

HRM Transformation in Various Industries: The Risk of Inertia vs. The Power of Innovation

Lenka Ližbetinová^{1*}, Eva Nedeliaková², Pavla Lejsková³ and Roman Urban⁴

¹Ambis University, a.s., Security Management Department, Lindnerova 575/1, CZ-180 00 Praha 8-Libeň, Czech Republic, lenka.lizbetinova@ambis.cz

²University of Žilina, Faculty of Operation and Economics of Transport and Communications, Univerzitná 8215/1, SK-010 26 Žilina, Slovakia, eva.nedeliakova@fpedas.uniza.sk

³University of Pardubice, Faculty of Transport Engineering, Studentská 95, CZ-532 10 Pardubice, Czech Republic, pavla.lejskova@upce.cz

⁴AMBIS University, Security Management Department, Lindnerova 575/1, CZ-180 00 Praha 8-Libeň, Czech Republic, Roman.Urban@ambis.cz

* Corresponding author

Abstract: This study aims to analyze the current application of modern Human Resource Management (HRM) tools across various industries and identify how companies perceive their future importance. The research focuses on HRM digitalization, gamification, flexible compensation, and employer branding as key factors influencing employee engagement and business competitiveness. The study employs a quantitative analysis of data obtained from a survey of 538 companies across different sectors. ANOVA testing was used to evaluate differences in HRM tool application across industries, while a K-means cluster analysis classified companies into three categories: progressive enterprises, careful enterprises, and sleepy enterprises. A correlation analysis assessed the relationship between current HRM adoption and its perceived future importance. Companies with a high degree of HRM digitalization—such as IT, finance, and research sectors—actively implement gamification, flexible compensation, and employer branding. In contrast, traditional sectors like manufacturing and construction continue to favor conventional HR strategies. Investments in employee training and development emerged as the strongest predictor of HRM being perceived as a crucial strategic factor in the future.

Keywords: HRM, digitalization, competitiveness, enterprise, industry

1 Introduction

In recent years, Human Resource Management (HRM) has undergone a significant transformation, driven by digitalization, globalization, and evolving employee expectations. Modern HRM tools such as gamification, flexible compensation, and employer branding play a crucial role in enhancing employee engagement and business competitiveness [1]. Despite existing research in HRM, significant gaps remain. Most studies focus on technologically advanced sectors such as IT, finance, and research [2] [3], while traditional industries like manufacturing, transportation, and construction remain underexplored [4]. A comprehensive cross-industry comparison is also lacking, making it unclear how different sectors can effectively adapt digital HRM tools [5]. Another limitation in current research is the lack of empirical evidence on the relationship between current HRM tool adoption and their perceived future importance. While studies confirm the positive impact of modern HRM strategies on employee engagement [6] [7], few investigate whether companies that have already implemented these tools plan to continue investing in them [8]. This study aims to analyze the current adoption of modern HRM tools across various industries and compare how businesses perceive their importance in the future. The findings will provide a more comprehensive view of HRM innovation trends and serve as a foundation for strategic HR management decisions.

2 Theoretical Background

The integration of human resource management (HRM) tools across various sectors is essential for enhancing organizational efficiency and employee satisfaction. Different industries adopt specific HRM strategies tailored to their operational needs, with a strong emphasis on digital transformation and innovative approaches. The following sections outline key HRM tools and their application in different businesses. The implementation of modern HRM tools increases a company's competitive potential in the future [7]. Organizations across various sectors use modern HRM tools to enhance employee autonomy and create meaningful work experiences. By integrating digital technologies, companies can foster a culture of flexibility and engagement, ultimately leading to improved employee satisfaction and retention. Effective communication and structured collaboration supported by HRM strategies can increase productivity by 30% and accelerate project completion by 20%.

Some sectors, particularly IT (J), finance (K), and research (M/P), have fully integrated digital HR tools, while traditional industries such as construction (F) and manufacturing (C) have been slower to adopt them [4] [9]. Low digitalization in healthcare (Q) and transportation (H) is linked to the nature of work and regulatory constraints [2].

2.1 Key HRM Tools and Their Application Across Sectors.

Research shows that greater autonomy enhances performance, allowing employees to proactively engage with their tasks, leading to better individual and organizational outcomes [10]. Work-life balance is another key factor in modern workplaces, directly impacting employee well-being and productivity. Flexible work arrangements, supportive policies, and employee wellness programs contribute to a healthier work environment, improving job satisfaction and retention [11] [12]. While remote work and flexible scheduling help reduce stress, some organizations face challenges in implementation due to traditional workplace structures and resistance to change.

