ACCEPTANCE AND IMPLEMENTATION OF DIGITAL BUSINESS PLATFORMS: AN ANALYSIS OF EMPLOYEE ATTITUDES IN DIFFERENT INDUSTRIES AND REGIONS

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ABSTRACT

Digitalization has recently sparked a technological revolution by drastically altering how businesses function. These changes have been further hastened by global difficulties, which have led to a rise in the use of digital business platforms. These platforms enable businesses to focus their efforts on distant users and modify their business plans to meet the market's needs. The main goal of this study is to examine employees from various industry sectors and geographical areas' attitudes toward adopting digital networks and using digital business platforms. The employee survey was conducted to understand better their attitude towards these tools and their readiness to integrate digital solutions into everyday work activities. Through cross-tab analysis, the study looked at attitudes regarding adopting and implementing digital business platforms across many industries and geographical areas. The collected data was analyzed using statistical techniques using the SPSS software package. The results obtained provide companies with valuable recommendations for more efficient use of digital tools and improving the digitalization of their business processes.

Keywords: digital business platforms, employee acceptance, behavior, industries, regions

JEL Classification: D85, L21, R11

1 INTRODUCTION

A decade ago, the emergence of Industry 4.0 marked the transition to a new manufacturing era. It integrated modern digital technologies such as artificial intelligence, the Internet of Things (IoT), big data analytics, cyber-physical systems, and other innovations (Yang & Gu, 2021). Since then, Industry 4.0 has remained a key driver of global trends in the development

https://doi.org/10.11118/978-80-7701-047-4-0121

of manufacturing systems while simultaneously driving the digital transformation of business practices, models, processes, and routines in the current digital age (Yaqub & Alsabban, 2023).

Modern IT models, paradigms, and control technologies are undergoing rapid changes, driven by urgent applications in practice, which motivates researchers and practitioners to continuously update the basic principles of Industry 4.0 (Gorodecki *et al.*, 2020). One of the more recent innovations is the development of digital business platforms, designed to enable employees to coordinate the management of distributed processes in accordance with the principles of "peer-to-peer" (p2p), which facilitates their acceptance and integration into work processes.

Over time, the platform's work in various business fields has led to numerous employee challenges. Digital platforms enable the coordinated operation of an employee's network through a common information and communication space, ensuring real-time work (Curry & Sheth, 2019). Working conditions depend to a large extent on the impact of digitization.

Furthermore, working on digital platforms replaces the traditional employment contract with a new form of collaboration between employees, platforms and customers, which can lead to both resistance and acceptance of the new work model. The concept of digital business platforms should be expanded for the next generation of enterprises to include proactive behavior, adaptive planning and online re-planning (Curry & Sheth, 2019). In the era of Industry 5.0, digital platforms improve resource management and enterprise integration, allowing employees to access cloud services and data in real time. Their acceptance by employees depends on understanding the benefits they bring in planning and controlling business processes (Gorodetsky *et al.*, 2020).

However, previous research has overlooked the distinct characteristics of digital platforms, which involve various actors on different sides of the platform. This has led to a lack of deeper understanding of how companies using platforms are implementing strategies to encourage the adoption and successful implementation of digital platforms, as well as to minimize employee resistance and facilitate their adaptation to the new work model.

Hence, the main goal of this study is to examine the attitudes of employees from different industry sectors and geographical areas towards adopting and using digital networks and business platforms. The focus is on understanding the key factors influencing their willingness to adopt digital solutions in their daily work activities. This includes a cross-analysis of their perceptions, experiences and expectations regarding adopting and implementing digital platforms across many industries and geographical areas.

2 LITERATURE REVIEW

The platform economy represents a revolutionary change in modern business, transforming business processes, organizational culture, user experience and employee work dynamics (De Reuver *et al.*, 2018). Key drivers of this transformation include the rapid spread of mobile devices, decentralized information networks and big data analytics, which have enabled the development of digital platforms. These platforms have facilitated the provision of work and given workers access to new forms of income via the Internet, which has accelerated changes in global work practices. Digitalization has radically changed the functioning of enterprises, the structure of work, and how work is done (Piasna *et al.*, 2022). This process has raised significant questions about the relevance of traditional worker protection mechanisms in the new circumstances. With the rise of platform work, the sector's revenue has grown from €3 billion in 2016 to approximately €14 billion in 2020. The number of workers relying on platforms is expected to reach 43 million by 2025 (O'Farrell *et al.*, 2020). These figures point to a profound transformation of the work environment, bringing new opportunities and significant challenges.

Digital transformation has also influenced the operating strategies of organizations, setting new standards for business agility and competitiveness in a rapidly changing environment (Škare & Soriano, 2020). Companies have had to abandon traditional methods and adapt their operations to digital platforms, which has created challenges for both organizations and employees (Woodside *et al.*, 2021). The introduction of digital technologies, however, is not enough on its own – it must be accompanied by the definition of comprehensive digital strategies aligned with the needs of platform workers (Woodside *et al.*, 2021; Weile *et al.*, 2022).

