

EVALUATION OF THE USE OF ARTIFICIAL INTELLIGENCE IN MEDIUM AND LARGE ENTERPRISES IN THE CZECH BUSINESS ENVIRONMENT: AN HR MANAGER PERSPECTIVE

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Cite as: Skypalova, R., Petrakova, Z., Malek, Z. (2025). *Evaluation of the Use of Artificial Intelligence in Medium and Large Enterprises in the Czech Business Environment: An HR Manager Perspective*, *Ekonomicko-manazerske spektrum*, 19(1), 28-38.

Available at: [dx.doi.org/10.26552/ems.2025.1.28-38](https://doi.org/10.26552/ems.2025.1.28-38)

Received: 14 December 2024; Received in revised form: 17 March 2025; Accepted: 30 March 2025; Available online: 30 June 2025

Abstract:

Research background: The use of artificial intelligence represents a modern approach to improving the strategic management of enterprises. Several studies have confirmed that gender plays a key role in the context of sustainable growth within the business environment.

Purpose of the article: The aim of this article was to evaluate the extent to which artificial intelligence is utilized in medium and large companies operating in the business environment of the Czech Republic.

Methods: A questionnaire was used to survey HR managers regarding the use of artificial intelligence in medium and large enterprises. A total of 451 HR managers from the business sector participated in the study. The research was conducted in 2024 in the Czech Republic. The assumption of normal distribution was tested using the Kolmogorov–Smirnov test, and homoscedasticity was evaluated using Levene’s test. Statistical hypotheses were verified using auxiliary statistics and the non-parametric Mann–Whitney U test.

Findings & Value added: The empirical results revealed several interesting findings. Statistically significant gender-based differences were observed in HR managers’ evaluations of artificial intelligence use. Male HR managers assessed AI applications more positively than their female counterparts, particularly in areas such as automation of administrative tasks, recruitment and selection, process efficiency, support for CSR report preparation, and management. However, no significant gender differences were found in the evaluation of AI’s impact on improving the employee experience.

Keywords: artificial intelligence; gender; HR manager; Czech business environment; perception

JEL Classification: M12; M14; O33

1. Introduction

With the growth of digitization and digital transformation of enterprises in the context of business sustainability and the growth of the quality of the business environment, society, government organizations and enterprises themselves are increasingly aware that the use of artificial intelligence at a certain level is an indispensable need (Belas et al., 2025).

Several authors point to the positive aspects of the use of artificial intelligence (e.g. Mo et al., 2025). Especially in the context of: human resource management (e.g., employee stability and satisfaction; Belas et al., 2024); socially responsible entrepreneurship (e.g., when preparing ESG reports; Zvarikova et al., 2024; Zvarikova et al., 2023); business risk management in the enterprise (e.g., retaining its customers; Dvorsky et al., 2023); marketing activities of the enterprise (e.g., when searching for new markets; Valaskova et al., 2024), but also in the strategic management of the enterprise by the manager or owner of the enterprise (Dvorsky et al., 2024).

In the context of large enterprises, several authors have confirmed that there are differences in human resource management between men and women. These differences are reflected not only in human resource management (Aguinis et al., 2024; Elsayy and Elbadawe, 2022), but also in other aspects of business (e.g., the level of business digitization, business sustainability, financial performance; Balcerzak and Valaskova, 2024).

The uniqueness of the quantitative research is that the results of this research comprehensively evaluate the use of artificial intelligence in medium and large enterprises from the perspective of HR managers and their gender. In this context, a unique questionnaire was created.

The structure of the scientific article is as follows. In the first part, the authors formulate the motivations for addressing the issue of artificial intelligence (AI) and its possible impacts on business activity and the business environment at the national level. Subsequently, the research objective, methodological procedure, information about the questionnaire and statements were formulated, hypotheses and methods for their verification were defined, along with the presentation of the demographic structure of HR managers. Empirical results are presented through clear tables. In addition to a summary of key findings, the discussion also includes a comparison of findings in an international context. The conclusion defines the limits of the study and the further direction of the authors' research activities.

2. Methodology

The aim of this paper is to evaluate the extent to which artificial intelligence is utilized in medium and large companies operating in the business environment of the Czech Republic.