Promoting autonomy and flexibility increases employee engagement and performance, with the highest level of independence found in IT, research, and finance [10] [13]. In contrast, manufacturing (C), transportation (H), and agriculture (A) operate under more hierarchical and less flexible structures [4]. Work-life balance has emerged as a crucial factor for employee motivation, with the best conditions found in industries that allow remote work [11]

Building a strong employer brand is essential for organizations aiming to enhance their attractiveness as employers. This process involves strategic initiatives that not only attract talent but also retain and engage existing employees. Digital platforms increase visibility and engagement, making companies more attractive to potential employees [14]. A well-defined employer brand significantly increases the likelihood of attracting top talent, particularly in competitive sectors like IT [15] [16]. Effective employer branding fosters a positive workplace culture, which is crucial for retaining skilled employees and enhancing their engagement levels [17]. According to available studies, companies in the IT, financial, and healthcare sectors invest heavily in employer branding due to high competition in the labor market [8]. In contrast, businesses in agriculture, construction, and manufacturing primarily rely on traditional HRM methods rather than actively developing employer branding [2].

Employee selection at the executive team level, coupled with team remuneration strategies, plays a crucial role in enhancing organizational performance [18]. The integration of effective selection methods and team-based compensation can lead to improved employee alignment with company goals and increased motivation. Selecting employees who share the organization's values and objectives enhances decision making and reduces risk in critical roles [19]. Implementing a model for team remuneration allows for collaborative goal-setting, linking team performance to organizational strategy [20]. A well-defined remuneration system that rewards team efforts fosters motivation, leading to improved business performance and competitive advantage [21]. Collective decision making is also applied in trade and manufacturing, though its flexibility is significantly lower than in IT [22]. According to a 2024 study [2], hierarchical decision making with limited employee autonomy is predominantly used in agriculture, construction, and transportation.

Digital tools such as artificial intelligence, gamification, and virtualization are transforming HRM practices, making processes more efficient and engaging [23] [24]. Gamification enhances motivation and performance by turning routine tasks into engaging challenges, incorporating game elements to increase productivity [25]. Advanced technologies, including AI, AR, and VR, create immersive learning environments that further boost motivation and efficiency [25]. Virtualization enables remote training and development, catering to diverse employee needs [26], while studies suggest gamification improves productivity, morale, and engagement [27] [28]. Knowledge-intensive sectors such as IT, finance, and research benefit the most from digital HRM integration, whereas industries like construction, transportation, and agriculture face limitations due to physical work demands and hierarchical structures [2] [29].

Compensation strategies remain critical for employee motivation, with companies increasingly using data analytics to personalize reward packages [30]. Gamification in compensation strategies has proven effective in boosting motivation [7]. The IT sector, along with finance and healthcare, offers flexible compensation models, including performance-based bonuses and stock options [8] [31]. Performance evaluation and feedback play a crucial role in training and development, aligning employee growth with organizational goals [3] [32]. Companies investing in structured performance management report higher productivity, job satisfaction, and retention rates [33]. Assessing employee performance allows organizations to tailor training programs, addressing skill gaps and optimizing overall workforce efficiency [34] [35]. Regular feedback meetings foster open communication, helping employees navigate challenges and seize growth opportunities [36] [37].

In today's evolving business environment, companies increasingly emphasize employee autonomy and responsibility in training programs, as this approach benefits both employees and organizations. Many businesses implement strategies that allow employees to shape their learning paths, enhancing their professional growth and engagement [38]. For example, Ford's co-determination model enables employees to take ownership of projects and workplace needs [39]. Self-directed learning plays a crucial role in modern training programs, fostering adaptability and employability [40] [41]. Grounded in self-actualization and autonomy theories, this approach enhances motivation and personal growth, ultimately leading to a more dynamic and engaged workforce [40] [42].

3 Materials and Methods

The aim of this paper was to identify the approach of business entities in the sectors of transportation, IT, construction, industry, and manufacturing regarding the application of modern HRM tools and concepts.

