

**Publisher**<http://jssidoi.org/esc/home>**EVALUATION OF HRM PROCESSES DIGITALISATION BY DIFFERENT GENDERS*****Natália Vraňaková^{1*}, Augustín Stareček², Zdenka Gyurák Babel'ová³**^{1*,2,3} *Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava, Ulica Jána Bottu 2781/25, 917 24 Trnava, Slovakia**E-mails:*^{1*} natalia.vranakova@stuba.sk (Corresponding author); ² augustin.starecek@stuba.sk; ³ zdenka.babelova@stuba.sk*Received 14 July 2024; accepted 12 November 2024; published 30 December 2024*

Abstract. Digital transformation is currently a topical and researched field. It includes basic processes, which are often closely related to production, and also affects human resource management (HRM) processes. Employee satisfaction is also reflected in the quality of management and the quality of setting up HRM processes. In contrast, the satisfaction itself can be different due to the gender diversity of employees. The article's main aim is to present the results of an analysis of the digital transformation in HRM processes from the perspective of gender diversity of employees in organisations in Slovakia. The current state was analysed through a research questionnaire, which was distributed online and in physical form. The research sample consisted of $n = 556$ respondents. The research questionnaire provided us with data for the evaluation of research questions and research hypotheses. As part of the research, we set two research questions focused on the differences between men and women in the perception of how their current job affects their future work skills and the employees' approach to developing their digital skills. Through the statistical evaluation of hypotheses, the differences between men and women in the perception of new technologies and the perception of which HRM processes are facilitated by digitalisation were tested. The presented research results can be used to make human resources management more efficient during the digital transformation.

Keywords: digitization; digital transformation; education; gender diversity; human resource management

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1. Introduction

In the past three years, the COVID-19 pandemic has significantly accelerated the development of new technologies, driving digital transformation and innovation in business processes. Industrial organisations are now facing the challenges associated with Industry 4.0, which affects work organisation, employee habits, and activities. This article explores the perception of new technologies among employees in Slovakia, focusing on the impact of digital transformation on human resource management and employees' work skills and development opportunities. Additionally, it addresses workforce diversity as a crucial factor in adopting new technologies and managing digitisation. The article is structured into six chapters: an introduction to the research

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topic, a theoretical framework on digital transformation and HR processes considering workforce diversity, a description of materials and methods used for analysis, results addressing research questions and hypotheses, a discussion, and a conclusion summarising the findings, research limitations, and future research directions.

2. Literature review and development of hypotheses

The literature review is divided into three areas. The first area is devoted to digitisation as well as digital transformation. The other two parts are devoted to digital transformation and human resource management processes, focusing on employee perception. In the last part, we consider the human factor, focusing on gender diversity, which is critical from the point of view of successful digital transformation.

Digitisation and digital transformation

Academic publications are currently devoted to the issue of developing digitisation as well as the issue of digital transformation. The impact of digitisation and, at the same time, digital transformation on the functioning of organisations is great, and this is also related to the number of publications devoted to various applications, as well as recommended procedures (Venkatraman, 2017; Mahraz et al., 2019), or the management of human resources in organisations with digital tools for individual human resource management (HRM) processes. The change that occurred with the arrival of new information and digital technologies is also called an era characterised by information and communication technologies (Siemens and Connectivism, 2023). The exponential development of new digital technologies and their adoption and use (intentional or unintentional) represents a new form of transformation, which we also call digital transformation (Hanna, 2016). In organisations, this form of organisational transformation (technology-enabled) refers to using information and digital technologies to influence various aspects of the organisation (Morakanyane et al., 2017). Digitisation is a term that has been increasingly used in several areas of life in the last two decades. The term is often used in the context of process innovation, both within organisations and in the public sector. We also frequently come across the term digital transformation. At the same time, it is essential to state that digitisation and digital transformation are closely related; they are not equivalent concepts and cannot be considered synonyms. Researchers believe that digital transformation goes beyond digitalisation because it affects the entire company; on the other hand, digitalisation refers to changes in selected business processes or tasks and activities (Amit & Zott, 2001).

