AUDIT FIRMS IN THE AGE OF AI AND GEN AI: WORKFORCE TRANSFORMATION AND INDUSTRY TRENDS

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Abstract: This study examines the impact of artificial intelligence (AI) and generative AI (GenAI) on the audit profession in the Republic of Serbia. It analyses workforce trends compared to the European Union (EU), revealing a decline in the number of traditional audit practitioners, but an increase in roles requiring AI and IT expertise. Using secondary data and theoretical analysis, the research highlights the willingness of younger auditors to adopt AI, in contrast to the reluctance of older professionals. The findings highlight the need for skill development to maximise the potential of AI while maintaining the critical role of human judgement in complex audit tasks.

Key words: Artificial Intelligence (AI), Generative AI (Gen AI), auditing profession, audit trends, workforce transformation

1. INTRODUCTION

Auditing and accounting activities in Europe are very complex, given that the structures of companies as well as their performance are different, due to the influence of the regulatory environment and the influence of business factors of individual countries. Between 2019 and 2024 the market for this activity is declining at a CAGR of 3% [1]. The Republic of Serbia follows the negative trend of the EU. Between 2019 and 2024, the audit and accounting market in the Republic of Serbia is declining at a CAGR of 3.7% [2]. Because of that, the audit company changed its strategy and is turning to AI (artificial intelligence).

The aim of this research is to analyze trends in the structure of employees within audit firms, with a special emphasis on the impact that the introduction of artificial intelligence (AI) technologies has on this industry. In particular, it is considered to what extent AI affects the transformation of the roles and responsibilities of employees, and whether modern technologies are gradually replacing human work in specific aspects of audit work. This research seeks to provide a comprehensive insight into the dynamics of change within the audit industry in light of technological innovation, while analyzing the challenges and potential benefits that the integration of AI brings to the sector.

The structure of the paper is organized into four main sections. The first section introduces the topic and defines the research objective. The second section explores the application of artificial intelligence (AI) in the auditing profession, analyzing its impact on processes and workforce dynamics. The third section outlines the research methodology, based on secondary data analysis and theoretical literature review. The final section presents the analysis of results, highlighting key changes and challenges facing the auditing profession in the context of technological innovations.

2. AUDITING IN THE AGE OF AI AND GEN AI

Artificial Intelligence (AI) has today positioned itself as one of the key drivers of innovation in the financial sector, providing sophisticated tools for in-depth data analysis, identification of complex patterns and improvement of the strategic decision-making process. Its application allows not only to increase the efficiency and accuracy of information processing, but also to significantly improve the quality of business strategies and competitiveness in the market [3].

Modern technologies are rapidly transforming the business environment, significantly affecting the way organizations function and adapt in various areas. AI brings greater flexibility and efficiency through improved data-driven systems, resulting in more accurate and faster reporting, as well as optimization of business processes. Its application in the accounting and auditing profession is

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fundamentally changing the operating models of financial institutions, moving from traditional paperwork to digitalized systems and software solutions, thereby ensuring greater productivity and transparency in work [4].

Data that can be automated will be created by machines [5] [6]. Globally, AI in finance is used by 71% of companies for financial reporting. Companies expect auditors to have experience and to provide the necessary support, especially in the control and management of activities that use AI technology [7]. Unlike the accounting profession, the auditing profession is still in the early stages of applying artificial intelligence and has not integrated it into business processes as deeply as it could. Western intelligence has not experienced its full potential in auditing, given that of all the technologies available, auditors rely most heavily on data analytics. [8].

"Auditing is a process, not a product." [9]. In which the quality of the audit is influenced by the responsibility, knowledge and experience of the audit expert [10]. The audit covers several levels of complexity. Because of the most complex tasks, it has not reached its full potential in the application of AI, although audit firms are integrating this technology into their tools and processes.

AI automates and simplifies most simple tasks and processes [11]. Gen AI generates a new fotmat based on an existing database and enables rapid access to automation of reviews, generation of first draft reports and more [12]. Automation is recognized at all stages of the audit [13]. Technological advances and automation are shifting focus to audit professionals, shifting activities to more complex tasks such as strategic decision-making and examining complex analyses [11]. Therefore, it is believed that auditors cannot be replaced by AI in the judgmental part of the job [14].

On the other hand, research shows that in the USA 25% of all activities will be automated thanks to the use of AI [15]. Accounting and auditing appear as the most vulnerable professions, which are included in the top 10 professions most exposed to the risk of language modeling [16], that is, from Gen VI based on the Large Language Model (LLM) [17].There are claims that even if AI were to experience full expansion in the auditing profession, it would still not be able to completely replace the auditor, given that the auditing profession requires auditing professional judgment. By using AI, auditors can focus on more complex tasks and automate and perform simple processes faster with the help of AI [4] [18].

The results of the DataSnipper analysis show that 77% of the surveyed auditors and financial experts believe in AI technology, that is, that AI will provide them with a higher level of quality. The results show that trust has increased by 3% compared to the results conducted just one year earlier [19]. The research showed that people under the age of 30 who work in the field of auditing in the Republic of Serbia show a high degree of readiness for the application of artificial intelligence systems and acceptance of the conclusions brought by such systems. However, as the age of the respondents increases, the willingness to adopt these technologies gradually decreases. [20].