Table 1

Structure of the research set								
Industry		Company size (by number of employees):				Majority ownership:		Total
		1-9	10-49	50-245	250-	Domestic	Foreign	
H - Transportation and storage	N	11	12	6	9	29	9	38
	%	28.9%	31.6%	15.8%	23.7%	76.3%	23.7%	100%
Other service	N	8	20	10	6	39	5	44
	%	18.2%	45.5%	22.7%	13.6%	88.6%	11.4%	100%
J - Information & communication	N	4	4	4	3	11	4	15
	%	26.7%	26.7%	26.7%	20.0%	73.3%	26.7%	100%
I - Accommodation and R - Arts	N	16	6	2	4	25	3	28
	%	57.1%	21.4%	7.1%	14.3%	89.3%	10.7%	100%
K - Financial and insurance	N	2	5	2	10	9	10	19
	%	10.5%	26.3%	10.5%	52.6%	47.4%	52.6%	100%
M – Scientific, technical and P – Education	N	5	4	3	2	13	1	14
	%	35.7%	28.6%	21.4%	14.3%	92.9%	7.1%	100%
F - Construction	N	20	19	11	6	50	6	56
	%	35.7%	33.9%	19.6%	10.7%	89.3%	10.7%	100%
G - Wholesale and retail trade	N	17	14	6	9	37	9	46
	%	37.0%	30.4%	13.0%	19.6%	80.4%	19.6%	100%
C - Manufacturing	N	18	37	40	70	86	79	165
	%	10.9%	22.4%	24.2%	42.4%	52.1%	47.9%	100%
D – Electricity, E - Water supply	N	1	2	1	2	4	2	6
	%	16.7%	33.3%	16.7%	33.3%	66.7%	33.3%	100%
Q - Human health activities	N	2	4	2	4	12	0	12
	%	16.7%	33.3%	16.7%	33.3%	100.0%	0.0%	100%
A -Agriculture, forestry, fishing	N	1	7	5	0	12	1	13
	%	7.7%	53.8%	38.5%	0.0%	92.3%	7.7%	100%
Other activities	N	24	23	22	13	63	19	82
	%	29.3%	28.0%	26.8%	15.9%	76.8%	23.2%	100%
Total	N	129	157	114	138	390	148	538
	%	24.0%	29.2%	21.2%	25.7%	72.5%	27.5%	100%

The research is based on data from a questionnaire survey conducted between 2023 and 2024. In 2023, a total of 800 business entities were contacted, and an additional 900 were contacted in 2024. The research sample was selected randomly from a database of business entities available on the website of the Czech Statistical Office [43]. Respondents were contacted via the official email address of the respective business entity and were asked to complete the questionnaire using Google Forms. They were informed that by submitting the questionnaire, they were consenting to participate in the research, with full anonymity guaranteed. The total response rate

across both years was 538 correctly completed questionnaires (31.6%). The structure of the research sample, classified by business activity, company size, and predominant ownership, is detailed in Table 1. The questionnaire, in addition to basic information regarding the entities (size, dominant ownership, business activity, and regional scope), was designed to assess the current level of adoption of selected modern HRM tools and the perceived importance of their future implementation. A total of 16 HRM tools were examined (see Table 2), where respondents were asked to rate their current use within their organization on a scale from 1 to 5 (1 = not used at all; 5 = fully implemented). The same scale was applied to assess the perceived importance of implementing these tools in the future (1 = not important; 5 = highly important).

The same logic was applied to the question about the perception of the future importance of applying these tools for the company, where 1 meant unimportant and 5 meant highly important. The McDonald's Omega value, as well as Cronbach's Alpha, is 0.83, which positively assesses the internal consistency of the variables under investigation.

Table 2

Researched group of modern HRM tools	
HRM tool	Question tailored to the application of the HRM tool
HRM1 – Work autonomy and meaning of work	Workplaces allow for the maximization of employee autonomy in the performance of work.
	The employee knows the meaning of their work in creating added value for the customer.
	The work system contains elements of work-life balance.
HRM 2 – Employer branding and employer attractiveness	The company systematically builds its employer brand.
	The company systematically works on its own attractiveness as an employer (employer branding).
HRM3 – Team decision making and cooperation	Employee selection is carried out at the level of executive teams.
	The company uses team remuneration.
HRM4 – Modern methods of people management	People management methods use gamification.
	People management methods use virtualization.
HRM5 – Employee remuneration and motivation	Employees are rewarded for behavior in accordance with the company's values.
	The company allows employees to choose the form of remuneration according to their preferences and needs.
HRM6 – Performance appraisal and feedback	Employees receive ongoing, informal feedback on their performance.
	The company takes employee engagement into account in the evaluation criteria.

HRM7 – Employee training and development	The company takes into account the freedom and personal responsibility of employees in choosing their training.
	Employee training is of key importance for the corporate culture and is perceived as a shared responsibility.
	The company evaluates the benefits of training for both employees and the company.

The following research hypotheses were established on the basis of the literature review:

RH1: The use of modern HRM tools differs significantly between fields.

RH2: Gamification and virtualization of HRM are more significantly used in fields with higher digitization (J - Information and communication, K - Financial and insurance activities and M - Scientific, technical and P - Education)

RH3: A group of organizations that intensively use modern HRM tools show a higher perception of their future importance.