Digitisation generally refers to the use of digital technologies and data to generate revenue, improve business, and transform business processes, and, at the same time, is related to the creation of an environment for business. Globalisation in the last two decades has increased the pressure on organisations (mainly production) to change the usual business models. These changes require organisations to integrate effectively in order not only to stay alive but to thrive in a globally competitive environment. Effective integration and optimal performance (Gyurák Babel'ová et al., 2020) can only be achieved through digital processes (White, 2012) and using sustainable management of organisations (Vrabcová & Urbancová, 2023). Digitization also provides productivity improvements, cost reductions and innovations that "influence" and affect the success of digital transformation (Strategic Information Management, 2020). The pressure to digitise processes within private and public organisations has increased based on the above.

In the beginning, when the term digital transformation began to be used, this term used to be defined as a process that includes all activities involving adaptation to digital changes within the system used (Hemerling et al., 2018; Young & Rogers, 2019). Digital transformation of organisations requires fundamental organisational change. Some experts say that digital transformation requires instilling a new culture that supports change while being enabled by an overarching corporate strategy (Hemerling et al., 2023). Thanks to technological progress and the integration of digital solutions into existing processes, digital transformation impacts a wide range of areas in the industry. Digital transformation has been introduced in all industry sectors to improve how businesses operate. Not all technologies can be implemented equally or in similar processes; therefore, different industries have adopted the technology to various extents (Kutnjak et al., 2019). For organisations that implement digital transformations, the effects of these transformations are especially beneficial in the areas of innovation (Zhu et al., 2006; Li, 2020), management, and modernisation. Digital transformation also positively

affects the competitiveness of organisations in terms of efficiency and cost reduction and affects global value chains in terms of geographic scope as well as specialisation (Leao & Silva, 2021). Examining the impact of digital transformation on different departments within an organisation allows for a deeper understanding of these effects. Managers and decision-makers can thus adopt a focused approach to overcoming the challenges they face. This will provide a better understanding of the differences between departments, including their unique cultures, work processes and resources, which may affect their ability to adopt and implement digital transformation initiatives (Hizam et al., 2023).

Digital transformation and human resource management

Digital transformation profoundly influences all aspects of business management, particularly human resource management (HRM). Organisations must adopt HRM practices that support employee behaviour and align with overall business strategies. The alignment of these practices plays a crucial mediating role in the relationship between strategy implementation and digital transformation (Nicolás-Augustín et al., 2022). Transitioning from traditional HRM methods to digital processes is vital for enhancing organisational productivity and efficiency while reducing resource consumption (Achchab & Tamsamani, 2022). Digital HRM processes involve integrating digitisation into various HR functions using modern technologies. While digital transformation presents substantial benefits for business growth, it also brings challenges related to converting old HR systems into new ones and potential negative impacts from these changes (Zhang & Chen, 2023). The HRM function is critical in the digital transformation as it adapts job roles and organisational structures to new standards and operational efficiencies. Digital transformation facilitates the creation of flexible organisational frameworks, enhancing spatial, temporal, and content flexibility for employees (Barisic et al., 2021; Jesek et al., 2021). The changes in digital transformation influence not only HR processes but also how organisations engage with their employees and cultivate workplace culture. Companies increasingly invest in HR processes to harness technological solutions, making digital applications essential for streamlining HR functions (Vardarlier, 2020). Modern organisations leverage digital transformation across almost all HR activities, enabling them to achieve strategic objectives such as improved service quality, cost efficiency, and enhanced HR methods (Zehir et al., 2020). Automation transforms HR management, with many routine tasks now handled by intelligent systems, freeing human resources for more strategic roles (Zehir et al., 2020).

