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THE IMPACT OF DIGITALIZATION ON STATUTORY AUDITING IN SERBIA

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Abstract:

Digitalization is profoundly transforming audit operations in Serbia, significantly enhancing the efficiency, accuracy, and speed of audit processes. This paper investigates how the adoption of digital tools and technologies is reshaping traditional audit methodologies, including the integration of data analytics, automated systems, and blockchain technology. It examines the evolving skill requirements for auditors, who must now navigate complex digital environments and address emerging challenges such as cybersecurity threats and the need for continuous improvement. While digitalization offers substantial benefits, such as increased data precision and streamlined workflows, it also necessitates substantial adaptation. Firms must invest in innovative technologies, upgrade their infrastructure, and focus on skill development to fully leverage these advancements and effectively address the associated challenges.

Keywords:

digitalization, audit, Serbia, technology, skills, cyber security.

1. INTRODUCTION

Digitalization is transforming modern business by improving operations, productivity, and adaptability. As part of the Fourth Industrial Revolution, advancements in big data, artificial intelligence (AI), blockchain, and automation are redefining traditional tasks, including auditing.

Auditing, which ensures the integrity of financial statements and identifies risks, is significantly changing due to digitalization. Traditional methods relying on manual verification are increasingly inadequate in an environment with vast amounts of data and the need for swift decision-making. Digital tools enable auditors to analyze large datasets with greater accuracy, detect patterns and anomalies, and minimize human error.

In Serbia, the process of digitalization of audit services is still in the development phase, but it shows significant potential for improving the quality of audit services. According to national and international research, an increasing number of audit firms in Serbia are starting to integrate digital technologies into their operations, recognizing the benefits they offer. However, this transition is not without its challenges. Auditors must continuously upgrade their digital skills, adapt to new tools and techniques, and address issues related to data protection and cybersecurity.

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The aim of this paper is to explore in detail the impact of digitalization on the performance of audit activities in Serbia, with a special emphasis on the following aspects:

1. Changes in work methodology – How digital tools and technologies are transforming traditional audit methods and what original approaches are being implemented.
2. Auditor Skills Requirements - What new skills and knowledge are required for auditors in the digital environment, and how they can effectively adapt to these changes.
3. Benefits of digitalization – How digitalization contributes to increasing the efficiency, accuracy, and security of audit processes.
4. Challenges and risks – What are the main challenges that auditors face in the digital transformation process, including issues related to data protection, cybersecurity, and regulatory frameworks?

The work will rely on a combination of qualitative and quantitative research methods, including the analysis of secondary data, surveys, and interviews with audit experts. The results of the research will provide a comprehensive overview of the current state of digitalization of audit operations in Serbia, identify key challenges and strengths, and propose strategies for further development and improvement of audit practice in the digital age.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. THEORETICAL FRAMEWORK

Digitalization, as the process of integrating digital technologies into business processes, is transforming the ways in which various tasks are performed in organizations. In the context of auditing, digitalization involves the use of advanced analytical tools, automation, and artificial intelligence to enhance audit activities. The theoretical framework of this paper is based on several key concepts:

Theory of Technological Diffusion – According to Rogers' theory of diffusion of innovation, the adoption of modern technologies in organizations occurs in stages: innovators, early adopters, early majority, late majority, and laggards. In the context of auditing, this framework helps to understand how and why the audit firms in Serbia adopt digital technologies.

Theory of Organizational Change – Lenin's model of organizational change (unfreezing, changing, freezing) explains how organizations can successfully implement change, including digitalization. This model provides insight into the stages that audit firms undergo during their digital transformation.

Resource Justification Theory – According to this theory, an organization's competitive advantage stems from the unique resources and capabilities it possesses. In digital auditing, key resources include technology infrastructure, employees' digital skills, and access to relevant data. (Barney, 1991)

2.2. LITERATURE REVIEW

The literature on digitalization highlights the importance of technologies such as big data analytics, artificial intelligence, and blockchain. Research indicates that these technologies enable auditors to analyze large amounts of data more quickly and accurately, allowing them to identify anomalies and risks that may be overlooked by manual methods (Alles, 2015; Casterella et al., 2019).

Big Data Analytics – Big data analytics allows auditors to process and analyze huge data sets, identifying patterns and anomalies that indicate potential risks or anomalies (Vasarhelyi et al., 2015).

Artificial Intelligence – AI is used to automate repetitive tasks, such as transaction analysis and anomaly identification. It also facilitates predictive analytics, which helps auditors proactively identify risks (Brown-Liburd et al., 2015).