2.1. Data collection

To analyse and evaluate the level of implementation and use of AI in the business environment of the Czech Republic, a questionnaire was created, which is the most common form of asking questions and obtaining subjective opinions. The respondent was defined as a senior human resources officer (HR manager) of a business entity that carries out business activities in the business environment of the Czech Republic (hereinafter referred to as the "respondent").

The final version of the questionnaire was prepared taking into account the professional and technical comments and recommendations received from HR managers. The subsequent main collection of research data was carried out by an external agency that is well established not

only in the business environment of the Czech Republic, but throughout Central Europe. The external research agency is one of the few companies operating and able to collect data in several EU countries. Respondents were selected from the agency's internal database using the Computer-Assisted Web Interview (CAWI) methodology. MNFORCE ensured the protection of the questionnaire from misuse by third parties. The research agency regularly verifies and updates information about the companies in its portfolio. The research agency also ensured the representativeness of the sample of respondents in terms of relevant demographic characteristics that were included in the questionnaire. The demographic structure of the research sample in individual groups of respondents was set to reflect the structure of the basic set of respondents in a given group in the Czech Republic. In this step, the agency used data from the Czech Statistical Office as of 31.12.2023.

The basic criterion for including a respondent in the research set was that the respondent had to be an HR manager of a medium or large enterprise that carries out business activities in the business environment of the Czech Republic. Compliance with this selection criterion was guaranteed by the aforementioned research agency MNFORCE.

Another criterion for data collection was the size of the sample set. Given the results of the minimum number of respondents, which were carried out in the Gretl program, the research sample of 451 HR managers is sufficiently large. This is because it exceeds by more than 10% the minimum sample size required for statistical research through a questionnaire survey.

MNFORCE also ensured the protection of the questionnaire from automated filling and hacker attacks. At the same time, it committed to adhering to ethical principles and research integrity in the actual implementation of data collection and creation of the research file.

The total number of respondents was 451 HR managers. At the beginning of the questionnaire, a question was formulated as to whether the respondent agreed that his or her attitudes and opinions could be used for scientific research purposes. Four respondents answered negatively and were subsequently excluded from the research data set. The final sample consisted of 447 HR managers who gave their consent to their answers being used for scientific research purposes.

2.2. Questionnaire and statements

The final version of the questionnaire consisted of several separate parts. The first part of the questionnaire formulated basic information about the research intention, research gap and planned scientific research outputs that will be created from the given quantitative research set. Respondents were asked to fill out the questionnaire truthfully and relevantly, with the proviso that in the event of impossibility or incompetence to answer all the questions truthfully, they had the option to stop filling out the questionnaire immediately at the given question. In such a case, of course, the given respondent was not included in the research sample of respondents. The introduction also included a question about the respondent's explicit consent to the publication of his answers for scientific purposes.

Respondents were required to express their position on individual statements regarding the use of artificial intelligence in the company using a 4-point Likert scale: (i) I completely disagree (numerical value 1); (ii) I tend to disagree (2); (iii) I tend to agree (3); and (iv) I completely agree (4).

Table 1 presents the formulation of statements to the using of artificial intelligence.

2.3. Statistical hypotheses and methods

To achieve the main objective of the article, the following statistical hypotheses were formulated (SH1-SH6).

Table 1: Formulation of statements to the using of artificial intelligence in the company (AI)

Items	Definition of the statements
AI1	The company uses AI to automate repetitive and time-consuming tasks (e.g. payroll processing, employee data management, shift planning, etc.).
AI2	The company uses AI in employee selection (e.g. CV screening, candidate evaluation, predicting candidate success based on historical data).
AI3	The company uses AI to obtain feedback, information on satisfaction, as well as recommendations and advice from its employees.
AI4	Our company uses AI to increase the efficiency of internal processes.
AI5	The organization uses AI to support the preparation of materials for the CSR report (for the annual report, for a separate CSR report, for a sustainability report) or other strategic documents.
AI6	The organization's management is committed to supporting the use of AI in the daily work activities of employees.