The recruitment and selection process, fundamental to an organisation's sustainable development, is undergoing significant changes due to digital transformation (Nagibina et al., 2020). The increasing use of mobile applications for job access, application tracking, artificial intelligence, and predictive analytics for candidate assessment and employer branding exemplifies this shift (DiRomualdo et al., 2018). Digitisation enhances employee onboarding, improving retention and reducing costs (Suvalova et al., 2021). Digital transformation significantly impacts education, necessitating adaptation to the evolving landscape of digital learning. Emphasis is increasingly placed on social and informal learning through digital media, while formal education is also enhanced by digital technologies (Seufert and Meier, 2016). Rapid advancements in computers and the internet have propelled lifelong learning, allowing employees to acquire transferable and specialised skills and enhancing their adaptability and competitive advantage (Bilyalova et al., 2020; Li, 2022; Sousa and Rocha, 2019). Management must identify vulnerable employee behaviours during digital transformation to facilitate a smooth transition. For instance, performance evaluations can become crucial in this phase, enabling objective assessments of how well employees adapt to new task management approaches (Alieva & Powell, 2023). Digital tools support continuous performance evaluations, allowing managers and employees to share feedback regularly, which promotes self-correction and adaptability to new digital demands (Fu et al., 2023). Digital technologies simplify access to compensation and benefits data, automating payroll processes. These technologies facilitate efficient data collection from various systems, minimising manual steps and enhancing overall efficiency in HR management. Self-service portals enable employees to manage their HR tasks, such as leave requests and personal information updates, increasing transparency and reducing administrative burdens (DiRomualdo et al., 2018). Workforce analytics is essential for HRM, enabling organisations to monitor employee engagement, productivity, and satisfaction in real-time (Burnett & Lisk, 2019). HR analytics integrates new technologies to improve decision-making related to people management, ultimately enhancing individual and organisational performance (Achchab & Tamsamani, 2022). Responsible decision-making in HR requires an analytical perspective that considers multiple dimensions of HR management and informs strategic

choices (Momin & Mishra, 2023). Data analytics facilitates accurate workforce planning and forecasts regarding employee turnover. Predictive analytics harnesses current data to anticipate future outcomes, assisting organisations in making informed decisions before implementing changes. The increasing emphasis on data analytics within HRM reflects a broader trend toward digitisation, reshaping traditional HR practices (Likhitkar & Verma, 2020).

Digital transformation helps overcome communication, geography, and hierarchy barriers, returning the focus of HR management to individuals. While digital HRM involves automating traditional functions, it also necessitates rethinking these roles through a people-centric lens that prioritises efficiency (Mitrofanova et al., 2019). However, it is critical to maintain a strong foundation of human values during this transition, as the role of people in achieving long-term organisational success remains paramount. Moreover, the digitisation of HRM raises concerns about potential job losses, particularly in roles traditionally held by women. Research indicates that job displacement due to automation is most pronounced in routine tasks, where women are often overrepresented, highlighting that digital transformation is not gender-neutral (Larsson & Viitaoja, 2019; Genz & Schnabel, 2023).

In conclusion, while digital transformation offers numerous advantages for human resource management, organisations must navigate its complexities thoughtfully. This involves strategically integrating digital technologies into HR practices while ensuring that employee engagement, adaptability, and core human values remain central to the process. By doing so, organisations can position themselves for sustainable success in an increasingly digital world.

A human factor in digital transformation

Some authors emphasise that human components in organisations are crucial to digital transformation (Stachová et al., 2020). In the digitisation era, HR processes should be human-oriented and personalised, focusing on appreciation, individualisation, and lasting experiences. Digital transformation poses challenges in human resources, given the extensive changes in standards and procedures. A key challenge lies in adapting to individual employees, necessitating a balance between digital processes and personalisation (Varshney, 2020). Organisations feature diverse workforces, and individual differences can influence the acceptance of new technologies. Investigating the differences in work approaches between men and women is vital, along with promoting equal opportunities (Murray & Southey, 2020). Research indicates that digital inequality and unequal access to technology, especially in regional communities, may lead to different perceptions and adoption of digital technologies between genders (UN Women, 2020; Hsieh et al., 2008). A study revealed significant differences in the impact of gender on technology adoption; businesses led by women tend to use social media more extensively than those led by men. However, women require more assistance with digital strategies, while men are more likely to pursue technical roles and IT skills (Alam et al., 2022).

The digital gender divide is complex, influenced by various aspects such as limited access to digital tools, affordability, lack of skills or education, technological literacy deficiencies, and inherent gender biases. While connectivity issues mainly affect developing regions, these challenges impact women globally. There is no one-size-fits-all solution to digital gender inequality, which restricts women's opportunities in technology professions. Hence, there is an urgent need to provide adults with opportunities to enhance qualifications, particularly for women to develop skills related to digitalisation. The digital era offers flexible solutions to remove barriers to adult learning, but achieving this requires coordination among different institutions and actors (Larsson & Viitaoja, 2019). Given the importance of analysing the gender divides within the context of digital transformation and its impact on business functioning, we aim to contribute to knowledge in this area through our research. Understanding these dynamics is essential for addressing the challenges posed by digital transformation and fostering inclusivity in technology adoption.

