelligence on business in the near future. A questionnaire survey was used to explore the opinions of the subjects in spring of 2024. The questionnaire was created on the Limesurvey platform and sent out online, receiving 311 responses. Finally, 260 responses were received in the course of the present research. SPSS software was used to evaluate the results. The effect of job position (H1) was assessed on the statements about AI (Likert scale). The results showed that differences in the opinions of people in different job positions (owner, manager or employee) were observed for some items (H1). The research is a pilot study to raise awareness of the importance of this topic and to stimulate further research in the management professional community.

Keywords: artificial intelligence, challenges, changing work environment, the future effects

#### 1. INTRODUCTION

The rapid development and spread of artificial intelligence (AI) is fundamentally changing the world of work around the world. Automation, data-driven decision making and machine learning are becoming more widely used not only in the technology sector, but also in traditional industries (Babashahi et al., 2024). For businesses, the use of AI has many benefits; AI-driven decision-making systems can increase organizational efficiency, reduce operational costs and drive innovation. The application of AI also has implications for human resource management (Berber et al., 2018), which is becoming increasingly "technology-intensive" (Rimac Bilušić & Pološki Vokić, 2025) and more efficient (Blahušiaková, 2023). Since AI is constantly evolving and has an infinite number of applications in many different fields (Kostin, 2018), in the near future companies may find the right type of AI for every task, the challenge is to recognize in time the benefits they can gain by using these tools (Raskovich et al, Automation and AI will have a significant impact on the structure of the workplace, and although many new jobs will be created, the automation of low-skilled tasks may lead to the exclusion of certain groups of workers. The introduction of technology is not always a clear positive: it can create uncertainty and

resistance among workers, which can inhibit the adoption of new systems (Frey & Osborne, 2017). Of particular importance is the question of how workers in different jobs and with different educational backgrounds perceive and value these changes, and how this affects the competitiveness and operational efficiency of organizations. Our research explored the views of workers with different educational levels and job titles, as well as those with intellectual and physical jobs, on the likely impact of AI in the near future.

## 2. INTRODUCTION

## 2.1 Increasing business competitiveness through AI

Companies are constantly looking for ways to innovate to increase their competitiveness (Soltysik et al., 2024). In recent years, Artificial Intelligence (AI) has played an increasingly important role in this process, especially since the Covid-19 pandemic, which has significantly accelerated the process of automating and digitizing work tasks (Cramarenco et al., 2023). AI is not just a new technology, but an engine of transformation that is reshaping work processes, business models and boundaries between industries. It is becoming increasingly popular and pervasive in cross-border e-markets, transforming the global economy (Mirbabaie et al., 2022), embedded in business strategies and decision-making processes (Shrestha et al., 2019), and has become a key factor in business value creation (Dwivedi et al., Its application not only increases efficiency, but also opens up new opportunities for companies in innovation and customer experience. It is pervasive (Wang and Siau, 2019) and applicable across a broad spectrum of industries, from automated customer service systems to predictive analytics and intelligent supply chains (Mirbabaie et al, 2022). According to research by Ransbotham et al (2017), more than 80% of companies already consider AI to be of strategic importance and almost 85% believe it can provide them with a competitive advantage.

While one of the biggest benefits of AI is cost reduction and efficiency gains (Enholm et al., 2022), its application is multifaceted and still relatively new in the corporate sector, leaving organizations facing a number of challenges (Mirbabaie et al., 2020). Digital transformation, the application of new technologies, is transforming organizational forms, production processes and business models (Nambisan et al., 2019), leading to a number of workplace changes. Many companies have implemented digital transformation to gain a competitive advantage, but success is not guaranteed: the transition involves risks and difficulties, mostly at the organizational and employee level (Cramarenco et al., 2023). Employees are the most important actors in digital transformation, as they operate and apply the technology, and their motivation, openness to change (Don Ton & Berke, 2024) and commitment are key to the success of a company's AI strategy (Ye et al, 2024). Employee mental health is also a key factor: a balanced, mentally healthy workforce can significantly increase an organization's performance and competitiveness (Soulami et al., 2024). Conversely, if employees experience stress and burnout, this has a negative impact on productivity, concentration, and increases absenteeism and turnover rates (Dimoff & Kelloway, 2018).