For data analysis, basic descriptive statistics were used together with inferential statistics (Anova test) to compare the average values of the groups at the 5% significance level. K-means Cluster was chosen to create clusters with 3 clusters that were the most suitable. This number was checked by the Silhouette Score test, the total score of which is 0.576 (indicating the necessary degree of cohesion and separation of the clusters). Pearson correlation analysis was used to identify connections within the current application of HRM tools and the perception of their importance for the company in the future.

4 Results and Discussion

Figure 1 provides an overview of the extent to which the examined HRM tools are applied across different industries, measured on a scale from 1 to 5 (1 = not used; 5 = fully implemented). Each HRM tool score represents the weighted arithmetic mean of the values assigned to the respective tool. For a clearer interpretation of the graphical representation, Table 3 presents the results of the ANOVA test, which highlights significant differences in the use of HRM4 (gamification and virtualization), HRM5 (compensation and motivation), and HRM7 (employee training and development). The effect size of these differences indicates a medium level of significance for HRM4 and HRM5 ($\eta^2 > 0.6$).

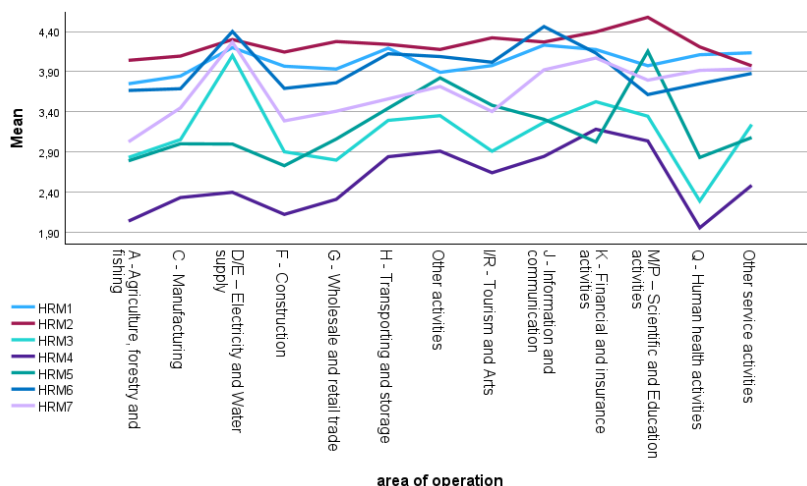


Figure 1
Use of modern HRM tools by area of operation

The results indicate (Tab. 3) that the highest utilization of gamification and virtualization in HRM is found in financial services (K) and the education and research sector (M/P). Conversely, the lowest adoption rates are observed in agriculture (A), construction (F), and healthcare (Q). Regarding employee motivation, particularly in rewarding behavior aligned with company values and allowing employees to choose their preferred form of compensation, the most progressive businesses were those in the education and research sector (M/P). An interesting finding is that businesses across various fields recognize the importance of employer branding (HRM2) and work-life balance (HRM1), with no significant industry differences in their implementation.

Table 3

Anova test (Between Groups: HRM tools and area of operation)

	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
HRM1 * area of operation	7.594	12	.633	1.515	.114	0.035
HRM2 * area of operation	7.215	12	.601	.916	.531	0.022
HRM3 * area of operation	28.555	12	2.380	1.525	.111	0.034
HRM4 * area of operation	48.901	12	4.075	2.898	<.001	0.062
HRM5 * area of operation	51.534	12	4.295	3.047	<.001	0.065
HRM6 * area of operation	15.603	12	1.300	1.208	.274	0.027
HRM7 * area of operation	27.919	12	2.327	1.877	.035	0.041

Table 4

Anova test within K-means Cluster

	Mean Square	df	Mean Square	df	F	Sig.
HRM1	14.819	2	0.366	535	40.491	<0.001
HRM2	144.652	2	0.726	535	199.357	<0.001
HRM3	22.437	2	0.560	535	40.080	<0.001
HRM4	233.342	2	0.707	535	330.014	<0.001
HRM5	202.686	2	0.712	535	284.624	<0.001
HRM6	170.843	2	0.841	535	203.160	<0.001
HRM7	108.622	2	0.679	535	159.972	<0.001

In practice, we encounter enterprises that, within a competitive environment, are significantly more capable of applying progressive HRM tools in their respective fields. Therefore, to gain a more comprehensive understanding of the implementation of the examined modern HRM tools, a comparison using cluster analysis (K-means cluster) is appropriate. The most suitable division was found to be into three clusters, which, in terms of HRM tool application, exhibit significant differences, particularly in HRM3 (team decision making) and HRM4 (use of gamification and virtualization) (see Table 4, where these factors have the highest F-values). Conversely, HRM1 (perception of work value, autonomy, and work-life balance) and HRM2 (employer branding) played the least role in forming these clusters. Figure 2 shows the average values of the examined HRM tools' application, along with 95% confidence intervals. Based on the distribution of the current application levels of HRM tools across the created clusters, these clusters can be categorized as sleepy, careful, and progressive enterprises.