Source: data collected by the authors

SH: The gender of the HR manager does not have a statistically significant impact on the assessment of statements AI1 (SH1), AI2 (SH2), AI3 (SH3), AI4 (SH4), AI5 (SH5), AI6 (SH6) in medium and large enterprises in the business environment of the Czech Republic. There are no statistically significant differences in the assessment of statements AI1-AI6 between respondents with respect to the gender of the HR manager.

The aim of descriptive statistics is to present the basic results of the evaluation of the defined statements of the questionnaire survey. This is done using the absolute and relative frequencies (percentages) of the perception of selected statements by HR managers in clear contingency tables (see e.g. Table 2 and Table 3 – descriptive characteristics). These were created using the method of simple sorting of a statistical feature. The above tables contain the evaluation of statements on AI according to the gender of the HR manager. These were created using the method of sorting according to two statistical features (gender, defined statement on AI).

With regard to the investigation and verification of the influence of the gender of the HR manager on the perception of statements on AI, the subject of the analysis will be the verification of the assumptions for performing parametric testing using ANOVA: (i) normal distribution using the Kolmogorov-Smirnov test ($n > 50$, see Table 3); and (ii) verification of homoskedasticity using the Levene test (see Table 4). In case the assumptions for applying parametric tests are not met, non-parametric tests will be used; Mann-Whitney U test (see Table 5 and Table 6). The assumption of normal distribution is considered accepted if the p-value (Sig.) of the Kolmogorov-Smirnov statistic is greater than the significance level ($\alpha = 0.05$). The assumption of homoscedasticity of variances of statement evaluations in selected groups by gender is met if the p-value (Sig.) of the Levene statistic is greater than the significance level ($\alpha = 0.05$).

2.4. Structure of HR managers

Structure of enterprises by number of employees (size of enterprise): i. 278 (62.2%) medium-sized enterprises with 51 to 249 employees, ii. 169 (37.8%) large enterprises with 250 or more employees. Structure of enterprises according to whether they are family businesses: (i) 144 (32.2%) yes; (ii) 261 (58.4%) no; and (iii) 42 (9.4%) don't know. Structure of enterprises according to whether the enterprise is international (doing business in a foreign business environment): (i) 264 (59.1%) purely Czech company (without foreign investor); (ii) 109 (24.4%) company with Czech and foreign investors; (iii) 48 (10.7%) only foreign investor (branch of a multinational company) and (iv) 26 (5.8%) don't know.

Structure of companies by location of company headquarters in the Czech Republic: (i) 128 (28.6%) Capital Prague; (ii) 23 (5.1%) South Moravian Region; (iii) 54 (12.1%) South Moravian Region; (iv) 9 (2.0%) Karlovy Vary Region; (v) 20 (4.5%) Hradec Kralove Region;

(vi) 15 (3.4%) Liberec Region; (vii) 54 (12.1%) Moravian-Silesian Region; (vii) 26 (5.8%) Olomouc Region; (ix) 20 (4.5%) Pardubice Region; (x) 18 (4.0%) Plzen Region; (xi) 20 (4.5%) Central Bohemian Region; (xii) 17 (3.8%) Usti nad Labem Region; (xiii) 24 (5.4%) Vysocina Region; and (xiv) 19 (4.3%) Zlin Region.

Structure of respondents by gender: (i) 183 (40.9%) men; and (ii) 264 (59.1%) women. Structure of respondents by age of HR manager: (i) 31 (3.9%) generation Z; (ii) 189 (42.3%) generation Y; (iii) 194 (43.4%) generation X; and (iv) 33 (7.4%) baby boom. Structure of respondents by highest education of HR manager: (i) 249 (55.7%) complete secondary education with school leaving certificate; while (ii) 198 (44.3%) university education (Bc., Ing./Mgr., PhD., doc., prof.)

3. Results

3.1. Descriptive statistics and contingency tables

The following contingency tables (see table 2) presents the results of the analysis of respondents' attitudes towards selected statements about the use of artificial intelligence in the company.