The successful integration of AI depends not only on technological advances, but also on shaping corporate culture and employee attitudes. Organizations need to design their AI-enabled business strategies with innovation and teamwork at the forefront (Fredström et al., 2022; Perifanis & Kitsios, 2023). It is important that leaders create an environment that supports employee skill development while providing them with stability, inclusion and well-being (Jiang et al., 2022). An innovative organizational culture stimulates continuous improvement in performance implementation (Strugar Jelača, 2018), but the active participation of employees, either directly or indirectly, is essential for success (Enholm et al., 2022; Pap et al., 2022).

# 2.2 The impact of AI on workers

The continued rise of artificial intelligence (AI) is fundamentally shaping the labor market, affecting almost every profession and influencing the way people work (Frey & Osborne, 2017). The integration of AI into the enterprise not only means new technological solutions, but also impacts on the skills, career paths and well-being of employees. It is predicted that by 2025, 50% of workers will need to learn new skills in order to keep pace with continuous technological advances and innovations (Schwab & Zahidi, 2020). Upskilling and retraining are essential for success: continuous learning and adaptation is what differentiates successful companies from those that lag behind the competition (Randstad, 2020). The spread of AI could also lead to the emergence of new professions and the creation of new jobs (Nübler, 2016; Lane & Saint-Martin, 2021). In parallel, there is a growing demand for highly skilled talent who can effectively apply AI-based technologies (Babashahi et al, 2024).

The digital switchover places heavy demands on workers. The widespread deployment of AI-related technologies requires the need to be prepared for human-machine interaction (Jaiswal et al., 2022) and to retrain employees to adapt to new job requirements (Li, 2022). The development of digital skills is becoming increasingly important: not only technical skills need to be mastered, but also expectations are rising in the areas of information management, communication, creativity and cybersecurity (Cramarenco et al., 2023; Major & Spalek, 2022; Pelau et al., 2021).

The mismatch between skills and job requirements can be a source of stress, which can reduce employee satisfaction (Ruzele et al., 2024; Gasic et al., 2025) and increase job insecurity (Nemțeanu et al., 2022). Gartner (2018) reports that

83% of companies have failed to achieve their digital transformation goals because employees have not actively engaged in technology-driven business processes and changes. Another study found that 61% of employees feel anxiety about technological developments in their workplace, while 49% fear that digital transformation could have negative workplace consequences (Hizam et al., 2023).

The introduction of new technologies can create uncertainty in the workplace and affect employee engagement and performance (Ye et al., 2024; Hizam et al., 2023). The use of AI technologies has many benefits, but employers need to develop appropriate strategies to adequately address these employee needs (Horobet et al, AI can also increase competition among employees and create polarization, so management should consciously promote collaboration and teamwork, fostering a positive organizational culture and cohesion among employees (Ye et al., 2024).

A motivated and engaged workforce is one of the most important factors in a company's growth and success. Research by Stamate et al. (2021) has shown that employees' attitudes towards AI play a crucial role in how they feel at work, significantly influencing their job satisfaction and psychological well-being. Although AI creates new opportunities, it can also become a source of stress for some employees, especially those who find it harder to adapt to rapid technological change (Nazareno & Schiff, 2021; Soulami et al., 2024). The impact of AI goes beyond employee well-being: it also affects engagement, productivity and overall satisfaction (Soulami et al., 2024).

Therefore, AI should be implemented in a way that takes into account the specific needs, age and skills of each worker (Wei et al., 2022).

The aim of our research is to investigate how different groups of employees perceive the impact of AI on their corporate life. In developing our hypotheses, we have taken into account the most recent literature, which is presented in detail in the following chapters. The perception of AI depends on a number of factors, including the educational level of employees, the nature of their work and their position in the organizational hierarchy. Below we describe the main relationships that form the basis of our research.