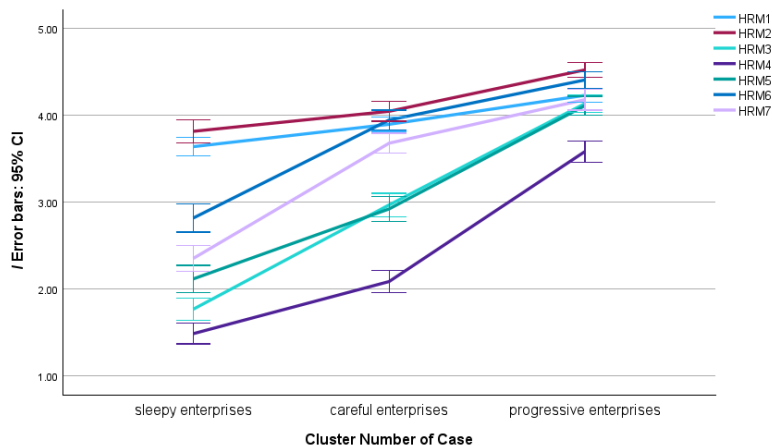


Figure 2
Use of modern HRM tools by clusters

Figure 3 illustrates the representation of individual companies within these clusters according to their field of activity.

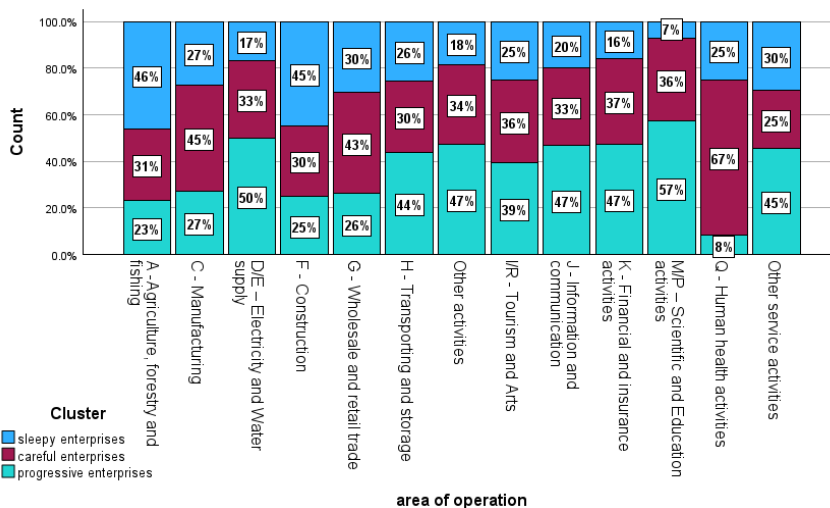


Figure 3
Representation of clusters by industry

Sleepy Enterprises (27.7% of enterprises)

This cluster represents enterprises that apply modern HRM tools to the lowest extent (Figure 2). They achieve the lowest scores, particularly in the areas of gamification and virtualization (HRM4 = 1.77), team decision making (HRM3 = 3.82), and flexible compensation (HRM5 = 1.49). Companies in this cluster approach innovation cautiously and primarily rely on traditional management methods. Similarly, in the area of performance evaluation and feedback (HRM6 = 2.12), they show the lowest scores, indicating less structured or irregular evaluation processes. Despite their conservative approach, these companies recognize the importance of fundamental elements such as work autonomy and work-life balance (HRM1 = 3.64). They also engage to some extent in employer branding (HRM2 = 2.35), although their involvement in these areas is lower compared to other clusters. The most prominent industries in this cluster (Figure 3) are:

- Agriculture (A) – 46.2% – This sector dominates the cluster, reflecting a conservative approach to modern HRM tools and a lower level of digitalization.
- Construction (F) – 44.6% – Similar to agriculture, traditional management methods prevail here.

- Wholesale and Retail Trade (G) – 30.4% – This sector exhibits a lower level of advanced HRM adoption.

Conversely, industries with high levels of digitalization and innovation are the least represented in this cluster, including Science, Research, and Education (M/P) – 7.1% and Energy and Water Supply (D/E) – 16.7%.