RH1: There is no statistically significant difference exists between men and women in the perception of new technologies (digitalisation).

RH2: There is no statistically significant difference between men and women in the perception that digitisation facilitates HRM processes.

The article's authors created a diagram showing the presented research framework. The representation of the research framework (research problem) can be seen in Figure 1.

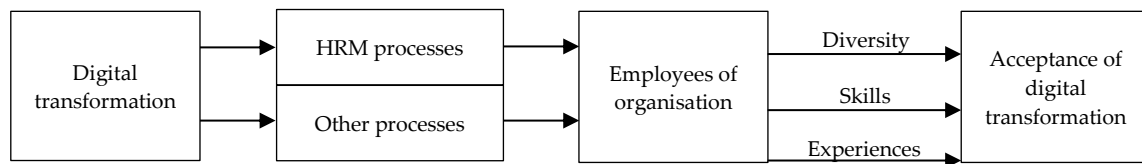


Figure 1. Research framework of digital transformation in human resource management

Source: own elaboration, 2023

In the research framework shown in Figure 1, we focused on the impact of digitalisation and digital transformation on individual HRM processes and the differences between men and women in the perception of digitalisation and its effects. Considering the area of digital transformation and also its possible impact on the functioning of organisations, we focused on how this phenomenon affects organisations in Slovakia. As part of the research focus, we analysed the impact of digitisation and digital transformation on human resource management. Since we perceive a significant lack of studies in this area, we formulated research questions, the answers to which would have practical and theoretical benefits.

3 Materials and methods

The following subchapters outline the research sample characteristics, data collection tool (research questionnaire), and evaluation of research questions and hypotheses. Initially, we examined theoretical knowledge in digitisation and new technologies, focusing on employee skill development while considering employee diversity. We defined the research framework, formulated the research problem, and identified the research object—employees from organisations in Slovakia and their perceptions of technology and digitisation. The formulation of research questions and hypotheses followed this.

The authors created a research questionnaire aligned with the goals of the project VEGA No. 1/0721/20, which focuses on identifying priorities for sustainable human resource management, particularly regarding disadvantaged employees in the context of Industry 4.0. Data collection occurred from April 2021 to December 2022, involving 556 employees from various organisations in Slovakia. The collected data were processed using MS Excel and IBM SPSS Statistics 23. Table 1 presents the characteristics of the employees based on their region and the size of their organisation, detailing both absolute frequencies (AF) and relative frequencies (RF). The evaluated data served as the basis for drawing conclusions from the conducted research.

Table 1. Characteristics of the respondents in terms of size and region of the organisation

Region / Number of employees in the organisation	1 to 9		10 to 49		50 to 249		250 and more		Total	
	AF	RF [%]	AF	RF [%]	AF	RF [%]	AF	RF [%]	AF	RF [%]
Western Slovakia	44	7.91	71	12.77	104	18.71	303	54.50	522	93.88
Central Slovakia	2	0.36	6	1.08	12	2.16	9	1.62	29	5.22
Eastern Slovakia	2	0.36	0	0.00	1	0.18	2	0.36	5	0.90
Total	48	8.63	77	13.85	117	21.04	314	56.47	556	100.00

Source: own elaboration, 2023

The employees participating in the research come from organisations in Slovakia. At the same time, according to the data in Table 1, it is clear that they mostly come from Western Slovakia (93.88%) and have 250 or more employees (54.50%) in the total number of organisations. A total of 5.22% comprised employees from companies based in Central Slovakia, while the largest were organisations with 50 to 249 employees. The smallest sample (0.90%) is employees from organisations based in Eastern Slovakia. This distribution

corresponds to the business environment in Slovakia, as most organisations and companies are concentrated in Western Slovakia. The following Figure 2 contains information about the sector and focus of the organisation participating in the research.