## 2.2.1 The expected impact of AI in the context of corporate scheduling

Organizational hierarchy can also influence opinions on AI. Executives and managers often view AI as a competitive advantage and an efficiency-enhancing tool, while subordinate employees may be more concerned about the uncertainties associated with automation and the transformation of work processes (Acemoglu & Restrepo, 2019). Research suggests that corporate culture also plays a key role in the adoption of AI, as openness to organizational innovation and the willingness of employees to use new technology in the long term (Enholm et al., 2022) determine the success of the adoption of technological innovations (Mikalef & Gupta, 2021). Senior managers play a crucial role in shaping this culture (Alsheibani et al, In innovative organizations, employees are more willing to engage with AI, especially if management supports the integration of technology and provides the necessary resources (Lee et al, The role of top management is also key because successful AI implementation requires significant organizational changes, such as increased collaboration between departments and reengineering of data management processes (Mikalef & Gupta, 2021). Positive attitudes and support from managers are essential for successful implementation (Enholm et al, 2022). However, the use of AI in leadership roles is still a divisive issue; the majority of employees support AI in helping them schedule and monitor their work processes (Raveendhran and Fast, 2021), but many reject the idea that AI will fully replace human leaders. AI in managerial roles is considered less reliable and acceptable, especially when it directly impacts their career, they disapprove of the use of AI-based managers, while the use of AI in non-managerial roles is considered more acceptable (Dong et al, 2024). The implementation of AI requires significant changes in the structure of the organization, the level of collaboration between departments, and the management of data within the organization (Mikalef and Gupta, 2021). It is therefore important to determine the benefits of strategic use of AI for employees in different positions and how this aligns with organizational goals (Enholm et al., 2022).

Based on the above, leaders and managers are often focused on the competitive advantages and efficiency gains of AI, and thus, the authors hypothesize, that they have a more positive towards it, while lower-level employees are less confident due to uncertainty about change:

H1: People with different job titles will have different perceptions of the future impact of AI on business.

The aim of this research is to empirically test these hypotheses using statistical methods in order to better understand the impact of AI on corporate life. The results can help companies to develop more effective AI strategies, taking into account employees' opinions and expectations, reducing their resistance to technological change.

## 3. METHODS

## 3.1 Data collection and sample

The study focuses on assessing the opinions of employees of Slovak companies about the impact of artificial intelligence on daily life of businesses in the near future.

The questionnaire survey was chosen from quantitative research methods.

The questionnaire consisted of closed questions only, some of which were Liker-scale questions. It made the analysis easier – from a statistical and mathematical point of view. The questionnaire was made on Limesurvey platform. Single-cross-sectional research method was used, since the data was collected from many different individuals at a single point in time. The convenience sampling method was used from the non-probability sampling methods as authors used their own list consisting of more than 5000 companies and individuals, since there is no list about them. The aim was to collect only 1 answer from 1 company. The questionnaire was sent out via email to the companies and individuals. The questionnaire period lasted from March 2024 to June 2024. A total of 331 responses were collected. This research is based on 260 responses (meaning 260 employees of different companies), since some of the responses were omitted due data cleaning and some responses were insignificant for the topic of this research. IBM SPSS software was used for data processing. Table 1. presents the demographic characteristics of the sample.

**Table 1:** About the sample (n = 260)

Size of the company	n	%
Micro	94	36.2%
Small	55	21.1%
Medium	37	14.3%
Large	59	22.6%
Non-Competitive Market	15	5.7%
Graduation	n	%
High School	192	73.8%
University	68	26.2%
Type of work	n	%
Physical	128	49.2%
Mental	132	50.8%
Position	n	%
Owner	79	30.4%
Manager	57	21.9%
Employee	124	47.7%

Source: own processing

#### 3.2 Statistics

Three hypotheses were formulated, where factor such as different educational backgrounds, work type and job positions were taken into account. The research model is shown in Figure 1.

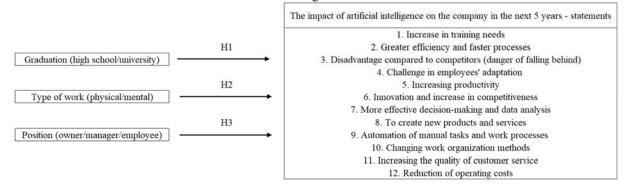


Figure 1: Research model Source: own processing

A Test of Normality (Kolmogorov-Smirnov and Shapiro-Wilk) was used to decide between parametric or non-parametric method for testing the actual hypothesis:

$$K = |cpo_i - cpe_i|_{max}$$

where

cpo<sub>i</sub> and cpe<sub>i</sub> = the i<sup>th</sup> observed and normal cumulative proportions.

$$W = \frac{(\sum_{i=1}^{n} a_i X_i)}{\sum_{i=1}^{n} (X_i - \bar{X})^2}$$

where

 $X_i$  = ordered sample values

 $a_i$  = coefficient based on the sample size

In this research data significantly deviate from a normal distribution. Based on the results, the Kruskal-Wallis test (H statistic) was calculated:

$$H = \left(\frac{n-1}{n} \sum_{i=1}^{k} \frac{n_i * (\overline{R} - E_R)^2}{\sigma^2}\right)$$

where

n = sample size

 $n_i$  = the number of observations in each group

 $E_R$  = expected value of the rankings

 $\bar{R}$  = mean rank sum in group i

 $\sigma^2$  = rank variance

## 4. RESULTS AND DISCUSSION

Based on the hypothesis of the research:

