

The Impact of Artificial Intelligence on accounting in hotels: employees' perceptions in North Macedonia and Serbia

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Abstract:

The information technology development has led to its application in numerous areas of business. Therefore, due to the perceived advantages, the use of different software solutions and applications is becoming more and more frequent. Artificial intelligence (AI) also finds its application in accounting. The aim of this paper is to consider and define the answer to the following question: Does the AI use affect accounting implications in hotels in North Macedonia (NM) and the Republic of Serbia (RS)? The research results point to the existence of significant differences between the use of AI software in accounting in NM and RS. A significant difference was found between implications of AI on Financial Accounting applications in NM and RS in the Receivables and Sales and Inventory. Likewise, a significant difference was determined between implications of AI on Management Accounting applications in NM and RS in the Participate in economic decision-making.

Keywords: Artificial Intelligence, accounting, hotels, North Macedonia, Republic of Serbia

JEL classification: M41, L830, O390

1. Introduction

In contemporary modern business, the employees' new skills come to the fore to a considerable extent. The new skills can especially be acquired and applied with the assistance of information technology (IT) and AI developments. IT brings with it a number of advantages of utilization, and their rapid development has led to the creation of various programs or applications that can be useful, both in people's lives and in business. Significant progress in recent years has been observed in the development and implementation of AI in business operations. The truth is that AI cannot replace emotional intelligence, but it is important to enhance and maintain it in the innovative digital era of business (Smrutirekha et al., 2022b).

Accounting information systems (AIS), as part of business information systems, also follow the development and application in various segments of the company's operations. Starting with the application and development of financial accounting, then through management accounting (as the basic division of accounting in companies), all of which is imbued with the skills of an accountant that they must develop, apply, and upgrade, in order to keep up with the development of IT. All of the above applies to the application of AI in the work of AIS accountants in companies. In modern business, training courses for the job of accountants, which do not include the implementation of AI, may seem outdated. AI is rapidly developing, offering opportunities for application in different areas of business and for different purposes. The impact of AI is further noticeable in the accounting function of companies.

AI is a computer program or software application that can imitate or simulate human behavior. AI is expected to automate many of the routine tasks of accountants, but opinions are divided on its impact on the profession. While some believe that advanced AI will completely replace accountants in the future, others believe that it will increase productivity and reduce costs. We should therefore expect AI to have a significant impact on the accounting profession in the coming period. According to Ng and Alarcon (2021, p. 1-2), AI will not make accountants redundant but will enable them to provide more accurate and timely information, with an eye to the future. As part of the upcoming transformation of the profession, accountants will need to acquire the necessary skills to assess and monitor artificial intelligence-based systems and processes to help organizations achieve higher productivity and other expected AI-related goals. AI is significantly taking over basic functions currently performed by humans due to cost savings and operational efficiency (Das, 2021). Among other things, this article looks at the use of AI

software in accounting. The impact of AI on cash and account reconciliations, receivables and sales, inventory, and accounts payable. Accounts payable were examined in greater detail, with financial accounting in mind. The applications of management accounting are analyzed in the paper with the help of implications of AI in participation in business forecasting, participation in economic decisions, and participation in performance appraisal and evaluation. The applications of management accounting were analyzed using Implications of AI on professional skills, managerial skills, computer skills, analytical skills, decision-making skills, the ability to predict, and reasoning ability.

The rapid development of AI in recent years has increasingly influenced the transformation of the accounting profession globally. However, in countries such as the Republic of Serbia and North Macedonia, the application of AI in accounting is still in its infancy and under-researched. Both countries are in the process of institutional alignment with European standards, with RS already implementing its second Strategy for the Development of Artificial Intelligence for the period 2025–2030, while NM is developing a national ICT strategy that includes a component for the advancement and integration of artificial intelligence.