Careful Enterprises (37.5 % of enterprises)

Enterprises classified in this cluster exhibit a moderate level of application of modern HRM tools (Figure 2). These businesses combine traditional approaches with selected modern tools, demonstrating a balanced use of team decision making (HRM3 = 4.50) and employee training and development (HRM7 = 3.95). Although they are open to innovation, they still approach certain progressive tools, such as gamification and virtualization (HRM4 = 2.97), with caution. In the areas of compensation and employee motivation (HRM5 = 2.90) and performance evaluation (HRM6 = 2.92), these companies adopt a balanced approach, incorporating elements of modern strategies while still maintaining traditional compensation and evaluation methods. The most represented industries in this cluster (Figure 3) include:

- Manufacturing and Industry (C) – 45.5% – This sector dominates the cluster, reflecting a combination of traditional methods with selected innovations.
- Healthcare (Q) – 66.7% – While there is a clear need for modern HRM tools in healthcare, their adoption remains cautious.
- Wholesale and Retail Trade (G) – 43.5% – This sector integrates certain modern approaches, particularly in employer branding and team decision making.

Conversely, industries with a lower degree of traditional hierarchical structures are less represented in this cluster, such as Information and Communication Technology (J) – 33.3%.

Progressive Enterprises (34.8 % of enterprises)

This cluster includes enterprises that apply modern HRM tools to the highest extent (Figure 2). These businesses achieve the highest scores in the areas of team decision making (HRM3 = 4.52), gamification and virtualization (HRM4 = 4.14), and employee training and development (HRM7 = 4.41). These companies actively support employee autonomy (HRM1 = 4.23) and systematically build their employer brand (HRM2 = 4.18). They also prioritize flexible compensation (HRM5 = 3.58) and regular performance evaluation (HRM6 = 4.11). The most represented industries in this cluster (Figure 3) include:

- Science, Research, and Education (M/P) – 57.1% – This sector leads in implementing innovative HRM approaches.

- Financial and Insurance Services (K) – 47.4% – Businesses in this industry heavily utilize advanced HRM tools, particularly in gamification and flexible compensation.
- Information and Communication Technology (J) – 46.7% – The IT sector is among the most progressive, with a high degree of HRM modernization.
- Transport and Storage (H) – 43.9%.

Conversely, the least represented sectors in this cluster are Agriculture (A) – 23.1% and Construction (F) – 25%. This reflects a slower adoption of modern HRM tools in these traditional industries.

4.1 Perceived Future Importance of HRM Tools and Their Relationship to Current Utilization

The analysis results indicate significant differences between business groups regarding the perceived future importance of modern HRM tools. These differences are most pronounced between progressive enterprises, which already extensively use advanced HRM strategies, and sleepy enterprises, which remain conservative in adopting modern HRM methods (Figure 4). Companies in the progressive cluster assign high future importance to all examined HRM tools. They place the highest priority on team decision making (HRM3), gamification and virtualization of HRM processes (HRM4), and flexible compensation systems (HRM5). This trend suggests that organizations with a higher level of digitalization and innovation plan to further strengthen these elements in the future. Conversely, sleepy enterprises consider HRM tools less important for their future development, with the lowest scores recorded for gamification and virtualization.

The ANOVA test results (Table 5) further confirm significant differences among clusters, with the largest variations observed in HRM3 (team decision making, $\eta^2 = 0.318$); HRM4 (gamification and virtualization, $\eta^2 = 0.298$) and HRM5 (flexible compensation, $\eta^2 = 0.236$). This highlights that companies already implementing advanced HRM strategies today will continue to see these tools as key drivers of their future growth. In contrast, businesses that currently make minimal use of HRM innovations do not anticipate their significant implementation in the future. A detailed correlation analysis confirmed a strong relationship between the current utilization of HRM tools and their perceived future importance. The results revealed the strongest positive correlations for HRM1 (autonomy and work-life balance, $r = .502$), HRM7 (employee training and development, $r = .649$), and HRM4 (gamification and virtualization, $r = .504$). This indicates that companies investing in employee development and technological innovations today perceive these areas as essential for the future. On the other hand, weaker correlations were identified between HRM2 (employer branding) and HRM4 (gamification and virtualization, $r = -0.015$), which suggests that companies primarily focused on employer branding

may not consider gamification a crucial component of their HR strategy. An interesting finding is that HRM7 (training and development) correlates with all HRM areas, confirming that businesses investing in employee development recognize its long-term impact on efficiency and competitiveness.