Table 2: Contingency tables of evaluation of AI statements

TA	AI1						AI2					
	SUME		M		F		SUME		M		F	
	(n = 447)		(n = 183)		(n = 264)		(n = 447)		(n = 183)		(n = 264)	
	n	%	n	%	n	%	n	%	n	%	n	%
1	104	23.3	32	17.5	72	27.3	144	32.2	49	26.8	95	36.0
2	125	28.0	52	28.4	73	27.7	129	28.9	52	28.4	77	29.1
3	150	33.6	66	36.1	84	31.7	129	28.9	62	33.9	67	25.4
4	68	15.1	33	18.0	35	13.3	45	10.0	20	10.9	25	9.5
TA	AI3						AI4					
	SUME		M		F		SUME		M		F	
	(n = 447)		(n = 183)		(n = 264)		(n = 447)		(n = 183)		(n = 264)	
	n	%	n	%	n	%	n	%	n	%	n	%
1	120	26.8	44	24.0	76	28.8	113	25.3	40	21.9	73	27.7
2	137	30.7	52	28.4	85	32.2	132	29.5	48	26.2	84	31.8
3	138	30.9	64	35.0	74	28.0	146	32.7	66	36.1	80	30.3
4	52	11.6	23	12.6	29	11.0	56	12.5	29	15.8	27	10.2
TA	AI5						AI6					
	SUME		M		F		SUME		M		F	
	(n = 447)		(n = 183)		(n = 264)		(n = 447)		(n = 183)		(n = 264)	
	n	%	n	%	n	%	n	%	N	%	n	%
1	115	25.7	42	23.0	73	27.7	115	25.7	37	20.2	78	29.5
2	143	32.0	54	29.5	89	33.7	131	29.3	54	29.5	77	29.2
3	139	31.1	57	31.1	82	31.1	145	32.4	56	30.6	89	33.7
4	50	11.2	30	16.4	20	7.6	56	12.6	36	19.7	20	7.6

Note: TA – Type of answer; AI1-AI6 - Artificial intelligence statements; M – Male; F – Female; n – number of respondents

Source: data collected by the authors

The results reveal the following findings (see Table 2):

- Only every second company (specifically 51.3%) agreed, either somewhat or completely, with the statement that it uses AI to automate repetitive and time-consuming tasks (AI1). From the gender perspective, it is evident that female HR managers (55.0%) report a higher use of AI in this context compared to male HR managers (45.9%).

- More than 6 out of 10 surveyed HR managers (specifically 61.1%) stated that their company uses AI in employee selection (AI2). From a gender perspective, female HR managers (65.1%) agreed with this statement to a greater extent than their male counterparts (55.2%).
- Fewer than 6 out of 10 HR managers (specifically 57.5%) reported that their company uses AI to gather feedback on employee satisfaction, suggestions, and advice (AI3). Again, female HR managers (61.0%) showed a higher level of agreement compared to male HR managers (52.4%).
- Only 54.8% of the surveyed HR managers indicated that their company uses AI to improve internal process efficiency (AI4). Comparing responses by gender shows that female HR managers (59.5%) agreed more strongly with this statement than male HR managers (48.1%).
- Exactly 57.7% of the HR managers stated that their company uses AI in the preparation of CSR reports or other strategic documents (AI5). From a gender perspective, female HR managers (61.4%) agreed more frequently than male HR managers (52.5%).
- Exactly 55.0% of the HR managers indicated that their company promotes the use of AI in employees' daily work activities (AI6). A gender-based comparison reveals that female HR managers (58.7%) agreed with this statement more often than male HR managers (49.7%).

Table 3 summarizes the results of selected descriptive statistics indicators related to the statements on the use of artificial intelligence in the company (AI: AI1-AI6).