The Republic of Serbia and North Macedonia were selected as countries for analysis due to similar economic and institutional characteristics, such as the countries' status in development and the process of European integration. Regarding the application of accounting standards in the two observed countries, it can be concluded that their application is uniform, making them comparable in terms of accounting. Both economic systems are characterized by similar challenges and needs for modernization of accounting practices in line with European standards and digital trends. Exploring these examples provides a deeper understanding of the challenges and potential of applying AI in accounting in developing countries. The results obtained can serve as a basis for comparing and improving practices in other economies with similar institutional frameworks.

A special focus of the research is on the hotel industry, which plays a significant role in the economies of both countries and is among the sectors most affected by the COVID-19 pandemic. This crisis has further emphasized the need for digital transformation and more intensive application of modern technologies, especially artificial intelligence. The use of AI is becoming increasingly prevalent in the hotel industry, which indicates a growing interest in its application in various aspects of business. Based on this fact, this paper is designed to examine the use of AI in hotel accounting. The choice of this topic is based on the fact that the application of AI in accounting processes, unlike other areas, is still insufficiently researched and represents a relatively new field of scientific interest.

The paper is structured into several sections. It begins with an overview of the literature on AI in accounting and AI in hotel accounting. This is followed by the development of hypotheses, which serves as an introduction to the research methodology and data sample. The next section presents the research results and discussion, followed by the conclusion.

2. Literature review

In the era of the modern digital economy, accountants need to specialize and use the latest technology (Knežević et al., 2023). AI can be integrated into accounting processes that fully automate data handling and processing. According to a study by Odonkor et al. (2024), the application of artificial intelligence in financial reporting contributes to greater accuracy and efficiency through the automation of routine tasks and the use of predictive analytics to support strategic decision-making. However, challenges include a lack of qualified personnel, privacy concerns, high integration costs, and resistance to change. The authors recommend a balanced approach that invests in training and education and focuses on ethical issues and regulatory compliance. AI leads to numerous benefits and facilitates many activities in accounting, such as data entry, reconciliation, and categorization of transactions, saving accountants time and necessary resources to focus on strategic activities. According to a global survey of 3,000 executives by Sage (Peifer et al., 2022), 50% of accountants surveyed said they need AI automation in their operations to save time. Advanced AI algorithms can process vast amounts of financial data, recognize patterns, spot anomalies, and provide actionable insights in real time. This enables better decision-making and more accurate predictions. (Adelakun et al., 2024).

A study by Hamza et al. (2024) examines the impact of artificial intelligence on the accounting systems of Saudi companies. The key finding is AI's ability to process large amounts of data quickly, thereby improving financial analysis, risk assessment, and forecasting. AI automates tasks such as data entry and report generation, saving time and allowing accountants to focus on more complex analytical tasks while constantly impacting the workforce. By automating routine tasks, AI significantly reduces the likelihood of human error, improves accuracy and frees up valuable time for accountants to focus on more complex and strategic aspects of their work (Adeyelu et al., 2024; Jeremić and Luka, 2024). The introduction of AI in accounting has led to significant changes, such as redesigning accounting procedures, reducing errors in accounting information, increasing efficiency in accounting, and improving the overall structure of accounting pro-