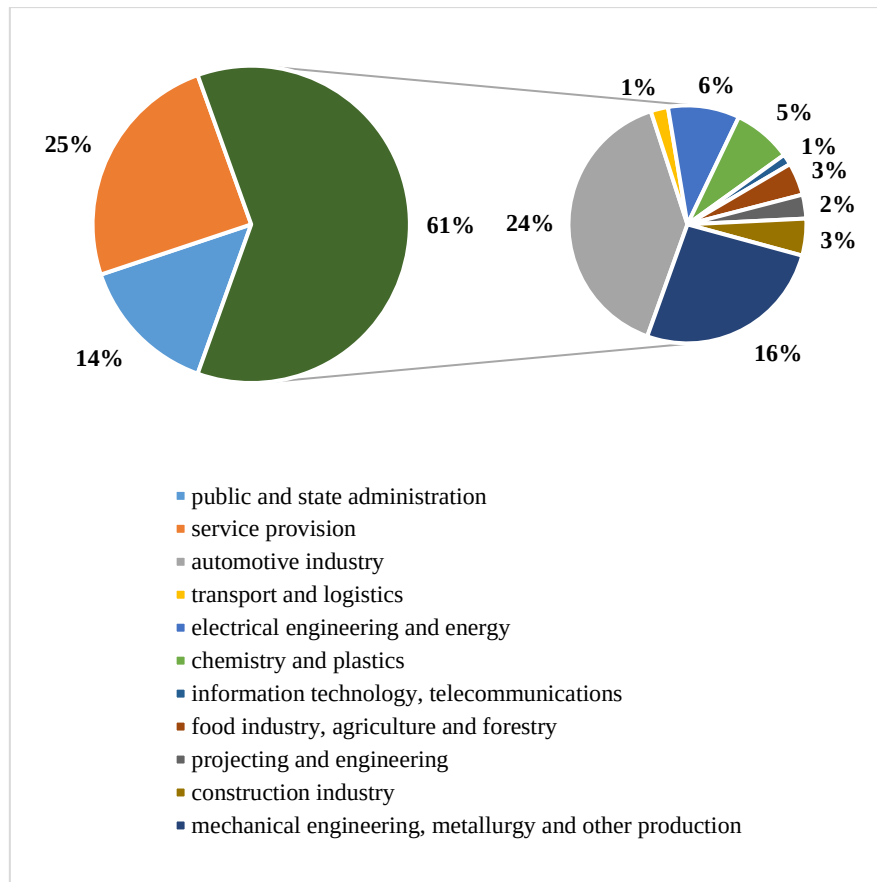


Figure 2. Characteristics of respondents from the point of view of the organisation's sector

Source: own elaboration, 2023

According to the data in Figure 2, 25% of employees come from organisations that provide services, and 14% come from public or state administration. Employees from industrial enterprises make up 61% of the respondents. In comparison, the most significant number are employees from the automotive industry (24% of the total number of organisations), followed by mechanical engineering, metallurgy and other production (16%). This distribution is also responsible for the business environment, as one of the most widespread sectors in Slovakia is the automotive production sector and related enterprises in the field of engineering. The fewest respondents are from companies in the field of transport and logistics and information technology and telecommunications (1% of the total).

In the next part of the article, the respondents - employees of organisations in Slovakia will be characterised in more detail (Table 2).

Table 2. Demographic distribution of respondents

Demographic distribution of respondents	Man		Woman		Total	
	AF	RF [%]	AF	RF [%]	AF	RF [%]
Job position						
production employee	68	12.23	27	4.86	95	17.09
administrative employee	47	8.45	115	20.68	162	29.14
specialist employee	114	20.50	85	15.29	199	35.79
managerial (management) position	70	12.59	30	5.40	100	17.99
Total	299	53.78	257	46.22	556	100.00
Year of birth						
1951 - 1960	2	0.36	1	0.18	3	0.54
1961 - 1970	22	3.96	20	3.60	42	7.55
1971 - 1980	56	10.07	53	9.53	109	19.60
1981 - 1990	113	20.32	76	13.67	189	33.99
1991 - 2000	103	18.53	106	19.06	209	37.59
2001, 2002	3	0.54	1	0.18	4	0.72
Total	299	53.78	257	46.22	556	100.00

Source: own elaboration, 2023

The data in Table 2 show the respondents' characteristics when 299 men (53.78%) and 257 women (46.22%) participated in the research. In terms of job position and group of men, the most significant part of employees are specialists (20.50% of all men) and the least (8.45% of all men) are administrative employees. Within the group of female respondents, the majority (20.68% of all women) are in administrative positions, followed by women in specialist positions (15.29% of all women). The fewest female respondents are in production positions. In terms of age, the youngest respondent was born in 2002, and the oldest in 1951. Most respondents are men born between 1981 and 1990, while most women were born between 1991 and 2000. Overall, the fewest respondents were born between 1951 and 1960.