However, platform work brings specific challenges regarding workers' rights and protections. The categorization of platform workers as self-employed or independent contractors often deprives them of traditional rights and protection mechanisms, significantly reducing their bargaining power to improve working conditions (Aloisi & Gramano, 2019). This status of workers, combined with the rapid expansion of paid work platforms, has raised significant expectations about their resistance and possible mobilization for better working conditions (Vandaele, 2018).

Research, such as Benkler (2011), points to strategic measures that individual workers can take to improve their working conditions. However, broader institutional support is needed to ensure that the digital transformation, while significant for the economy, does not lead to degrading workers' rights and working conditions (Vandaele, 2018). In this context, digitalization has become not only a technological but also a social phenomenon that shapes contemporary working realities, raising the question of how to balance innovation with sustainable and fair working practices (Aloisi & Gramano, 2019).

3 METHODOLOGY AND DATA

The research used an online questionnaire distributed to employees in companies of various industries and geographical regions via personal email and the LinkedIn platform. The survey included two sets of questions. The initial group concentrated on the demographic information of the respondents, including age, gender, education level, work experience, job position, country, and industry. The second set of questions explored the readiness of the respondents to embrace digital business platforms in their business activities. The research covered countries such as the Republic of Serbia, Hungary, Poland, Slovakia, the Czech Republic and Bulgaria, and the questionnaire was adapted to small and medium-sized enterprises and their openness to the use of digital platforms. 636 correctly completed questionnaires were analyzed using a five-point Likert scale. The statistical software SPSS v.25 was used for data processing and analysis.

4 RESULTS

After data collection, incomplete responses were excluded from the sample, and a data set was then selected for further statistical processing. Out of 825 questionnaires sent, 636 were fully completed and valid for processing, which makes up 77.1% of the representative sample. Demographic characteristics of the respondents are shown in Table 1.

Two main age trends can be deduced from the data in Table 1. The age group 31 to 45 years old makes up the largest part of the data set with (36.3% of respondents), followed by 18–30 years old (23.6%) and those older than 46 (32.3%). Male respondents had a higher share in the sample at 61.8%, while women made up only 37.1% of the sample. Most respondents had a master's degree (47.0%), while the rest had a bachelor's degree (24.7%). The collected data show that the working population with work experience of 6 to 20 years makes up the largest part of the sample, with younger and older workers being less represented. For the positions of the company 30.7% of respondents worked as owners or employees, and a significant part

Tab. 1 Demographic characteristics

Variables	Category	Frequency	Percent
Age	18–30	152	23.6
	31–45	230	36.3
	46–60	205	32.3
	> 61	49	7.8
Gender	Male	393	61.8
	Female	236	37.1
	Do not wish to answer	7	1.1
Education Level	High school	139	21.9
	Bachelor	157	24.7
	Master	299	47.0
	PhD	31	4.9
	Other	10	1.5
Years of Work Experience	Up to 5 years	178	28.0%
	From 6 to 10 years	109	17.1%
	From 11 to 20 years	149	23.4%
	More than 20 years	196	30.8%
	Missing	4	0.6%
Position in Company	Owner	195	30.7%
	Senior manager	101	15.9%
	Manager	145	22.8%
	Employees	195	30.7%
Country of Operation	Czech Republic	89	14.0%
	Hungary	110	17.3%
	Slovakia	100	15.7%
	Poland	101	15.9%
	Serbia	135	21.2%
	Bulgaria	101	15.9%
Industry of Business Activity	Agriculture	29	4.6%
	Mining and quarrying	14	2.2%
	Machinery and equipment	39	6.1%
	Construction and developers	56	8.8%
	Wholesale and retail trade	79	12.4%
	Information and communications	65	10.2%
	Manufacturing	104	16.4%
	Finance and insurance	37	5.8%
	Energy	36	5.7%
	Other sectors	177	27.8%

were still managerial workers. Most respondents come from Serbia, Hungary and Poland, with industries such as manufacturing at 16.4%, trade at 12.4% and communication and information at 10.2%.

4.1 Cross-tabulation Analysis of Factors Influencing the Adoption and Implementation of Digital Platforms

For further analysis, a crosstab was employed for additional analysis to assess how various categories like age, gender, education level, work experience, job position, country of origin, and industry affect employees' views and expectations about the adoption and implementation of digital platforms. Crosstab analysis allows for comparing and identifying patterns in responses to different categories and determining statistically significant differences between different groups in the respective variant.

The crosstab analysis shows the distribution of responses to the question about the adoption and use of digital platforms depending on the age group. The obtained values indicate that the largest number of respondents from the age groups 31–45 and 46–60 consider the platforms to be a good or very good choice for their business. In contrast, the number of respondents older than 61 who positively assessed digital platforms is significantly lower. The results from the chi-square test show a statistically significant difference between age groups regarding the adoption of digital platforms (Pearson Chi-Square = 36.248, $p < 0.001$). This indicates that age has a significant impact on attitudes towards digital platforms. The Linear Association results also confirm this difference ($p = 0.006$), meaning that younger age groups tend to have more positive attitudes towards digital platforms.