Table 3: Descriptive statistics of AI statements according to the gender (M/F)

DS	Artificial intelligence (AI)					
	AI1	AI2	AI3	AI4	AI5	AI6
ME	2.546/2.311	2.290/2.083	2.361/2.212	2.459/2.231	2.410/2.186	2.497/2.193
SE	0.073/0.062	0.073/0.061	0.073/0.060	0.074/0.060	0.075/0.057	0.076/0.058
SD	0.982/1.014	0.982/0.995	0.984/0.983	1.004/0.969	1.017/0.927	1.026/0.950
SK	0.984/1.133	1.082/0.985	1.060/0.997	1.079/1.003	1.107/0.941	1.124/1.077
KU	0.114/0.118	0.093/0.416	0.028/0.265	0.068/0.205	0.058/0.200	0.008/0.142
MIN	1.000/1.000	1.000/1.000	1.000/1.000	1.000/1.000	1.000/1.000	1.000/1.000
MAX	4.000/4.000	4.000/4.000	4.000/4.000	4.000/4.000	4.000/4.000	4.000/4.000

Note: DS – Descriptive statistics; AI1-AI6 – Artificial intelligence statements; M – Male; F – Female; ME – Mean; SE – Standard error; SD – Standard deviation; SK – Skewness; KU – Kurtosis; MIN – Minimum; MAX – Maximum
Source: data collected by the authors

The results indicate that the greatest differences in evaluation between male and female respondents were observed for statement AI6 (Male HR managers: ME = 2.497; Female HR managers: ME = 2.193). On the contrary, the highest level of agreement between respondents by gender was found in the evaluation of statement AI3 (Male HR managers: ME = 2.361; Female HR managers: ME = 2.212).

3.2. Verification of assumptions (normality and homoscedasticity)

The following tables (see Table 4 and Table 5) present the results of verifying the assumptions (normal distribution and homoskedasticity) for conducting parametric testing to identify differences in HR managers' perceptions of statements formulated regarding the use of artificial intelligence in the company.

The results (see Table 4) show that the assumption of normal distribution for the selected variables (AI1-AI6) is not met, both for both groups of respondents by gender because the p-values of the Kolmogorov-Smirnov statistic are lower than the significance level ($\alpha = 0.05$).

Table 4: Verification of the assumption - normal distribution according to the gender (M/F)

Gender		Kolmogorov-Smirnov		Shapiro-Wilk			
		Statistic	df	Sig.	Statistic	df	Sig.
AI1	M	0.219	183	0.000	0.877	183	0.000
	F	0.202	264	0.000	0.867	264	0.000
AI2	M	0.213	183	0.000	0.866	183	0.000
	F	0.222	264	0.000	0.845	264	0.000
AI3	M	0.217	183	0.000	0.871	183	0.000
	F	0.195	264	0.000	0.865	264	0.000
AI4	M	0.224	183	0.000	0.872	183	0.000
	F	0.192	264	0.000	0.867	264	0.000
AI5	M	0.195	183	0.000	0.874	183	0.000
	F	0.197	264	0.000	0.864	264	0.000
AI6	M	0.191	183	0.000	0.875	183	0.000
	F	0.215	264	0.000	0.857	264	0.000

Note: AI1-AI6 – Artificial intelligence statements; M – Male; F – Female

Source: data collected by the authors

This means that the selected variables (AI1-AI6) do not have the shape of a probability model of normal distribution. The results (see Table 5) also show that the assumption of homoskedasticity of variances is met for each monitored variable (AI1-AI6). This is because the p-values of the Levene statistic are greater than the significance level ($\alpha = 0.05$).

Table 5: Verification of the assumption - homoscedasticity

		Levene Statistic	df1	df2	Sig.
AI1	Based on Mean	0.566	1	445	0.452
	Based on Median	0.434	1	445	0.510
	Based on Median and with adjusted df	0.434	1	437.792	0.510
	Based on trimmed mean	0.508	1	445	0.476
AI2	Based on Mean	0.288	1	445	0.591
	Based on Median	0.149	1	445	0.700
	Based on Median and with adjusted df	0.149	1	444.783	0.700
	Based on trimmed mean	0.556	1	445	0.456
AI3	Based on Mean	0.265	1	445	0.607
	Based on Median	0.802	1	445	0.371
	Based on Median and with adjusted df	0.802	1	444.998	0.371
	Based on trimmed mean	0.403	1	445	0.526
AI4	Based on Mean	1.146	1	445	0.285
	Based on Median	1.304	1	445	0.254
	Based on Median and with adjusted df	1.304	1	427.322	0.254
	Based on trimmed mean	1.391	1	445	0.239
AI5	Based on Mean	5.185	1	445	0.023
	Based on Median	4.746	1	445	0.030
	Based on Median and with adjusted df	4.746	1	438.126	0.030
	Based on trimmed mean	5.725	1	445	0.017
AI6	Based on Mean	3.033	1	445	0.082
	Based on Median	3.439	1	445	0.064
	Based on Median and with adjusted df	3.439	1	424.139	0.064
	Based on trimmed mean	3.400	1	445	0.066