"H1: People with different job titles will have different perceptions of the future impact of AI on business." In testing this hypothesis, we examined questions about the future impact of scheduling (independent, nominal variable) and AI (dependent, ordinal variable). To decide which statistical method to use, a normality test (Table 2) was used:

**Table 2:** Test of Normality – H1 (n = 260)

		Kolmogo	Kolmogorov - Smirnov		Shapiro - Wilk		
Statements	Position	Statistic	df	Sig.	Statistic	df	Sig.
	Owner	0.191	79	0.000	0.871	79	0.000
Increasing training needs	Manager	0.321	57	0.000	0.830	57	0.000
	Employee	0.259	124	0.000	0.869	124	0.000
	Owner	0.249	79	0.000	0.872	79	0.000
Greater efficiency and faster processes	Manager	0.307	57	0.000	0.800	57	0.000
	Employee	0.262	124	0.000	0.853	124	0.000
	Owner	0.232	79	0.000	0.862	79	0.000
Disadvantage compared to competitors	Manager	0.231	57	0.000	0.868	57	0.000
	Employee	0.237	124	0.000	0.867	124	0.000
	Owner	0.218	79	0.000	0.880	79	0.000
A challenge for workers to adapt	Manager	0.275	57	0.000	0.859	57	0.000
·	Employee	0.252	124	0.000	0.868	124	0.000
	Owner	0.220	79	0.000	0.879	79	0.000
Increasing productivity	Manager	0.300	57	0.000	0.840	57	0.000
	Employee	0.253	124	0.000	0.869	124	0.000
	Owner	0.244	79	0.000	0.875	79	0.000
Innovation and competitiveness growth	Manager	0.313	57	0.000	0.809	57	0.000
,	Employee	0.280	124	0.000	0.854	124	0.000
	Owner	0.249	79	0.000	0.870	79	0.000
More efficient decision-making and data analysis	Manager	0.275	57	0.000	0.816	57	0.000
	Employee	0.277	124	0.000	0.858	124	0.000
	Owner	0.266	79	0.000	0.863	79	0.000
Creation of new products and services	Manager	0.278	57	0.000	0.852	57	0.000
•	Employee	0.221	124	0.000	0.876	124	0.000
	Owner	0.194	79	0.000	0.878	79	0.000
Automation of manual tasks and workflows	Manager	0.262	57	0.000	0.836	57	0.000
	Employee	0.244	124	0.000	0.867	124	0.000
Changing work organization methods	Owner	0.223	79	0.000	0.870	79	0.000
	Manager	0.242	57	0.000	0.861	57	0.000
	Employee	0.220	124	0.000	0.878	124	0.000
	Owner	0.236	79	0.000	0.875	79	0.000
Improving the quality of customer service	Manager	0.253	57	0.000	0.867	57	0.000
	Employee	0.276	124	0.000	0.851	124	0.000

	Owner	0.219	79	0.000	0.865	79	0.000
Reducing operating costs	Manager	0.243	57	0.000	0.858	57	0.000
	Employee	0.260	124	0.000	0.867	124	0.000

Source: own processing

Based on the above (Table 2), the date is not normally distribution for any of the items, so a Kruskal-Wallis test (Table 3) was performed.

Table 3: Kruskal-Wallis Test - Ranks - H1 (n = 260)

Statements	Position	N	Mean Rank
Increasing training needs	Owner	79	117.17
	Manager	57	147.90
	Employee	124	130.99
Greater efficiency and faster processes	Owner	79	110.11
	Manager	57	149.40
	Employee	124	134.80
Disadvantage compared to competitors	Owner	79	127.92
	Manager	57	141.52
	Employee	124	127.08
A challenge for workers to adapt	Owner	79	125.02
	Manager	57	143.65
	Employee	124	127.95
Increasing productivity	Owner	79	119.25
	Manager	57	145.44
	Employee	124	130.80
	Owner	79	121.80
Innovation and competitiveness growth	Manager	57	149.11
	Employee	124	127.49
	Owner	79	123.22
More efficient decision-making and data analysis	Manager	57	151.51
-	Employee	124	125.48
	Owner	79	127.23
Creation of new products and services	Manager	57	152.40
	Employee	124	122.52
	Owner	79	115.97
Automation of manual tasks and workflows	Manager	57	153.62
	Employee	124	129.13
	Owner	79	113.02
Changing work organization methods	Manager	57	151.39
<del>-</del>	Employee	124	132.04
Improving the quality of customer service	Owner	79	134.03
	Manager	57	143.30
	Employee	124	122.37
	Owner	79	124.49
Reducing operating costs	Manager	57	151.73
5 r · · · 5 · · · · ·	Employee	124	124.57

Source: own processing

Based on the mean rank scores (Table 3), managers were the most likely to agree with our statements that AI will bring big changes to different areas of work in the next 5 years.

