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Article

Adapting the competences of the employed personnel in the context of the integration of artificial intelligence in organizations

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ADAPTING THE COMPETENCES OF THE EMPLOYED PERSONNEL IN THE CONTEXT OF THE INTEGRATION OF ARTIFICIAL INTELLIGENCE IN ORGANISATIONS

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Abstract

Artificial intelligence (AI) has been part of organisational activity for a long time, but until the launch of the ChatGPT application at the end of 2022, it was not discussed in such a comprehensive way. This type of application brought to the public's attention the concept of artificial intelligence and the fact that some of the repetitive activities of employees could easily be taken over by such applications. The article aims to identify trends in the evolution of skills among employees in the context of the integration of AI into the activity of organisations, based on empirical exploratory research, carried out between January and February 2024, on a sample of 259 respondents. The data were obtained by applying an online questionnaire on a specialised platform, the questionnaire having 21 questions, of which the first eight outline the sociodemographic profile of the respondents.

The originality of the article consists of conducting empirical research with the aim of matching the sociodemographic characteristics of the respondents with their approach toward the acquisition of skills in the context of the inclusion of AI in the activities of the organisation in which they operate. To validate the research hypotheses, non-parametric analysis methods of the interdependencies between the variables were used, the results obtained highlighting the need to study this issue on a representative sample, using a more complex questionnaire. More than 75% of respondents to the study are interested in acquiring skills to use AI-based applications. The most significant risks identified, as a result of the



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integration of AI in organisations, are the alteration of interpersonal communication and staff restructuring, and the greatest opportunity is the decrease in the time allocated for the performance of certain tasks, reflected in the increase in the efficiency of the organisation. The relevance of the research derives from the need to deepen several aspects related to the evolution of employee skills, in the context of increasing concern related to the way in which AI is being adopted by organisations.

Keywords: artificial intelligence (AI), employee professional skills, attitude toward artificial intelligence, non-parametric analysis, Chat Generative Pre-trained Transformer (ChatGPT), the Organisation for Economic Cooperation and Development (OECD).

JEL Classification: J24, O15, O33, C25.

Introduction

Artificial intelligence is already present in many applications used in the business or home environment, and it is generally recognised that it makes tasks easier. By definition, AI refers to the ability of an application to mimic human cognitive functions, such as learning, problem solving, and pattern recognition, to perform various tasks without being explicitly programmed (Russell and Norvig, 2009). Here are some examples of systems based on artificial intelligence, used in various fields: virtual assistants such as Siri, Google Assistant or Shazam for song recognition; personalised online recommendations such as platforms like Netflix, Spotify, or YouTube, autonomous cars in the automotive industry, image analysis and facial recognition used in security systems, machine translation systems, voice recognition such as Google or Siri, data analysis and Business Intelligence, AI-powered chatbots that provide automated responses and interactive support.

It is generally accepted that AI threatens the continuity and security of worker jobs (Arslan et al., 2021). Uncertainty about the employment of workers appears to be an integrated element of integrating AI (Zirar, Imran and Islam, 2023). These aspects are also confirmed by the conferences organised recently, where discussions revolve around the types of jobs that can be replaced by artificial intelligence and, for the first time, due to the limited knowledge on this subject, the employed staff began to fear for their jobs. The introduction of new technologies affects human behaviour development and requires adaptation through the acquisition of new skills and competencies. In order to stay relevant in the digital world, workers need to acquire certain abilities and give up others. Therefore, the research work aims to "identify strategies that can support organisations and guide workers toward upskilling and reskilling challenges" (Morandini et al., 2023). "Schools need to provide an appropriate education in a ubiquitously digitalised world and within an accordingly complex and changing career landscape" (Benvenutti et al., 2023). "Before 2030, it is estimated that 375 million people (14% of the global workforce) may need to change jobs due to AI-related technological advancements" (Morandini et al., 2023). This disruption calls for continued reskilling and upskilling of workers to avoid 'a collective failure to adjust to skills' (Willcocks, 2020).

The main aspects highlighted are in the same direction as the advantages according to the OECD, AI should benefit people (OECD, 2021). Implementing AI in different industrial

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sectors helps automate activities currently performed by humans, thus reducing the workload. It has demonstrated its potential to transform and streamline many business processes including those in human resource management (Stone, Lukaszewski and Johnson, 2024). The purpose of the research is to highlight the opportunities and risks of integrating AI into organisations and how the skills of the employed personnel are adapted to this new context, of integrating AI into the activities of organisations.