Note: AI1-AI6 – Artificial intelligence statements

Source: data collected by the authors

3.3. Non-parametric tests

Based on the results of testing the assumptions of normal distribution and homoscedasticity, it was concluded that parametric testing could not be applied to determine statistically significant differences in HR managers' evaluations of AI-related statements by gender. The

following tables (see Table 6 and Table 7) summarize the results of the comparison of HR managers' attitudes by gender using non-parametric testing.

Table 6: Mann-Withney U test – rank evaluation of AI statements

Gender	N	Mean of Rank	Sum of Ranks	Gender	N	Mean of Rank	Sum of Ranks
AI1 M	183	241.0	44,107	AI4 M	183	240.9	44,083
F	264	212.2	56,022	F	264	212.3	56,046
Total	447			Total	447		
AI2 M	183	239.8	43,877	AI5 M	183	239.9	43,905
F	264	213.1	56,252	F	264	213.0	56,223
Total	447			Total	447		
AI3 M	183	235.4	43,081	AI6 M	183	245.3	44,886
F	264	216.1	57,048	F	264	209.3	55,242
Total	447			Total	447		

Source: data collected by the authors

The results (see Table 6 and Table 7) reveal the following empirical findings. The gender of the HR manager is a statistically significant factor influencing the evaluation of statements related to the use of artificial intelligence (AI1-AI6), with the exception of AI3. The results of the non-parametric tests confirmed that the p-values of the Mann–Whitney (M–W) statistics for AI-related statements (ranging from AI6: *Sig* = 0.003 to AI2: *Sig* = 0.025) are lower than the established significance level (α = 0.05).

The gender of the HR manager is not a statistically significant factor influencing the evaluation of statement AI3. This is because the p-value (*Sig* = 0.105) of the M–W test is higher than the significance level (α = 0.05). Thus, gender does not have a statistically significant impact on the evaluation of statement AI3.

Table 7: Results of nonparametric tests

Non-parametric tests	Artificial intelligence					
	AI1	AI2	AI3	AI4	AI5	AI6
Mann-Whitney U	21041.500	21271.500	22067.500	21065.500	21243.000	20262.000
Wilcoxon W	56021.500	56251.500	57047.500	56045.500	56223.000	55242.000
Z	-2.412	-2.242	-1.621	-2.397	-2.263	-3.020
Asymp. Sig. (2-tailed)	0.016	0.025	0.105	0.017	0.024	0.003

Source: data collected by the authors

Table 8 provides a summary overview of the evaluation of the formulated statistical hypotheses.

Table 8: Evaluation of differences in the perceptions on the AI statements according to the gender

Items	Definition of the statements	Statistical hypotheses	Evaluation	Gender Differences
AI1	The company uses AI to automate repetitive and time-consuming tasks (e.g. payroll processing, employee data management, shift planning, etc.).	SH1	rejected	yes
AI2	The company uses AI in employee selection (e.g. CV screening, candidate evaluation, predicting candidate success based on historical data).	SH2	rejected	yes
AI3	The company uses AI to obtain feedback, information on satisfaction, as well as recommendations and advice from its employees.	SH3	accepted	no
AI4	Our company uses AI to increase the efficiency of internal processes.	SH4	rejected	yes
AI5	The organization uses AI to support the preparation of materials for the CSR report (for the annual report, for a separate CSR report, for a sustainability report) or other strategic documents.	SH5	rejected	yes
AI6	The organization's management is committed to supporting the use of AI in the daily work activities of employees.	SH6	rejected	yes

Source: data collected by the authors

4. Discussion

The evaluation of HR managers' attitudes toward statements regarding the use and implementation of AI in their companies shows that the level of agreement with statements AI1 to AI6 ranges from 51.3% to 61.1%. The highest level of agreement (somewhat agree + strongly agree) was observed for the use of AI in recruitment and employee selection (AI2: 61.1%), while the lowest level of agreement was related to the automation of administrative tasks (AI1: 51.3%).