However, the analysis indicates that respondents' gender does not show a statistically significant response difference.

Further analysis examined the relationship between the country where the respondents' company operates and their perceptions of adapting and using digital platforms. The results show significant differences across countries, as confirmed by the Pearson chi-square test value (129.855, $p < 0.001$). Respondents from Serbia show the highest percentage of strong agreement with adapting and using digital platforms (score 5, with 38 responses), while the Czech Republic, Hungary and Bulgaria have a smaller number of respondents in this category. Slovakia has a more even distribution, with a significant number of responses in the middle range (score 4, with 30 responses). This analysis suggests that national context influences the adoption of digital platforms, with some countries showing a greater propensity for adaptation than others.

The relationship between the position in the company where employees work and perceptions of adapting to and using digital platforms was also examined. The results show statistically significant differences between groups, as confirmed by the value of the Pearson chi-square test (50.031, $p < 0.001$). Company owners comprise the largest percentage of respondents with low scores for adapting to digital platforms (score 1, with 116 responses). In contrast, managers and employees show a relatively even distribution of responses with higher scores, indicating greater openness towards digital platforms. Senior managers have the fewest responses in the high-score categories (4 and 5). This analysis suggests that position in the company significantly influences attitudes towards digital platforms, with company owners showing greater scepticism while employees and managers demonstrate greater readiness to accept them.

Cross-sectional analysis shows a correlation between employees' education level and their perception and willingness to adapt to digital platforms. Pearson's chi-square test shows statistically significant differences ($\chi^2 = 63.667$, $p < 0.001$), indicating that the level of education significantly influences attitudes towards digital platforms. Respondents with a high school diploma dominate the category with the lowest grades, while those with a master's or doctorate degree show a higher representation in the category with higher grades. In particular, respondents with a master's degree have the most responses in categories 4 (45 responses)

and 5 (32 responses), indicating a positive attitude towards digital platforms. On the other hand, respondents with a lower level of education generally show a lower willingness to adapt to these technologies. This analysis highlights the importance of education as a factor contributing to adopting digital platforms.

A statistically significant difference can be observed in the attitudes of employees from different sectors of business activities towards the adoption and application of digital platforms. Pearson's chi-square test shows statistical significance ($\chi^2 = 63.014$, $p = 0.004$), indicating that the sector in which companies operate affects the readiness of their employees to adapt to digital platforms. The largest number of respondents who opted for high scores come from sectors such as wholesale and retail trade, information and communication, and manufacturing. In contrast, some sectors such as mining and quarrying, and agriculture, show a higher representation of responses with lower scores, indicating a lower readiness to accept digital platforms. This analysis highlights the importance of the business sector as a factor shaping the attitudes and readiness of companies to adapt to digital innovations

5 DISCUSSION AND CONCLUSIONS

This study aimed to explore how different elements, such as age, gender, education, work experience, job role, geographic area, and industry sector, influence employees' readiness to embrace and utilize digital networks and business platforms. Consequently, a cross-analysis was performed to better comprehend the distinctions among various employee groups regarding their views on digitalization.

The results indicate a significant influence of age group on attitudes towards digital platforms, with the most positive responses among employees aged between 31 and 60, while those over 61 showed less willingness to adopt these technologies. Geographical differences also play a key role, with employees from Serbia showing a greater willingness to adopt digital platforms compared to countries such as the Czech Republic, Hungary and Bulgaria, while employees in Slovakia had a more balanced response. In addition, position in the company significantly influences attitudes towards digital solutions; business owners showed more scepticism compared to managers and employees, who generally showed more openness to digitization. The education level was also important since employees with advanced degrees, like a master's or doctorate, exhibited a stronger readiness to embrace digital technologies.

Theoretically, this paper enhances the comprehension of the complexities of adopting digital platforms across various industries and locations, pinpointing essential elements influencing employee perceptions of digital transformation. Practical implications include recommendations for identifying specific barriers and factors that hinder or encourage the adoption of digital solutions depending on the sector, country, and level of education of employees. Based on these findings, organizations should create strategies encompassing training, education, and infrastructure adjustments to enhance employees' readiness to embrace and incorporate digital solutions into their everyday tasks.

In light of these results, organizations should develop strategies that address the unique requirements of their employees, intending to enhance digital transformation and streamline business operations through the successful implementation of digital technologies and digital business platforms.

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Acknowledgement

This paper for the special session is based upon work from COST Action CA21118 – "Platform Work Inclusion Living Lab (P-WILL)" supported by COST (European Cooperation in Science and Technology—www.cost.eu).

This publication is based upon work from COST Action CA22124 supported by COST (European Cooperation in Science and Technology). COST is a funding agency for research and innovation networks. Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation. http://www.cost.eu.

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