Blockchain technology – As a decentralized and transparent technology, blockchain provides auditors with the ability to verify the authenticity and integrity of data in real-time, thereby reducing the need for manual verification (Dai & Vasarhelyi, 2017).

Digitalization requires auditors to acquire new skills and knowledge, especially in the areas of data analytics, programming, and cybersecurity (Byrnes et al., 2018). Studies show that the successful digital transformation of audit firms depends on the continuous education and development of employees' digital skills (Kokina & Davenport, 2017).

The benefits of digitalization in auditing include increased efficiency, accuracy, and process security (Issa et al., 2016). However, challenges such as data protection, cybersecurity, and regulatory requirements represent significant hurdles that need to be overcome (Appelbaum et al., 2017).

Data protection and cyber security – Digitalization increases the risks related to data protection, and it is necessary to establish strong cybersecurity measures to protect confidential customer data (Feng et al., 2014).

Regulatory requirements – The adoption of digital technologies in auditing must be aligned with existing legal and regulatory frameworks, which can pose additional challenges for audit firms (Kokina & Blanchette, 2019).

The challenges and advancements in the digitization of audits in Serbia – This exploration highlights how technology is transforming auditing practices, emphasizing the need for adaptation to maintain efficiency and accuracy in the evolving financial landscape. M. Perić, M. Kaličanin, Z. Kaličanin, and M. Kljajić have addressed the critical issues surrounding the digitization of audits thoroughly examining the challenges and implications for auditing practices in Serbia.

The literature on the digitalization of audit work clearly shows that technology has the potential to significantly improve audit processes. However, successful implementation requires careful planning, continuous education, and adaptation to innovative technologies and regulatory frameworks. This theoretical framework and literature review serve as a basis for further research into the impact of digitalization on auditing in Serbia.

3. METHODOLOGY

The aim of this research was to explore the impact of digitalization on the performance of audit work in Serbia. To achieve this goal, a quantitative method of collecting data through questionnaires was applied. This approach allowed for the collection of specific and relevant information from audit professionals, providing insight into the changes, challenges, and benefits brought by digitalization.

The research was designed as a descriptive study with a quantitative approach. A questionnaire was used as a basic data collection tool, focusing on various aspects of digitalization in auditing.

The research sample consisted of 22 respondents, including auditors and other experts in the field of auditing who worked in different audit firms in Serbia. The aim was to ensure representativeness of the data by including respondents from various parts of the country and with diverse levels of experience.

The collected data were analyzed using descriptive statistical methods, which represented the sample's basic characteristics and the response distribution. The analysis focused on identifying trends and insights regarding the impact of digitalization on audit work.

The research was conducted in compliance with all ethical standards, ensuring the anonymity and confidentiality of all data subjects. The participants were informed of the research's purpose, and their free consent to participate was obtained.

This methodology enabled a comprehensive examination of the impact of digitalization on audit work in Serbia, providing relevant insights that could contribute to the further development and improvement of practice in this field.

4. DATA ANALYSIS

The analysis of the data collected through the questionnaire enables the identification of key trends and insights regarding the impact of digitalization on auditing in Serbia. This analysis will focus on the distribution of responses and the identification of key patterns among respondents, as well as the relationships between different variables.

4.1. ANALYSIS OF DEMOGRAPHIC DATA

The demographic data collected from the first question allow the classification of respondents according to their position in the audit firm and the size of the organization. The results are as follows:

- Partner: 36.4%
- Audit Assistant/Junior: 22.7%
- Audit Supervisor: 18.2%
- Semi Senior/Senior in Revision: 9.1%
- The remaining percentage is equally distributed among the Audit Director, Senior Audit Manager, and Audit Manager.

4.2. THE IMPACT OF DIGITALIZATION ON WORK EFFICIENCY

Most respondents (54.5%) stated that the application of digitalization has significantly improved work efficiency, while 40.9% believe that work efficiency has improved. A minority of respondents (the rest of the percentage) reported that efficiency has remained at a high level without significant changes.

4.3. FACILITATING DATA COLLECTION AND ANALYSIS

Most respondents (81.8%) believe that the use of digital tools and software has significantly facilitated and reduced the time and effort required to collect and analyze substantial amounts of data. A smaller proportion (18.2%) indicate that the relief is moderate.

4.4. THE IMPACT OF DIGITAL TOOLS ON THE ACCURACY OF ANALYSIS

- Significant increase in the accuracy of analyses: 54.5%
- Moderate increase in the accuracy of analyses: 36.4%
- No effect on the accuracy of the analysis: 9.1%

These results indicate that most respondents believe the use of digital tools contributes to an increase in the accuracy of analyses and the identification of irregularities.