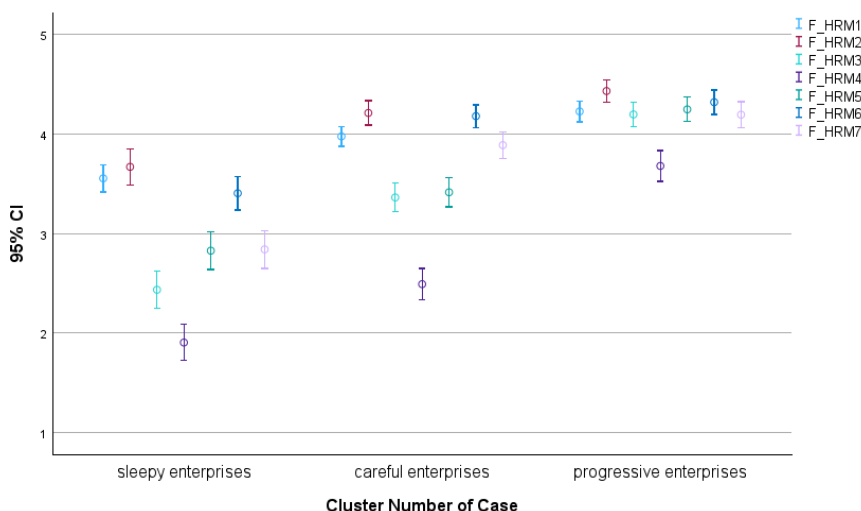


Figure 4
Perception of the Importance of Applying Modern HRM Tools in the Future

Table 5
Results of the ANOVA Test on the Perceived Importance of the Application of Modern HRM Tools in the Future Among Clusters

	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
F_HRM1 * Cluster	37.777	2	18.889	33.156	<.001	.110
F_HRM2 * Cluster	49.890	2	24.945	29.161	<.001	.098
F_HRM3 * Cluster	257.695	2	128.848	124.805	<.001	.318
F_HRM4 * Cluster	281.350	2	140.675	113.343	<.001	.298
F_HRM5 * Cluster	172.374	2	86.187	82.540	<.001	.236
F_HRM6 * Cluster	78.337	2	39.168	48.552	<.001	.154
F_HRM7 * Cluster	162.804	2	81.402	81.126	<.001	.233

4.2 Hypothesis Verification and Discussion

The results of the ANOVA test confirmed significant differences in the application of modern HRM tools across various sectors. The most pronounced differences were observed in HRM4 (gamification and virtualization, $\eta^2 = 0.062$), HRM5

(compensation and motivation, $\eta^2 = 0.065$), and HRM7 (employee training and development, $\eta^2 = 0.041$), confirming RH1 (The application of modern HRM tools significantly differs across sectors) at a 5% significance level. The highest implementation of HRM tools was recorded in the IT sector (J), financial and insurance services (K), and the field of science and research (M/P), with an unexpectedly high presence in the transportation and warehousing sector. In contrast, the lowest scores were found in construction (F), agriculture (A), and healthcare (Q). This trend suggests that knowledge-intensive sectors exhibit a higher degree of HR process digitalization, whereas traditional industries still largely rely on conventional HR models.

Companies in digitally advanced sectors (IT, finance, and research) demonstrated significantly higher utilization of HRM4 (gamification and virtualization) compared to traditional industries. This area achieved highly significant results in the ANOVA test ($p < 0.001$, $\eta^2 = 0.062$), indicating that businesses already leveraging digital HR solutions plan to further integrate HRM with technology. Conversely, sectors such as construction, manufacturing, and healthcare make little to no use of these tools, which may be due to traditional hierarchical structures and a lower perceived need for HR process digitalization. This confirms RH2 (Gamification and virtualization of HRM are more prominently used in highly digitalized sectors such as IT (J), finance (K), and research and education (M/P)) at a 5% significance level. Companies in the progressive enterprises cluster perceive all HRM tools as significantly more important for the future compared to businesses in the careful and sleepy enterprises clusters. The ANOVA test results confirmed the most significant differences in perceived importance in the areas of HRM3 (team decision making, $\eta^2 = 0.318$), HRM4 (gamification, $\eta^2 = 0.298$), and HRM5 (compensation, $\eta^2 = 0.236$), thereby confirming RH3 (Organizations that currently intensively use modern HRM tools perceive their future importance more highly) at a 5% significance level. Correlation analysis further confirmed a strong relationship between the current use of HRM tools and their expected future importance. The strongest correlations were found for HRM1 (autonomy and work-life balance) $\rightarrow$ future importance of HRM1 ($r = .502$), HRM4 (gamification and virtualization) $\rightarrow$ future importance of HRM4 ($r = .504$), and HRM7 (training and development) $\rightarrow$ future importance of HRM7 ($r = .649$). These findings indicate that companies already investing in employee training and HR process digitalization today perceive these areas as essential for the future. In contrast, companies in the sleepy enterprises cluster do not attribute significant future importance to modern HRM tools, which may put them at a competitive disadvantage.