The novelty of this study consists of the empirical research carried out, which involved the selection of the variables included in the questions from the online survey questionnaire, as well as the results obtained. The profile of the respondents is outlined by eight sociodemographic variables: gender, age, level of education, professional status, income category, field of activity, and size of the organisation in which they work, as well as the environment in which they live.

At the same time, in the specialised literature, similar research, which captures those aspects of AI that can have a direct impact on people, from the perspective of their quality as employees, but also as consumers, is limited.

The added value of the study also consists in the use of non-parametric analysis techniques, the applicability of which aims to identify the interdependencies between the sociodemographic characteristics of the respondents and the attitude towards the impact of integrating AI-based applications into organisational activities.

This paper is structured in three main sections and aims to identify and deepen those aspects of AI that can have a direct impact on consumers or influence their activities as employees. The first part of the paper captures the most important conclusions from articles published on the subject of AI and how it will impact the way organisations work, along with the main opportunities and threats identified. The research methodology related to the evolution of employee competencies in the context of the integration of artificial intelligence in the activity of organisations is present in the second part of the article, while the last part includes the analysis of the results, the validation of the hypotheses, and the formulation of the conclusions. Through its content, this document complements the studies carried out so far in relation to the impact of the use of AI applications from the perspective of employees and their role as consumers, providing support for the development and application of development strategies in the field.

1. Literature review

Academic literature argues in favour of workers and AI co-existence, the latter becoming omnipresent in the business environment and beyond. Building trust among workers in this context is extremely important. Some authors (Varma, Pereira and Patel, 2024) anticipate that in the near future AI machines will be able to understand human emotions and develop feelings of their own. As such, keeping human involvement or having a "human-in-the-loop" approach is strongly recommended by others (Andrieux et al., 2024). Along the same lines, AI-based applications could also increase and benefit from the expertise and experience of human employees. In turn, workers could benefit from AI applications' precision, number calculation, and pattern recognition (Farrow, 2019).

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Another positive aspect identified is that AI challenges workers to cultivate human-only skills to drive value creation from human-machine collaboration (Chuang, 2021). Such human-only skills include problem-solving, creative thinking, managing difficult conversations, working effectively in teams, etc. (Cook et al., 2020). However, some consider that even skills such as 'analytical decision-making', currently mastered by workers, are expected to shift to intelligent systems in the next two decades (Klotz, 2016).

In the workplace, robots can prevent humans from many heavy and tiring activities, protecting their physical and mental health (Benvenutti et al., 2023). Morandini et al. (2023) confirm that AI "has the potential to enhance or even replace human tasks and activities through recognition, understanding, learning, and action". The authors argue that generative AI can be a very valuable tool and should be extremely helpful to managers because it can allow them to complete their tasks faster, reduce job burnout, and gather information needed for new projects (Aguinis, Beltran and Cope, 2024). Pan and Nishant (2023) even argue that AI technology has the potential to support the achievement of the SDGs, introducing the concept of digital sustainability. It mainly refers to the use of technologies that utilise, create, and interpret data to achieve SDGs targets.

While using AI applications or systems helps increase efficiency and productivity (Giudice et al., 2022), it also poses significant implications for organisations and their employees. According to Ratnasari, Bagyo and Sunarto (2024), the organisation's capacity could be defined as "a collection of interconnected tools used to carry out essential tasks". Employees' skills are significant tools that drive the performance of an organisation. Given the dynamic growth in the development and use of Artificial Intelligence in our society, digital competency or ICT literacy of the employees will certainly need to be complemented with knowledge to integrate AI applications in the organisational processes.

The progressive, yet dynamic introduction of AI in the workplace can lead to the creation of new jobs needed for the implementation of AI technology. Certain skills may become more valuable as AI continues to advance. This transformational trend for the labour market has become a topic on the public agenda, as a significant percentage of workers will need retraining and further education. Key skills that are expected to increase in importance by 2025 include soft skills (also called transversal skills), such as critical thinking and analysis, problem solving, and self-management (WEF, 2020). The authors highlight the importance of taking a transdisciplinary approach in workforce transformation. Such skills, together with communication and collaboration, will enable workers to adapt to the rapidly evolving technology, be flexible, and coexist with AI systems. It should be noted, however, that "despite the many benefits of these new technologies, there are also critical risks and ethical dilemmas associated with their use" (Stone, Lukaszewski and Johnson, 2024) in the labour market. Therefore, regulators and private companies must be aware of these risks and take proactive steps to approach potential problems or mitigate possible risks (Lukaszewski and Stone, 2024). "To be a citizen of the 21st century requires one to master different skills and competencies to be an effective worker, for personal realisation and development" (Benvenuti et al., 2023). However, above all, for the benefits of AI to be shared equally among all the stakeholders, the attitude and the mental set-up towards AI should be open and ready for change.