4.5. THE EFFECTIVENESS OF AUDITING IN THE FIELD

Digitalization has significantly reduced the time auditors spend in the field, as reported by 59.1% of respondents, while 22.7% of respondents indicated that time has been reduced. A smaller percentage (13.6%) believe that while digitalization has made it easier to perform routine tasks, it has not affected the engagement time in the field. The remaining respondents stated that digitalization had no impact.

4.6. THE IMPACT OF DIGITALIZATION ON AUDIT WORK AND RESULTS

- Improvement in customer control performance and results: 81.8%
- No progress in performance and control results: 13.6%
- Downgraded work and result control due to the need for additional training: remaining percentage

4.7. THE IMPACT OF DIGITALIZATION ON COMMUNICATION WITH CUSTOMERS

Most respondents (68.2%) said that digitalization has significantly facilitated communication with customers and access to information. Further, 22.7% believe that digitalization has facilitated and improved communication with customers, while a smaller proportion (9.1%) believe that there has been no impact.

4.8. THE IMPACT OF DATA DIGITALIZATION AND ANALYTICS ON DATA SECURITY

- Improvement in information security through access controls: 22.7%
- Improvement in information security through data analysis to detect threats: 31.8%
- Improvement in information security through the implementation of internal policies and procedures: 31.8%
- Digitalization and data analytics have no impact on data security: 4.5%
- Reduced security due to increased risk of hacking: 27.3%
- Reduced safety due to the risk of malware: 9.1%

4.9. STRATEGIES FOR THE ADOPTION OF DIGITAL TECHNOLOGY

Respondents were given the opportunity to select multiple strategies applied when adopting digital technology in their audit firms. The results are as follows:

- Detailed analysis of the needs of the audit firm: 36.4%
- Setting goals to achieve with digitalization: 40.9%
- Market research of available digital tools: 27.3%
- Implementation Planning: 31.8%
- Employee Engagement, Training, and Support: 54.5%
- Monitoring and evaluation of achieved results: 27.3%
- Cooperation with experts and consultants: 22.7%

The analysis of the collected data indicates a significant positive impact of digitalization on the efficiency of work, the accuracy of analyses, communication with clients, and data security in auditing operations. However, there are also challenges, such as the increased risk of cyber threats, which must be addressed through adequate strategies and training.

5. RESULTS

The results of the survey show a diverse distribution of respondents according to their positions in audit firms. Partners accounted for 36.4% of respondents, audit assistants/juniors for 22.7%, supervisors for 18.2%, semi seniors for 9.1%, while the remaining percentages were evenly distributed among audit directors, senior managers, and audit managers. Most respondents (54.5%) believe that the application of digitalization has significantly improved work efficiency, while 40.9% cite an improvement in efficiency. The remaining respondents believe that efficiency has remained at a prominent level without significant changes.

When it comes to data collection and analysis, 81.8% of respondents believe that digital tools have significantly facilitated and reduced the time required for these activities, while 18.2% feel that this facilitation is moderate. Additionally, 54.5% of respondents indicated that the use of digital tools has significantly increased the accuracy of the analyses, while 36.4% felt that the accuracy has increased; only 9.1% stated that there was no effect on the accuracy of the analyses.

Digitalization has significantly reduced the time it takes for auditors to engage in the field, according to 59.1% of respondents, while 22.7% believe that the time has been reduced. Additionally, 13.6% of respondents stated that digitalization made it easier to perform rou-

tine tasks but did not reduce time spent in the field. The remaining respondents felt that digitalization had no impact. Regarding the impact of digitalization on the work and results of the audit, 81.8% of respondents cited an improvement in the performance and outcomes of client control, while 13.6% stated that there has been no progress. A smaller percentage of respondents indicated that digitalization has hindered the work and result of control due to the need for additional training.

Digitalization has made it easier to communicate with customers for 68.2% of respondents, while 22.7% report improved communication. A smaller percentage (9.1%) believe that digitalization has not affected communication with customers. Regarding data security, 22.7% of respondents believe that digitalization has improved information security through access controls, 31.8% through data analysis for threat detection, and 31.8% through the implementation of internal policies and procedures. A smaller percentage of respondents (4.5%) believe that data digitization and analytics have no impact on data security, while 27.3% cite reduced security due to the increased risk of hacking, and 9.1% due to the risk of hacking.

Strategies applied in the adoption of digital technology include a detailed analysis of the audit firm's needs (36.4%), setting digitalization goals (40.9%), market research on available digital tools (27.3%), implementation planning (31.8%), employee engagement, training and support (54.5%), monitoring and evaluating the achieved results (27.3%), and cooperation with experts and consultants (22.7%).