4 Results

Two research questions and two hypotheses were established to establish the research framework, which are evaluated in the following subchapter.

Evaluation of research questions

When formulating the research questions, the authors of the article focused on how the current job of employees in the conditions of digitisation and digital transformation affects employees' work skills and what opportunities are offered to employees to improve their digital skills. The intention was to examine the experience of employees and the possibilities of developing their skills as prerequisites for the acceptance of new technologies with regard to the diversity of the workforce. *Evaluation of the first research question: RQ1: How do employees perceive if their current job affects their future work skills?* To evaluate the first research question, the following Table 3 was constructed.

Table 3. Perception of future work skills

Option / Answer	Man		Woman		Total	
	AF	RF [%]	AF	RF [%]	AF	RF [%]
yes, the physical load	40	9.52	20	6.21	60	8.09
yes, the mental load	91	21.67	64	19.88	155	20.89
yes, it allows me to develop skills	114	27.14	99	30.75	213	28.71
yes, it motivates me	77	18.33	49	15.22	126	16.98
yes, it demotivates me	32	7.62	29	9.01	61	8.22
no, it doesn't affect me	66	15.71	61	18.94	127	17.12
Total	420	100.00	322	100.00	742	100.00

Source: own elaboration, 2023

The data shown in Table 3 express opinions on how men and women perceive their work abilities with respect to the future. Both men and women agree, to the highest extent 28.17% of the total number of respondents 27.14% of the total number of men and 30.75% of the total number of women) confirmed that their current work allows them to develop their work skills. Percentage-wise, more men, 21.67%, than women, 19.88%, experience psychological stress at work, which may affect their working abilities in the future. In total, the fewest respondents, 8.09%, feel the physical strain at work, specifically 9.52% of respondents from the group of men and 6.21% of respondents from the group of women. The evaluation of the second research question can be seen in Table 4. *RQ2: How do employers ensure the development of their employees' digital skills?*

Table 4. Ensuring the development of digital skills

Option / Answer	man		woman		Total	
	AF	RF [%]	AF	RF [%]	AF	RF [%]
Did not conduct any training	135	30.82	115	33.82	250	32.13
Implemented contact (face-to-face) training	38	8.68	19	5.59	57	7.33
Implemented online (distance) training	122	27.85	92	27.06	214	27.51
Prepared video instructions for using the systems	65	14.84	46	13.53	111	14.27
Prepared manuals and instructions (printed or electronic Word / PDF)	69	15.75	61	17.94	130	16.71
Provided financial resources for the personal development of selected skills	9	2.05	7	2.06	16	2.06
Total	438	100.00	340	100.00	778	100.00

Source: own elaboration, 2023

Respondents had the opportunity to mark several answers from the options listed in Table 4. In the mentioned question, the answers were similar between men and women. Therefore, employers must implement training to the greatest extent to develop digital skills. The second most common answer is online (distance) training, followed by manuals and tutorials. Among the least marked options is providing a financial contribution for developing selected skills and contact (face-to-face) training.

Evaluation of research hypotheses

When formulating research hypotheses, we focused on how the gender diversity of human resources affects the perception of new technologies and areas of human resource management that are facilitated by digitalisation. We processed the established research hypotheses in MS Excel and evaluated them using the chi-square test and the Independent Samples T Test in the IBM SPSS Statistics 23 software.

Evaluation of the first research hypothesis (*RH1*): *There is a statistically significant difference between men and women in the perception of new technologies (digitalisation)*. The hypothesis was tested using the chi-square test, and the strength/measure of correlation was defined by Cramer's Cramer's V. The results of the chi-square test and Cramer's Cramer's V are shown in Table 5, Table 6 and Table 7.