Table 4: Kruskal-Wallis – Test Statistics – H1 (n = 260)

Statements	Kruskal-Wallis H	df	Asymp. Sig
Increasing training needs	6.175	2	0.046*
Greater efficiency and faster processes	11.003	2	0.004*
Disadvantage compared to competitors	1.723	2	0.422
A challenge for workers to adapt	2.547	2	0.280
Increasing productivity	4.491	2	0.106
Innovation and competitiveness growth	5.373	2	0.068
More efficient decision-making and data analysis	6.531	2	0.038*

Creation of new products and services	7.068	2	0.029*
Automation of manual tasks and workflows	9.141	2	0.010*
Changing work organization methods	9.648	2	0.008*
Improving the quality of customer service	3.646	2	0.162
Reducing operating costs	6.398	2	0.041*

Source: own processing

Based on the results of the Kruskal-Wallis test (Table 4), "Increasing training needs" (p = 0.046), "Greater efficiency and faster processes" (p = 0.004), "More efficient decision-making and data analysis" (p = 0.038), "Creation of new products and services" (p = 0.029), "Automation of manual tasks and workflows" (p = 0.010), "Changing work organization methods" (p = 0.008), "Reducing operating costs" (p = 0.041) show significant differences between the different positions.

## 5. DISCUSSION AND CONCLUSION

This research, we wanted to find out how people with different educational and professional backgrounds perceive the impact of AI in the near future. We looked at the extent to which people with manual and mental jobs feel affected and the differences in their views. Our aim was to use statistical methods to empirically test our hypotheses and to gain deeper insights into how AI affects business operations.

Results related to the hypothesis (H1: People with different job titles will have different perceptions of the future impact of AI on business) clearly support that employees in different positions have different perceptions of the impact of AI on the company. Senior management tends to be more favorable to the adoption of AI as a strategic and competitive advantage, while for employees the level of adoption depends largely on the practical application of AI, technological transparency and training opportunities. This finding is consistent with previous research (Lee et al., 2019; Mikalef & Gupta, 2021; Dong et al., 2024) that suggests that adoption of AI is strongly influenced by organizational culture, openness to innovation, and managers' attitudes towards technology. While top management decisions play a crucial role in the successful corporate integration of AI, the attitudes and skills of employees are key to the effective adoption of new technologies.

According to research by Rožman et al (2023), an AI-based corporate culture, leadership approach and targeted training programs can significantly contribute to reducing employee workload and increasing organizational performance. In particular, AI offers benefits in the area of complex decision-making and data analytics, enabling managers to make faster and more informed decisions, while reducing the volume of frequent tasks for employees and increasing workplace engagement. Therefore, it is essential for companies to support AI adoption with transparent communication and detailed training programs to increase employee confidence and reduce resistance.

The integration of artificial intelligence into the enterprise will continue to accelerate in the coming years, creating new opportunities and challenges in the labor market. The evolution of AI is expected to not only transform decision-making and data analysis processes, but also play an increasing role in automation and customer relationship management. To adapt successfully, companies will need to proactively develop their training strategies to ensure that employees have the necessary technological and analytical skills.

The role of managers in promoting the adoption of AI is becoming more important, while corporate culture and employee attitudes are also becoming key factors. In the future, it will be particularly important to develop effective human-machine collaboration that not only increases efficiency but also improves employee satisfaction and engagement. The success of AI implementation will therefore be not only a technological issue, but also a strategic and organizational one.

The rapid development of AI adoption in the enterprise warrants further research on the long-term impact of AI adoption. Future studies may focus on the dynamics of AI adoption, especially in relation to how different industries and corporate cultures adapt to technological changes.

Optimizing the interaction between AI and human work could also be an important research direction, especially among manual workers, where automation is seen as a threat. Further empirical studies are needed to explore the impact of AI on worker satisfaction, engagement and performance, and what training programs can facilitate adaptation.

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