professionals (Zhang et al., 2020). The most prominent applications of AI in accounting include automated accounting document creation and classification, financial analysis and forecasting, intelligent and dynamic financial reporting, automated risk management and compliance review, and financial fraud detection based on big data (Chen et al., 2023). The review of previous research in the field of AI application in accounting and auditing based on the Scopus database and the research conducted by Weheba (2024), and considering the papers published between 1992 and early 2022, concludes that the implementation of AI in accounting and auditing is expected to bring benefits in terms of increased efficiency, productivity, and accuracy, while addressing the challenges related to income and wealth inequality, the decline of traditional jobs, and unskilled workers. The research conducted by Meryem & Said (2024), which uses Scopus as its database and includes 30 research articles from 2010 to 2022, shows that AI technologies have significant potential and are well-suited to accounting activities. In addition, the same study found that improving companies' cybersecurity and the skills of the accounting workforce are among the biggest challenges. The unemployment crisis in the labor market caused by AI technologies poses a threat to the accounting sector. The study by Kureljusic and Karger (2024) aimed to summarize existing knowledge on how AI is used for predictive purposes in financial accounting. The authors collected data from the scientific databases Scopus and Web of Science and extracted a sample of 47 studies. Similarly, the study by Berdiyev et al. (2021) included a database covering the period from 1989 to 2020 and comprising 150 research studies. The results of the meta-analysis show that most studies demonstrate a positive influence of AI systems on accounting and financial processes. Expert systems in business accounting can help with complicated decision-making processes by providing insights derived from historical data and predefined rules (Berdiyeva et al., 2021, p. 10).

A study by Yang (2024) analyzes the application of AI in accounting and its impact on the transformation of accounting functions, and emphasizes the importance of continuous professional development to follow technological trends. The transformation of accounting functions is considered from three aspects (Table 1).

Table 1: The accounting function transformation in the context of AI

Activities	Explanations of transformation.
Change of the accounting function method and focus.	AI is changing the work of accounting, in a way that requires accountants to change their working methods. Specifically, the focus of accounting work is shifting from “post-accounting” to “future planning”; management accounting objects are transitioning from “monetary units” to “multidimensional units”; the content of accounting work is moving from “regular bookkeeping and reporting” to “irregular value analysis and risk control”; financial reporting is moving from “traditional three basic financial statements” to “multidimensional reports, process reports,” etc.
Establishing a mechanism for business and financial integration.	The integration of business and financial departments is gradually being actively improved. Thus, the organizational structure of the company is enhanced, as well as the recognition of the concept and integration of information systems.
Financial management strengthening	Managers are increasingly investing in the development of the important role of management accounting in financial transformation. In this way, the significance attributed to financial management will effectively increase, actively participating in financial management and promoting the improvement of its quality.

Source: Adapted from: Yang, X. (2024). Development and Impact of Artificial Intelligence Technology in the Accounting Industry. *Journal of Computing and Electronic Information Management*, 13(1), p.22.

In recent times, AI has undergone significant development, particularly in the accounting profession, which has shifted its focus from manual paper and pencil entry to computer-based processes (Das, 2021). However, there are conflicting studies. Das’s research (2021) recommends that accountants, with the assistance of AI, should essentially develop their own behaviour and expertise, thereby eliminating certain accounting costs. The implementation of AI in accounting depends on the availability and quality of data. Inaccurate or incomplete data can compromise the efficiency of AI algorithms, leading to incorrect conclusions and decisions. (Adeyelu et al., 2024).

In the future, it is predicted that the accounting industry will play a very powerful role as an interface in every area of accounting (Cho, 2024). Many researchers have wondered, and continue to wonder today: What does the future of the accounting profession look like with the growth of artificial intelligence? AI will not replace accounting professionals entirely; instead, it will shift the emphasis (Greenman, 2017). The use of AI will not completely replace the work of accountants, but it will make it easier (the work will no longer be done manually) (Jaya and Ilahiyah, 2024).

A study by Kurnaz and Buyukipek (2024) analyzed accounting practices in 4- and 5-star hotels in Konya province. The results show that half of the hotels have separate management accounting, while 58.3% use separate cost accounting. Practices such as using actual costs, budgeting, performance evaluation, and strategic management contribute significantly to business success. It was concluded that accountants need to improve their skills through specialized training in order to meet the demands of the labor market (Norzelan et al., 2024). AI is used in manufacturing and retail companies, but it also plays a strategic role in service-oriented companies (Smrutirekha et al., 2022b). AI is used or can be used in hotels for various tasks, departments, employees, and purposes. AI plays a very important role in the hotel industry and is one of the factors that allow property owners to save, eliminate, or reduce human error and provide first-class services (Lad and Zade, 2020; Bešić et al., 2024). Gáll (2023) claims that the implementation of AI in hotels brings numerous benefits that lead to higher guest satisfaction and better competitive positioning in the market. Research conducted by Al-Hyari et al. (2023) examines the impact of AI on guest satisfaction in luxury hotels from a management perspective. The results show that AI is revolutionizing guest satisfaction in the hospitality industry by streamlining services and boosting loyalty. The study highlights that the application of AI in luxury hotels increases competitive advantage, reduces costs through automation, and introduces new technologies that rely less on human labor. The financial benefits of implementing AI in hotels can be seen in better management of finances and costs associated with services (Smrutirekha et al., 2022a).