Table 5. Differences between men and women in the perception of new technologies

Option / Answer			As a burden	As a necessity	As work facilitation	I do not observe this in our organisation
Gender	Man	Count	17	130	122	30
		Expected Count	15.1	112.9	136.1	35.0
	Woman	Count	11	80	131	35
		Expected Count	12.9	97.1	116.9	30.0
	Total	Count	28	210	253	65
		Expected Count	28.0	210.0	253.0	65.0

Source: own elaboration, 2023

Table 6. Chi-square results for testing of hypothesis 1

Test of Chi-Square	Value	df	Asymptotic significance (2-sided)
Pearson Chi-Square	10,784 ^a	3	0.013
Likelihood Ratio	10.845	3	0.013
Linear-by-Linear Association	8.575	1	0.003
N of Valid Cases	556	-	-

Source: own elaboration, 2023

Table 7. Cramer's Cramer's V for testing of hypothesis 1

Test of Cramer's Cramer's V	Value	Approximate Significance
Nominal by Nominal	Phi	0.139
	Cramer's Cramer's V	0.139
N of Valid Cases	556	-

Source: own elaboration, 2023

The level of significance proves that it is less than 0.05. Based on the above, we accept the alternative RH1 and thus that there is a difference between men and women in the perception of new technologies (digitalisation). Although the result is statistically significant, the value of Cramer's V is 0.139; thus, the variables are only weakly related (Table 5, Table 6 and Table 7).

Evaluation of the second research hypothesis (RH2): *There is a statistically significant difference between men and women in the perception of which HRM processes are facilitated by digitisation.* Table 8 shows the results for men (M) and women (W) respondents.

Table 8. HRM processes facilitated by the use of technology

Option / Answer	0 – I do not know		1 – The best		2		3		4		5 – The worst		Average	
	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Recruitment and selection of employees	58	40	71	66	77	59	51	46	24	30	18	16	1.89	2.03
Orientation and adaptation of employees	56	26	40	41	78	79	77	65	39	35	9	11	2.10	2.29
Employee education and development	35	15	72	78	90	79	59	57	35	16	8	12	2.04	2.07
Health protection and hygiene measures	65	36	58	63	66	58	68	68	28	20	14	12	1.93	2.04
Assigning and changing work tasks	49	29	49	49	97	82	79	74	14	19	11	4	1.98	2.07
Change of place of work	72	52	50	43	67	59	70	71	26	22	14	10	1.90	1.99
Communication and employee awareness	32	17	85	97	83	60	53	52	28	17	18	14	2.05	1.99
Presence at the workplace (e.g. home office)	67	39	71	78	56	45	66	61	28	16	11	18	1.83	1.96
Assessment and control of work tasks	42	32	53	45	84	59	81	99	29	17	10	5	2.11	2.15
Rewarding of employees	71	57	33	31	60	49	72	76	41	24	22	20	2.15	2.15
Release (dismissal)	100	88	31	25	32	23	74	72	36	23	26	26	1.98	1.98

Source: own elaboration, 2023

Respondents in the HRM processes rated the impact of technology on various areas from "1 - best" to "5 - worst," with an option for "0 - I don't know" as shown in Table 8. We analysed the responses by gender, calculating averages based on the number of answers multiplied by their respective values (0 to 5) and divided by the number of respondents in each gender group. The key finding is that respondents view technology positively regarding its impact on employee management. Both men and women agreed that technology enhances workplace presence (e.g., through remote work), facilitating alternative work modes. Men rated technology's impact on recruitment and selection as highly positive, while women considered employees' release (dismissal) as the second most positively impacted area.

Conversely, women rated the orientation and adaptation of employees, assessment and control of work tasks, and employee remuneration as the least positively influenced areas. Men also rated these three areas as the least positive, although in a different order. Overall, this study highlights varying perceptions of technology's impact

on HRM processes based on gender. As part of the second research hypothesis, we used the Independent Samples T Test, and the results are shown in the table attached to the article. In our case, we do not reject RH2, as the significance value is greater than 0.05. There is no difference between men and women in the perception that digitisation facilitates HRM processes.