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2. Research methodology

To analyse the evolution of employees' skills in the activities that involve the integration of AI, as well as to identify the respondents' opinion regarding the proportion of activities in organisations likely to be replaced by AI, the data obtained from an exploratory research on a non-random sample of 259 respondents from Romania were used. The research was carried out between January and February 2024, obtaining the data using an online questionnaire through the SurveyMonkey platform. Since it is difficult to conduct research on a representative sample, the authors of the empirical exploratory aimed to include individuals in the sample based on the criterion of relevance (people who possess the essential characteristics of the population targeted by the research, employed personnel, and implicitly, consumers). The questionnaire used in the research includes 21 questions, developed entirely by the authors, that aim to highlight the evolution of the necessary skills for the employed personnel in the context of the integration of Artificial Intelligence in the activity of organisations. The aspects of artificial intelligence that can influence their work as employees and have a direct impact on their role as consumers have been targeted. The first eight questions in the questionnaire aim to outline the sociodemographic profile of the respondents, while the rest of the questions focus on identifying the degree of knowledge of the activities carried out within the organisations, potential to be replaced by AI-based applications, opportunities, and risks identified following the integration of AI in organisations.

The general purpose of the research is to analyse the opinions of the respondents, employees from Romania, regarding the impact of integrating artificial intelligence applications in organisations. The main objectives subordinated to it aimed at:

• analysing the impact of using of artificial intelligence in organisations on employees;

- how employees perceive the risks and opportunities generated by the adoption of artificial intelligence in the organisation where they work;
- outlining an employee profile based on sociodemographic characteristics and their approach to the adoption of artificial intelligence applications within the organisation.

Descriptive statistics summarising the main research results were completed by analysing the interdependencies between variables using non-parametric techniques, such as association analysis and ordinal regression. By using statistical methods specific to nominal and ordinal variables, the aim is to avoid distorted estimation of the effect size, inflated error rates, and other problems that could distort research results (Liddell and Kruschke, 2018; Bürkner and Vuorre, 2019), observed in the case of statistical models that falsely assume them to be metrics. Association analysis between variables, performed by means of Goodman and Kruscha's Gamma tests, as well as Chi-Square tests, allowed the identification of the intensity of the dependencies between the variables, the level of its statistical significance thereof, specifying the ordinal regression model.

The analysis methods described above were used to test the research hypotheses:

• **Hypothesis 1:** Given the recent surge in AI, most employees (more than 75%) are interested in acquiring competencies for using AI-based applications;

• **Hypothesis 2:** The greatest risk identified as a result of AI integration in organisations is job reduction, and the most significant opportunity identified as a result of AI integration is increased organisational efficiency;

• **Hypothesis 3:** The income of the respondents influences the intensity concern for the adoption of AI-based applications by organisation;

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• **Hypothesis 4:** There is a significant relationship between the degree of implementation of artificial intelligence applications within the organisation and the expressed interest of employees in acquiring the competences to use AI-based applications;

• **Hypothesis 5:** The level of education influences the interest expressed in acquiring competencies for using applications based on AI;

The five hypotheses formulated also aim to identify an employee profile based on the approach to the adoption of artificial intelligence applications within organisations.