The research results indicate a significant positive impact of digitalization on work efficiency, accuracy of analyses, communication with clients, and data security in auditing in Serbia. At the same time, challenges, such as the increased risk of cyber threats, have been identified, underlining the need for adequate strategies and training. The implementation of digital technologies requires careful planning, employee engagement, and continuous monitoring of results to ensure optimal outcomes.

6. DISCUSSION

The research results indicate that digitalization has a notably positive impact on various aspects of auditing in Serbia.

One of the key findings is that digital tools have significantly streamlined data collection and analysis, which is essential for enhancing the quality of audit services. This improvement in the efficiency of data collection allows auditors to focus on data analysis and interpretation, rather than on manual and repetitive tasks. Additionally, the increased accuracy of analyses achieved through digital tools contributes to the identification of irregularities and risks, which is crucial for the reliability of audit reports.

However, despite these advantages, the results indicate that a certain percentage of respondents believe digitalization has not affected the accuracy of analyses or reduced engagement time in the field. This suggests that the implementation of digital tools may not always be equally successful across all firms, or that further training and process adaptation may be necessary to fully realize benefits of digitalization.

The issue of data security presents a significant challenge in the process of digitalization. While many respondents believe that digitalization enhances information security through improved access controls and data analysis for threat detection, a notable percentage also feel that digitalization increases the risk of cyberattacks, such as hacking.

Digital adoption strategies vary among audit firms, but many respondents emphasize the importance of a detailed needs analysis, goal setting, market research of available tools, implementation planning, employee engagement through training and support, as well as monitoring and evaluating the results achieved. These strategies are crucial for the successful implementation of digital technologies and maximizing their benefits.

In conclusion, digitalization represents a valuable opportunity to enhance audit processes and achieve greater efficiency and accuracy. The implementation of digital tools requires careful planning and continuous monitoring to ensure that the desired results are achieved and that organizations adapt to the dynamic digital environment.

7. CONCLUSION

Research has shown that digitalization has a significant positive impact on the performance of audit activities in Serbia. Digital tools and software improve work efficiency, streamline data collection and analysis, increase the accuracy of analyses, and facilitate better communication with clients. Most respondents recognize these advantages, which confirms the importance of digitalization in modernizing audit processes.

However, the research has identified challenges, particularly regarding data security, which poses increased risks of hacking. This underscores the need for ongoing investment in cybersecurity and protective measures.

The research results indicate that, despite the challenges, digitalization can significantly improve audit processes and contribute to better audit outcomes. To achieve this, it is crucial that audit firms recognize the importance of digital transformation and invest in adequate resources and strategies that will enable them to adapt to the dynamic digital environment.

In conclusion, digitalization is a necessary step towards the modernization of auditing operations, aimed at achieving greater efficiency, accuracy, and security. With adequate access and investment, audit firms in Serbia can successfully integrate digital tools into their processes and achieve significant benefits for their business and clients.

One of the main limitations of this study is the small sample size of 22 subjects, which may affect the generalization of the results. While the data collected provide useful insights into the impact of digitalization on the performance of audit work in Serbia, the sample size may limit the reliability and accuracy of the statistical conclusions.

To overcome these limitations in future research, it is recommended to use a larger sample, as well as include different types of audit firms. This approach would provide a more comprehensive understanding of the impact of digitalization on audit work. A larger sample would also allow for a more detailed analysis of the different variables and their interactions, contributing to a deeper understanding of this phenomenon.

Future research on the impact of digitalization on auditing jobs should focus on several key aspects to broaden the understanding of the topic and yield more comprehensive results. First, it is advisable to use a larger and more diverse sample of respondents, including auditors from companies of various sizes and with different levels of experience. This approach would enable researchers to gain deeper insights into the variations in the application of digital tools and their impact on audit processes.

Research should also prioritize longitudinal studies to track the long-term effects of digitalization on audit work. This approach would allow an assessment of the impact of digital tools on efficiency, accuracy, and security, and how auditors adapt their strategies to technological advancements.

Additionally, future research could focus on specific digital tools and software used in auditing, analyzing their strengths and weaknesses in various contexts. Comparative studies and investigations into how audit firms select and implement these technologies could further enhance the understanding of the factors influencing successful digitalization.

Finally, research can also include qualitative methods, such as in-depth interviews with auditors and digitalization experts, to gather deeper insights into subjective experiences and perceptions that quantitative approaches may not fully capture. This approach would help create a more comprehensive framework for understanding the impact of digitalization on audit processes and identifying potential areas for improvement.

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