5 Discussion

Digital transformation within organisations requires investing in opportunities and creating strategies that leverage the existing workforce across departments. For this transformation to succeed, employees must understand its goals, rationale, and implications for their work. Clear communication about the advantages and disadvantages for individual employees is essential. Generally, the more actively employees participate, the better the digital transformation outcomes, as these efforts correlate with organisational performance (Ullrich et al., 2023). Digital transformation often sees employees outside IT departments managing technologically demanding projects, underscoring the need for digital skills among all staff (Yeow et al., 2018). However, the importance of employees' roles and digital skills in this process needs to be addressed. Digital literacy is crucial for employees' cognitive behaviour when using digital technologies, as findings indicate that this knowledge fundamentally impacts their use of digital tools. Aligning employee capabilities with digital technologies can enhance resource utilisation and support digital transformation initiatives (Cetindamar Kozanoglu & Abedin, 2021). An integrated approach to digital transformation involves a symbiotic relationship between influencing factors, digital competencies, and information technology. Adopting digital technologies and innovative business models shapes the direction of organisational culture transformation (Trushkina et al., 2023). As organisations evolve digitally, changes in structure and culture lead employees to adopt roles beyond their traditional functions (Vial, 2019). Employers must prioritise employee well-being during this transformation. Workplace resilience and adaptability significantly influence digital transformation outcomes for individuals and organisations. The rise of advanced technologies is accompanied by a growing skills shortage in the labour market, where retraining and upskilling employees emerge as critical challenges for organisations and governments alike (Trenerry et al., 2021). The demand for digitally skilled employees is increasing in industries, prompting educational institutions to adapt their programs accordingly. A new, flexible educational framework is essential and adaptable to various circumstances and levels of education (Kuhn & Lucke, 2021).

Research should focus on the digitised lives of young people, shaping education in higher institutions while also addressing foundational education to equip future generations with the necessary skills and interests in the digital field (Iivari et al., 2020). Social skills, higher education, and advanced digital literacy may provide a competitive advantage in the job market (Larsson & Viitaoja, 2019). For proactive skill development among current employees, they must view technological advancements as controllable opportunities rather than threats—employees' perceptions of industry maturity regarding technology management impact how they perceive these changes. Employees may see technological advancements as threats when industry maturity is viewed negatively. To foster skills development, managers should encourage open communication about the effects of macro-level trends like digitalisation on their organisations (Ostmeier & Strobel, 2022). Digitisation directly impacts employees, making their involvement in the process essential while also considering their concerns. Misunderstandings regarding specific digital tools can lead to frustration and dissatisfaction among staff (Bueechl et al., 2021). Therefore, monitoring and enhancing the digital employee experience is crucial for successful digital transformation, contributing to productivity, employee satisfaction, and talent retention (Gheidar & Zanjani, 2023).

Successful implementation of new ideas relies on employees having rewarding learning experiences. Human resources play a strategic role in digitisation, as their activities promote employee engagement (Varshney, 2020). Additionally, attention should be given to gender differences. The European Parliament's resolution highlights persistent gender inequalities in the digital sector, with Eurostat data revealing that girls and women are underrepresented in ICT studies within the EU. Gender stereotypes significantly affect subject choice, resulting in fewer adolescent girls interested in ICT careers. Despite an increase in women in cybersecurity, their numbers remain low, necessitating a commitment to gender equality in digital education across all levels (2019/2168(INI), 2023). Both educational institutions and employers must actively participate in developing

digital skills and promoting gender equality in the workforce, particularly in contexts of job transformation (Yalina, 2019).

6 Conclusions

The article successfully analyses the perception of digital transformation in human resource management among employees in Slovak organisations. It reveals gender differences in how new technologies (digitalisation) are perceived. Based on the evaluation of RH1, there is a difference between men and women in the perception of new technologies (digitalisation). This finding highlights the importance of considering gender diversity and the varying starting conditions of current and future employees when developing digital skills. Addressing these differences is crucial for creating effective development opportunities in digital literacy, which are critical to the success of organisations in digital transformation. This should be applied not only in employee training but also in secondary and higher education institutions to enhance digital skills from an early stage. It is positive that, based on the RH2 evaluation, the perception of HRM areas affected by digital transformation does not differ between men and women. Organisations should focus on comprehensively developing and digitising HRM processes, as they are crucial for overall digital transformation. It's essential that employees feel their skills and current roles are protected from future changes, so organisations must prioritise HRM development. Overall, the above findings suggest the need to focus more on factors that may be more relevant than gender in digitisation initiatives. Practice recommendations include taking into account individual preferences and the level of technical skills or motivation of individuals, which can contribute to higher efficiency and acceptance of digital transformation in workplaces.

The research has some limitations, such as the sample size being limited to Slovak organisations and the analysis being conducted only from employees' perspectives. Recommendations are also general and tailored to organisations rather than being specific procedures, as these vary by organisation.

Future research explores ways to maintain employees' work abilities, considering gender differences and examining employability in job transformation due to digitisation. Expanding research beyond Slovakia to other EU countries will also provide a broader perspective.

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