	Table no. 1. Variables included in the analysis: county, meaning, type					
	variables Type			oding and significance of responses		
			In3(1)	< 2500		
			In3(2)	2500 - 3500		
In3	Income category (lei)	Ordinal	In3(3)	3500 - 5000		
			In3(4)	5000 - 7500		
			In3(5)	> 7500		
			In7(1)	High school		
			In7(2)	University		
In7	Educational level	Ordinal	In7(3)	Postgraduate		
			In7(4)	Doctoral		
			In7(4)	Postdoctoral		
	The degree of concern about		In10(3)	Highly preoccupied		
In10	the adoption of AI-based	Ordinal	In10(2)	Slightly preoccupied		
1010	applications by the organisation in which the respondent works.	Orumui	In10(1)	Not preoccupied		
			In11(3)	Directly involved		
In11	Degree of involvement in the adoption of AI applications in the organisation	Nominal	In11(2)	Not directly involved, but support the projects that facilitate integration of AI in the activities of the organisation		
	where the respondent operates		In11(1)	Not directly involved and do not support projects for integration of AI in the activities of the organisation.		
	Interest in acquiring the		In15(3)	Yes, interested		
In15	competences for the use	Ordinal	In15(2)	Indifferent		
	of AI applications.		In15(1)	No, not interested		
In1	Age					
In2	Gender					
In4	Size of the organisation					
In6	Professional status					
In8	B Environment					
In12	12 Risks identified as a result of integrating AI into the organisation					
In13	13 Opportunities identified as a result of integrating AI into the organisation					
In14	14 Areas of activity in which the use of AI is considered appropriate					
In15	5 Competencies needed to integrate AI into the organisation					
In16	6 Courses to acquire the skills needed to use AI-based applications					
In19	Types of AI applications suital	ole for organ	nisational	adoption, as judged by respondents		
In20	Descriptors for the process of	leveloping	AI skills a	at the organisation level		
In21	1 Proportion of activities likely to be replaced by AI-based applications in the organisation					

Table no. 1. Variables included in the analysis: coding, meaning, type

Source: Authors' data processing based on the questionnaire designed and used in the research

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Achieving the objectives and validating the presented hypotheses was carried out through statistical-econometric processing based on the analysis of the association between nominal and ordinal variables, respectively, logistic regression (Logit model). Logistic regression measures the relationship between dependent categorical variables and one or more independent variables, by estimating probabilities of events corresponding to categorical variables, being seen as a special case of generalised linear models (Hurlin, 2015).

The general form of a logit model is as follows:

$$\ln(odds) = \ln(k) + \sum_{i=1}^{n} \ln(OR_i) = a + \sum_{i=1}^{n} B_i \cdot x_i$$
(1)

where $odds = \frac{p}{1-p}$ represents the chance of the event whose probability ratio (*likelihood* ratio) is p, and $OR_k = \frac{odds_k}{odds_{baza}}$ is the odds ratio (*Odds Ratio*). Thus, the value $odds_i$ of opting for a certain statement that expresses a variant of the factorial variable is: $odds_i = e^{\ln(k) + \sum_{i=1}^n \ln(OR_i)} = e^{a + \sum_{i=1}^n B_i \cdot x_i}$ (2)

The statistical processing of the data and the estimation of the logistic regression model was carried out with the help of the specialised software package IBM SPSS, ver. 26.

3. Results and discussions

The study was carried out on a sample of 259 respondents, approximately 60% of whom are over 40 years old, 63% women, living in urban areas (81.5%). More than 90% of the respondents have higher education, 83% have employee status, and approximately 60% work in medium and large companies (with more than 50 employees) – Table 2.

In1 - Age	Percent	In3 - Income	Percent	In7 - Education	Per	cent
18-24 years	8.9	<2500	6.6	High School		7.7
25-30 years	12.0	2500 - 3500	10.8	University		46.3
31-40 years	19.3	3500 - 5000	20.1	Postgraduate		40.2
41-50 years	44.4	5000 - 7500	23.9	Doctoral		4.6
51-65 years	14.7	>7500	38.6	Postdoctoral		1.2
65+ years	0.8	Total	100.0	Total		100.0
Total	100.0					
In2 - Gender	Percent	In8 - Medium	Percent	In6 - Professional	l status	Percent
Male	37.1	Urban	81.5	Employee		83.0
Female	62.9	Rural	18.5	Entrepreneur		11.2
Total	100.0	Total	100.0	Self employed		5.8
				Total		100.0
In4 – S	lize of the org	anisation		Percent	t	
Microe	nterprise (1-9	employees)			22.	4
Small e	Small enterprise (10-49 employees)		15.1		1	
Mediur	n-sized enterp	rise (50-249 emple	oyees)	23.2		2
Large e	enterprise (mo	re than 250 employ	yees)	39.4		4
Total					100.	0

Table no. 2. Sociodemographic variables

Source: Authors' own data processing based on the exploratory research carried out

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From the perspective of the respondents' concern for acquiring the necessary skills to use AIbased applications, more than 80% declared that they were interested (a value that validates *Hypothesis 1* of the research), 14% attended courses in the last 3 years and 57% plan to attend training courses (Table 3).