The true potential of Generative AI (GenAI) lies in employees who integrate it into their work. Despite 61% of workers using GenAI at least once in the past year, regular use remains limited. To unlock its full potential, leaders must encourage experimentation, address barriers like lack of awareness, and provide training in both AI and essential human skills such as leadership and problem-solving [21]. Gen AI helps users use their resources and time more efficiently, while technology transforms their information or documentation. Tools like Chat GPT can significantly impact worker productivity in a positive direction. Also, it can reduce the gap between employees who are less skilled in relation to employees with more knowledge and skills [17] [22].

3. RESEARCH METODOLOGY

This research is based on a detailed analysis of secondary data sources, including reports from the European Union, namely the European Commission, which includes a review of the consideration of the article of the European Union law for the registration of services. audit and the Republic of Serbia, namely publicly available information from the Chamber of Certified Auditors, on trends and changes in the work of audit professionals. Secondary data sources were selected according to the criteria: (1) relevance to the research topic, namely the research question, (2) credibility and reliability of the data

source, use of official reports for the sectors of responsibility, responsibility of the sectors of responsibility. (3) time frame of the data, use of reports between 2018 and 2024, in order to see the real current picture of the positions of employees in the field of audit in this year.

In addition, the impact of AI was explored through a theoretical analysis of the available scientific literature and professional publications, with the aim of identifying the key changes that this technology is bringing to the audit profession. This combination of data and analytical approaches allows for a comprehensive overview of the dynamics of transformation in this field.

Research question: How do AI and Gen AI affect the analysis of trends in audit professionals in the European Union countries and the Republic of Serbia, with a special focus on changes in the structure of employees in audit firms? Is the decrease in the number of audit practitioners being compensated by the arrival of new experts in the field of information technology and artificial intelligence?

4. ANALYSIS OF RESULTS

The European Commission announced in 2024 that the number of employed experts (audit practitioners) is decreasing in EU countries. Figure 1 shows that the number of employees decreased in 2021 by 6% compared to the number of employees in 2018. While the number of highly qualified employees in audit jobs, such as partner positions in audit jobs, increased by 7% [23]. As of 2024, the Accounting & Auditing industry in Serbia includes 2,211 businesses, reflecting a compound annual growth rate (CAGR) of 0.7% over the period from 2019 to 2024 [2].

	EU registered statutory auditors and audit firms (2018-2021)			Republic of Serbia registered statutory auditors and audit firms (2018-2021)			Republic of Serbia registered statutory auditors and audit firms (2021-2024)		
	2018	2021	Change	2018	2021	Change	2021	2024	Change
Statutory auditors	213.299	200.484	-6%	672	812	21%	812	773	-5%
Statutory auditors employed by or associated as partners or otherwise with an audit firm	47.944	51.388	7%	302	340	13%	340	386	14%
Audit firms	25.11	22.427	-11%	67	75	12%	75	79	5%

Figure 1 - Comparative analysis of registered auditors and audit firms in the European Union and the Republic of Serbia (2018–2024) [23] [24]

The Republic of Serbia is following a growing trend in the number of audit professionals (affiliated as partners) performing highly qualified tasks. It is also following a declining trend in the number of auditors as auditors in the period from 2021 to 2024.

A survey conducted among 17 of the largest audit firms (Big 4 and others) shows that in the US, too, the number of employees in audit jobs is decreasing, and inversely proportionally, the number of employees in AI jobs is increasing.

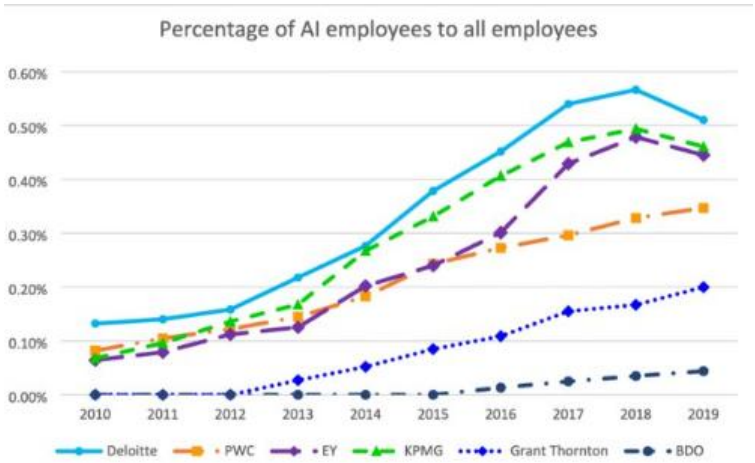

Figure 2 –Percentage of employees in the field of artificial intelligence compared to the total number of employees in leading audit firms (2010–2019) [25]

5. CONCLUSION

Artificial intelligence (AI) is emerging as a key driver of transformation in the auditing profession, enabling automation of routine tasks and optimization of business processes. The research highlights AI's significant impact on reducing the number of traditional auditors while creating opportunities for new experts in IT and AI fields. However, human judgment remains irreplaceable in complex aspects of auditing. The generational gap in adopting new technologies underscores the need for continuous education and workforce adaptation. To ensure the profession's relevance, audit firms must strategically integrate AI, balancing technological innovation with the indispensable human factor.

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