A gender-based comparison reveals that female HR managers reported a higher level of agreement (ranging from AI1: 55.0% to AI2: 65.1%) with the statements on the use and implementation of AI in their companies (AI1 to AI6), compared to their male counterparts (ranging from AI1: 45.9% to AI2: 55.2%).

Empirical findings have confirmed that artificial intelligence (AI) is beginning to play a significant role in the management of human resources within business entities. This partial conclusion aligns directly with the findings of Kekez et al. (2025), Kliestik et al. (2023), and Mura and Stehlikova (2025). In this context, Kosikova and Matovcikova (2024) and Bankins et al. (2022) argue that the use of AI significantly contributes to the expansion and transformation of the digital working environment for entrepreneurs.

Male HR managers are more likely to utilize AI for automating repetitive and time-consuming tasks compared to their female counterparts. Similar gender-based disparities were also identified in the use of AI during the recruitment process—particularly in the initial screening of résumés and the evaluation of candidates. These conclusions, rooted in differing perspectives between male and female HR managers, are consistent with the findings of Elbadawi (2024), Belas et al. (2025), and Elsayy and Elbadawe (2022).

Significant gender-based differences were also observed in the attitudes of HR managers towards the use of AI in enhancing the efficiency of internal procedures, as well as in the application of AI in preparing corporate social responsibility (CSR) reports and other strategic documents. Female HR managers were less inclined to utilize AI in the aforementioned HR functions. In this regard, gender emerges as a significant factor not only in the adoption of AI technologies but also in relation to employee-related risks (e.g., error rates, flexibility, etc.; Frajtova-Michalikova et al., 2024) and the broader organization of human capital within firms (Remeikiene et al., 2025; Khan et al., 2024).

In this context, the findings of Piwowar-Sulej and Cierniak-Emerych (2024) and Zvarikova et al. (2024) are also noteworthy, as their studies addressed employee satisfaction within the framework of socially responsible business practices and business sustainability.

5. Conclusions

The aim of this article was to evaluate the extent to which artificial intelligence is utilized in medium and large companies operating in the business environment of the Czech Republic.

Among the key findings regarding the attitudes of HR managers is the fact that 50% to 60% of Czech medium and large enterprises use AI within their operations. The attitudes of male and female HR managers toward statements about the use of artificial intelligence differ significantly, with the exception of statement AI3 (the company uses AI for feedback, gathering information on employee satisfaction, as well as suggestions and advice from employees). Male HR managers evaluated the use of AI in the company significantly more positively compared to their female counterparts.

Empirical findings serve as a crucial catalyst for medium and large enterprises in the adoption, implementation, and utilization of artificial intelligence within internal human

resource management processes. Recognizing the differences in human resource (HR) management styles based on the gender of HR managers has demonstrable positive effects on the overall management of the organization. These benefits are particularly evident in the efficiency of HR department employees, the quality of candidate selection processes for potential new hires, the reduction of financial costs related to HR management, and, not least, in the management approach of HR professionals who are aware of such differences.

However, the research has certain limitations that influence the obtained findings. Primarily, the study was conducted only at the local level, specifically within a single Central European country—the Czech Republic. The responses of HR managers to selected questionnaire items are inherently subjective and may vary over time. Furthermore, the choice and interpretative power of results derived from the testing of statistical hypotheses using non-parametric tests also possess inherent limitations.

Future research will be directed along several lines. One key objective is to expand the study to other European Union countries to enable broader generalization and applicability of the empirical findings. Another goal is to replicate the research after a time interval in order to compare the results longitudinally. Additionally, future studies will aim to verify the current findings using alternative mathematical and statistical methodologies (e.g., logistic regression, correspondence analysis, structural equation modelling), which will constitute the basis for further scientific and publication outputs.

Author contributions: All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

Funding: This research received no external funding.

Data Availability Statement: Data are available from the authors upon reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

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