 Table no. 3. The structure of the respondents according to the answers provided for the variables In15 and In16

In15 – Competences required	Percentage	In16 – Courses to acquire	Percentage
to integrate AI into		competencies required for the use of	
organisation		AI-based applications	
Not interested	12	No and don't plan to	29
Indifferent	8	No, but I plan to	57
Yes, interested	80	Yes, in the last 3 years	14
Total	100	Total	100

Source: Authors' own data processing based on the exploratory research carried out

Regarding the degree of concern related to the adoption of AI-based applications by the organisation in which they operate, 61% of respondents have a low degree of concern, only 30% being intensely concerned. In terms of participation in the adoption of AI applications in the organisation, only 18% of respondents are directly involved, while a significant percentage (58%) supports projects for the integration of AI (Table 4).

 Table no. 4. The structure of the respondents according to the answers provided for the variables In10 and In11

In10 – Degree of concern about the	Percentage	In11 – Degree of involvement in	Percentage
adoption of AI-based applications by	y the adoption of AI applications in		
the organisation in which the		organisation where the respondent	
respondent works		operates	
Not at all processing	0	Not directly involved and do not	24
Not at all preoccupied	9	support project for AI integration	24
Slightly processing	61	Not involved, but support project	59
Singhtly preoccupied	01	for AI integration	50
Highly preoccupied	30	Directly involved	18
Total	100	Total	100

Source: Authors' own data processing based on the exploratory research carried out

From the perspectives of risks and opportunities identified as a result of the integration of AI in the organisation, the greatest risk considered is the alteration of interpersonal communication (59% of the respondents), in the second only being the risk related to personnel restructuring (37% of the respondents), a result that partially invalidates **Hypothesis 2** of the research. From the perspective of the identified opportunities, **Hypothesis 2** is validated because approximately 70% of the respondents appreciate that the integration of AI-based applications increases the efficiency of the organisation, by reducing the time allocated for the performance of certain tasks (Table 5).

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In12 - Risks identified as a result of AI integration in organisation	Frequency (Percentage) Count (Percent)	In13 - Opportunities identified following the integration of AI in organisation	Frequency (Percentage) Count (Percent)
Alteration of interpersonal communication	154 (59)	Reduced time allocated for carrying out certain tasks	179 (69)
Personnel restructuring	95 (37)	Monitoring and analysing large volume of information	151 (58)
Growth incidence of operational errors	75 (29)	Quick and easy generation of creative content (images, text)	106 (41)
Income decrease for engaged employees	33 (13)	Replacing positions for which recruitment becomes burdensome due to IA applications	35 (14)

Table no. 5. Distribution of respondents according to the responses providedfor variables In12 and In13

Source: Authors' own data processing based on the exploratory research carried out

Regarding the fields of activity in which the use of AI is considered appropriate, the answers of the study participants identify marketing, communication, and market prospecting in the first positions, and from the perspective of the competencies necessary for the integration of AI in the organisation, the first ranked in the respondents' options are critical and analytical thinking, respectively intuition and pattern recognition (**Table 6**).

Table no. 6. Distribution of respondents according to the answers provided for variables In14 and In18

In14 – Areas of activity where the use of AI is considered appropriate	Frequency/Percent (Count/Percent) (N Valid: 259)	In18 – Required competencies for AI integration into an organisation	Frequency/Percent (Count/Percent) (N Valid: 259)
Marketing and communication	126 (49)	Critical thinking and analytics	136 (53)
Prospection and market development	113 (44)	Intuition and recognition patterns	131 (51)
Customer relations and consumers	102 (39)	Communication and collaboration skills	106 (41)
Production and services	101 (39)	Diligence and resolution	59 (23)
Education and continuous learning	99 (39)	Active listening and assertiveness	48 (19)
Infrastructure and energy	79 (31)		

Source: Authors' own data processing based on the exploratory research carried out

The last two items addressed in the questionnaire refer to respondents' assessments regarding the process of developing competencies in the field of AI, respectively, the proportion of activities likely to be replaced by applications based on AI in the organisation (Table 7). The largest share of respondents (36%) rate this process as slow, and the proportion of activities likely to be replaced by AI-based applications is below 30% for 80% of study participants.