The research conducted by Norzelan et al. (2024) aimed to explore the adoption of AI technology among managers of financial and accounting entities in the shared services industry, using the TPB (Theory of Planned Behavior) and UTAUT (Unified Theory of Acceptance and Use of Technology). Observing managers and employees in finance and accounting in the shared services industry, they found that perceived performance, attitude, skills, and technical capabilities significantly influence the adoption of AI technologies. The study by Saleh et al. (2021) aimed to investigate the impact of AI on the quality and interpretation of financial reports in hotels in the Aqaba Special Economic Zone in Aqaba, Jordan. Milton (2024) looked at the implementation of AI in the practical management of finances in the hotel sector. With the rapid advancement of AI technology, hotels are increasingly turning to artificial intelligence-based solutions to optimize financial operations, increase revenue, and improve efficiency. AI, including predictive analytics, cost tracking, fraud detection algorithms, and personalized pricing strategies, plays a key role in improving the financial decision-making process. By using these technologies strategi-

cally, hotels can optimize revenue, improve financial transparency, and provide a better experience for their guests to achieve sustainable success in an increasingly digital hospitality industry. It can also be used extensively in the practice of hotel financial management.

When examining the work of researchers dealing with the research topic in RS, we highlight the following: According to Štilić et al. (2023), the benefits of implementing AI in hotels are reflected in improved efficiency, cost savings, and enhanced guest experiences. In 2020, RS defined a strategy for AI development until 2025 (The Government of The Republic of RS, 2019). Currently, a new strategy for the period 2025-2030 is in the final stages of development and adoption (The Government of The Republic of RS, 2025). The research that provides information on the application of AI in accounting in RS is not yet at the level of research conducted on this topic worldwide. The literature and opportunities to study this topic in RS are very scarce. The same applies to research on AI in hotels in RS. When examining the work of researchers dealing with the research topic in NM, we find the following: According to Angeleski and Kostoska (2022), AI can significantly contribute to daily business operations by improving customer service, creating personalised user experiences, increasing production and quality, reducing costs, and increasing revenue, etc. With regard to the limited research in the countries covered in this study, it is worth noting that neither NM nor RS is among the top 20 countries in terms of the number of publications on AI and business management and accounting from 2008 to 2022, according to the research conducted by Khan et al. (2023). As an example of data availability on AI, in one of the EU member states, Slovenia, according to Muren et al. (2023), the adoption of AI is predominantly found among male workers, especially in services that rely heavily on knowledge and in the private sector, particularly in remote or hybrid work environments. AI significantly increases the pace of work, improves product quality, continuously boosts employee performance, and has a positive impact on job satisfaction and well-being. Future expectations show that highly qualified workers are optimistic, while low-skilled workers are more concerned about their income compared to workers from other countries. However, they are less concerned about losing their jobs due to the introduction of AI. Slovenian workers have a largely neutral attitude towards artificial intelligence and its impact on work, although the impact on future wages is uncertain. Nevertheless, AI promises a more efficient and creative labor market through automation and improved human decision making. Eurostat data for Slovenia in 2023 show that the share of companies using AI is 11.3% (Eurostat, 2023). In Slovenia, the use of artificial intelligence increases with company size (Redek et al., 2023, p.106):

- Less than 10 employees: 11.4%
- 10–49 employees: 8.9%
- 50–249 employees: 16.8%
- 250+ employees: 53.2%.