The results of this study revealed significant differences in the application of modern HRM tools across sectors, with the most pronounced disparities observed in the areas of gamification and virtualization of HR processes (HRM4), flexible compensation (HRM5), and employee training and development (HRM7). These findings align with previous research [1] [7], which highlights the growing role of

digitalization in HRM while also pointing out the uneven pace of its adoption across different industries. Similar to the study by Jayasinghe et al. [2], our results suggest that knowledge-intensive sectors such as IT, finance, and research and development exhibit a high level of utilization of modern HRM tools, whereas traditional sectors like manufacturing, construction, and healthcare continue to rely on conventional HR models. This disparity may be attributed to organizational culture, hierarchical structures, and regulations that, in some industries, limit the implementation of progressive HR practices [44]. The findings also indicate that companies that are already actively using HRM tools perceive them as more important for the future. This trend is confirmed by the ANOVA test results, where progressive enterprises exhibited significantly higher scores in the perceived future importance of HRM tools compared to careful and sleepy enterprises. Correlation analysis further demonstrated that investment in training and employee development (HRM7) is the strongest predictor of the future perception of HRM as a strategically important factor ($r = .649$). This finding supports the claims of Kohnová et al. [6], who argue that companies focusing on continuous employee education achieve greater innovation capacity and competitiveness. A surprising finding is the weak correlation between employer branding (HRM2) and gamification of HRM processes (HRM4) ($r = -0.015$), suggesting that companies emphasizing employer branding do not necessarily perceive gamification as an essential HR strategy tool. This contrasts with some previous studies [15], which assert that digital HRM practices, including gamification, can positively influence employer attractiveness. A possible explanation is that not all companies view gamification as a direct means of improving employer branding but rather as a method to enhance the engagement of existing employees. Another key insight is that employee autonomy (HRM1) and work-life balance are strongly associated with the overall perception of the importance of HRM tools ($r = .502$). These results confirm the research by Dullah et al. [13], which emphasizes that employees with a high degree of autonomy tend to be more productive and engaged. Companies that support flexible working conditions are, therefore, more likely to implement modern HRM strategies and perceive them as crucial for the future.

Based on these findings, we can conclude that companies with higher levels of HR process digitalization and investments in employee development have a clearer HRM strategy and regard these tools as key for the future. Conversely, companies in traditional sectors that are slower to digitalize may face challenges in maintaining competitiveness and retaining talent in an evolving labor market [3].

Conclusions

The aim of this paper was to analyze the current application of modern human resource management (HRM) practices in companies across various industries and to identify their perspective on the importance of applying these practices in the future. The research shows that companies with advanced HRM strategies (progressive enterprises) plan to invest even more in gamification, team decision making, and flexible compensation models. The findings also indicate that

investments in employee training and development are the strongest predictors of HRM being perceived as important for the future—the more companies invest in education today, the more they recognize its significance for the future. Conversely, traditional sectors (sleepy enterprises) do not see an urgent need to transform HRM processes, which could lead to lower competitiveness in the future. A strong correlation between employee autonomy, work-life balance, and the perception of work value (HRM1) with the overall perception of the importance of HRM tools suggests that companies fostering a healthy work environment are more inclined to implement modern HRM strategies. Based on these findings, companies should strengthen investments in training and digital HRM solutions, as these factors are directly linked to the future perception of HRM as a key strategic element. Supporting the digital transformation of HR processes, particularly in the areas of gamification, flexible compensation, and employee training, will be essential for maintaining competitiveness. Additionally, organizations should focus on building a work environment that promotes autonomy and work-life balance, as these measures are associated with higher employee engagement and a greater willingness to adopt modern HRM strategies. Traditional industries such as manufacturing and healthcare could benefit from better integration of modern HRM strategies to remain competitive in the labor market. Employer branding and gamification should be viewed as complementary strategies that can enhance a company's attractiveness to both current and potential employees. Moreover, employee training and continuous development should be a priority, as their implementation has the highest predictive value for the future success of HRM strategies.

The results of the analysis clearly show that the most successful companies of the future will be those that invest today in HRM digitalization, team decision making, and employee development. Companies that fail to take these steps may face higher employee turnover, lower productivity, and a loss of competitiveness in a rapidly changing labor market.

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