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Table no. 7. The structure of the respondents according to the answers provided
for variables In20 and In21

In20 – <i>Descriptors</i> for the process of	Percentage	In21 – Proportion of activities	Percentage
developing AI skills at the	(Percent)	likely to be replaced by AI-based	(Percent)
organisation level		applications in the organisation	
slow	36	less than 10%	43
reasonable	25	11% - 30%	37
encouraging	14	31% - 50%	16
costly	14	51% - 70%	3
applicant	8	over 71%	1
don't know	3		
Total	100	Total	100

Source: Authors' own data processing based on the exploratory research carried out

Regarding the proportion of activities likely to be replaced by AI-based applications in the organisation, at the moment, 43% of respondents believe that less than 10% of the organisation's activity could be replaced by AI, and 37% of respondents believe that between 11% and 30% of the organisation's work could be replaced by AI. From the perspective of the types of AI applications suitable for adoption in the organisation, 54% of the respondents value applications that explore and integrate databases as the most suitable, followed by visual content generators (35%), respectively, writing assistants and translators/transcribers of audio-video content (Figure 1).



Figure no. 1. Share of types of AI applications suitable for adoption in the organisation, according to the assessment of the respondents (In19) *Source: Authors' own data processing based on the exploratory research carried out*

The association analysis between the variables quantifying the degree of involvement in the adoption of artificial intelligence applications within the organisation (In11), respectively, the interest shown in acquiring the skills to use AI-based applications (In15) highlights a statistically significant link (Approx. Sig.=0.000), of medium intensity (Table 8), a result that validates **Hypothesis 4**.

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Symmetric Measures				
		Value	Approx. Sig.	
	Phi	0.572	0.000	
Nominal by Nominal	Cramer's V	0.404	0.000	
	Contingency Coefficient	0.496	0.000	
	Source: Authors' processing using SPSS			

Source: Authors' processing using SPSS

The analysis carried out with respect to the intensity of the connection between the variables quantifying *the income of the respondents* (In3) and *their concern regarding the adoption of AI-based applications in the organisation in which they operate* (In10) highlights a statistically significant dependence, but of low intensity (Figure 2). Thus, respondents with high incomes are more concerned about the adoption of AI-based applications by the organisation, the category of respondents "little concerned" being predominant regardless of income category, a result that partially confirms *Hypothesis 3* of the research. The Gamma coefficient has a value of 0.319, which means that if we know the values of one of the variables, the prediction errors of the values of the second variable are reduced by 32% (Rotariu et al., 2006; Coman, 2011).



		Value	Asymp. Std. Error	Approx. T	Approx. Sig.	
Ordinal by Ordinal	Gamma	0.319	0.087	3.562	0.000	

Figure no. 2. The degree of dependence between the income category and the degree of concern for the adoption of AI by organisations. Association between variables In3 and In10

Source: Authors' processing using SPSS

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To validate *Hypothesis 5* of the investigation, regression analysis with ordinal variables was used, the Logit model, which has as an endogenous ordinal variable In15, and as an exogenous variable In7, and it is observed that most respondents are concerned with acquiring skills in the use of AI-based applications (Table 9).

Table no. 9. The proportion of cases that fall into each level of the dependent variable (In15)

		Marginal Percentage
Interest in acquiring skills in the use of AI	Not interested	12.0
based applications (In15)	Do not care	7.7
	Interested	80.3
	High School	7.7
	Universitary	46.3
Education level (In7)	Postgraduate	40.2
	Doctoral	4.6
	Postdoctoral	1.2

Source: Authors' own data processing based on the exploratory research carried out

The chi-square test value (8.541, Sig.= 0.074) obtained in the case of the model with predictors leads to the acceptance of the null hypothesis and shows that it is appropriate for the proposed analysis. To test the validity of the model and its degree of adequacy with the analysed data (Goodness-of-Fit tests), Pearson's Chi-square statistics was used (2.170, Sig. = (0.705), as well as the Chi-square statistic based on the analysis of the variance (2.480, Sig. = 0.648). The results of both applied tests demonstrate that the constructed model is suitable for the analysis of the dependence between the two ordinal variables (Sig. > 0.05).

Unlike the classic regression model, in which the coefficient of determination (R^2) indicates the proportion in which the predictor influences the variation of the dependent variable, in the case of ordinal regression, three statistics are calculated that summarise the proportion of variation in the result that can be explained by the exogenous variable: Cox and Snell (0.032), Nagelkerke (0.045), and McFaddencare (0.026). The interpretation of the pseudo R- square values must be done with caution, especially since in the specialised literature there is no reference to how they should be interpreted (Lomax and Hahs-Vaugn, 2012; Smith and McKenna, 2013; Pituch and Stevens, 2016; Crowson, 2019). The values obtained suggest that the proposed factorial variable (In7) explains to a small extent, approximately 5%, the variance in the degree to which they are interested in acquiring skills in using AI-based applications. Certainly, the obtained result is not surprising because there are other factors that can influence the respondents' choice.

Parameter Estimates										
		Estimata	Std Damon	Wald	df	Sig.	95% Confidence Interval			
		Estimate	Std. Effor	walu	u		Lower Bound	Upper Bound		
Threshold	[In15 = 1]	-20.351	1.034	387.495	1	0.000	-22.377	-18.324		
	[In15 = 2]	-19.745	1.026	370.185	1	0.000	-21.756	-17.733		
Location	[In7=1]	-19.239	1.121	294.524	1	0.000	-21.436	-17.042		
	[In7=2]	-18.504	1.049	311.137	1	0.000	-20.560	-16.448		
	[In7=3]	-17.978	1.063	286.084	1	0.000	-20.061	-15.895		
	[In7=4]	-17.387	0.000		1		-17.387	-17.387		
	[In7=5]	0 ^a		•	0	•				
a This parameter is set to zero because it is redundant										

Table no. 10. Estimation of regression model parameters - Link function Logit

a. This parameter is set to zero because it is redundant.

Source: Authors' own data processing based on the exploratory research carried out

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Analysing the regression coefficients and significance tests for each of the independent variables included in the model (Table 10), it can be seen that the estimates obtained are negative, which means that for each increase of one unit of an independent variable, a decrease is estimated, in a certain measure of the probability of obtaining a higher level for the dependent variable (Crowson, 2019).

Conclusions

The objective of the article is to analyse the opinions of the respondents, employed in organisations in Romania, in order to identify trends in the evolution of employee competencies related to the impact of artificial intelligence on their activity. The exploratory research aimed to obtain information related to the impact of the use of artificial intelligence on employees in organisations, to analyse how they identify the risks and opportunities generated by the adoption of AI in organisations, and to outline a sociodemographic profile of the employee and their approach to adopting artificial intelligence applications within the organisation.

From the analysed data, it is highlighted that more than 80% of employees are interested in acquiring skills for using AI-based applications. Related to the involvement of employees in the adoption of applications based on artificial intelligence, even if only 18% of respondents are directly involved a significant percentage, 58% support projects for the integration of AI. The degree of involvement in the adoption of AI applications within the organisation and the level of education, influence the interest of employees in acquiring the skills to use applications based on AI, showing a direct association between them. The results of the analysis suggest that at the organisational level, income influences how employees are concerned about the organisation's adoption of AI-based applications, and high-income respondents are more concerned about the adoption of AI-based applications than respondents in other income categories. From the perspective of highlighting the risks and opportunities, most of the respondents identified the greatest risk, the alteration of interpersonal communication (59% of the respondents), and in the second place the personnel restructuring (37% of the respondents). The greatest opportunity identified was to increase the efficiency of the organisation (70% of the respondents), by reducing the time allocated for the performance of certain tasks. Regarding the fields of activity in which the use of AI was appreciated as appropriate, we mention: marketing, communication, and market prospecting, and related to the types of AI applications suitable for adoption in the organisation, 54% of respondents appreciate applications that explore and integrate databases as the most suitable, followed by visual content generators or writing assistants and audiovideo translators/transcribers.

Through its content, this article complements existing scholarly articles in relation to the impact of the use of artificial intelligence applications, from the perspective of employees, providing support for the development and application of development strategies in the field. The added value of the study lies in the use of analysis techniques aimed at identifying the interdependencies between the socio-demographic characteristics of the respondents and their attitude towards the impact of the inclusion of AI-based applications in the activity of organisations. The limits and future opportunities of the research are due to the use of a non-representative sample, highlighting the need to deepen this issue using a more complex questionnaire on a representative sample.

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