The sectoral accommodation at the EU-27 level in 2021 shows that 5.6% of companies use AI across sectors, while in Slovenia, the situation in 2021 was that 6.7% of companies in the accommodation field used AI across sectors. However, in 2023, this percentage decreased to 5.1%. The specific purposes of AI use in Slovenian companies for accounting, controlling, or finance management in 2021 are not known, but in 2023, it was determined to be 1.7%. Currently, AI adoption remains relatively low, and companies are often cautious about adopting new, potentially expensive solutions with uncertain impact. Although official statistical data indicate that Slovenia is relatively well-positioned in terms of AI usage in companies, visits to companies have revealed that AI usage is still in its early stages, with minimal impact on company performance (Redek et al., 2023).

3. Hypothesis Development

As accounting data is generally based on rules and is well structured, it is ideal for automated analysis using AI models. Financial ratios in particular are crucial for pattern recognition, as they are often interlinked (Soliman, 2008). In addition, the large number of items in the balance sheet, income statement, and cash flow report raises the question of appropriate conclusions without machine learning techniques (Vlad and Vlad, 2021). The study by Saleh et al. (2021) aimed to investigate the impact of AI on the quality and interpretation of financial reports in hotels classified in AQABA, JORDAN, and found, among other things, a correlation between AI and AIS integration. The first research question of the study relates to the use of AI software in accounting in NM and RS. Based on this, the following hypothesis is formulated:

H1: There is a significant difference between the use of AI software in accounting in NM and RS.

According to Jejenywa et al. (2024), AI has brought a significant transformation to accounting, automating routine tasks and improving efficiency. By focusing on data entry and reconciliation, routine accounting activities lead to fewer errors and increased efficiency. Data entry systems are designed to support a variety of data formats and structures and ensure compatibility with a wide range of sources. AI algorithms can analyze large

amounts of data, detect discrepancies, and reconcile accounts automatically, speeding up the reconciliation process and increasing accuracy. Financial reporting, which used to be labor-intensive, is now completely revolutionized by AI-powered automation. According to Das (2021), accounting staff receive data from past transactions. Accounting judgment requires the evaluation of events based on current information to manage the transition that accounting standards provide for the adoption of future laws. Although the use of artificial intelligence in accounting is noticeable, its widespread application is not yet fully realized. The application of AI in financial accounting can reap significant benefits from science and technology. The study by Li (2020) analyzes the impact of AI on future financial accounting and proposes strategies in line with the trend of intelligent accounting development. A study by Umeorah et al. (2024) highlights the application of advanced machine learning algorithms and big data analytics in optimizing inventory management, demand forecasting, and cash flow forecasting. With regard to financial accounting, the paper examines the impact of AI on cash and account reconciliations (Umeorah et al., 2024), receivables and sales (Appel et al., 2020), inventories (Umeorah et al., 2024) and accounts payable (Kanaparthi, 2023). Based on the above, the following specific hypothesis was formulated:

H2: There is a significant difference between the impact of AI on financial accounting applications in NM and RS.

According to Das (2021), management accounting is a forecast to ensure the reality of the predicted results. Most management activities are inextricably linked to the involvement of management accounting, whether in budget preparation, decision-making, final assessment, and evaluation of the manager's work. AI simulates the future environment to support management accounting in performing its tasks and has a major impact on decision-making. Smrutirekha et al. (2022b) provide a detailed overview of the role of AI in revenue management in hotels around the world. The aim of the study by Korobeynikova et al. (2021) is to develop directions for the use of AI in accounting in agricultural organizations, and concludes that AI can become an applied tool for accounting that enhances its traditional capabilities. A review of the critical points in the study by Sreli (2023) points to the potential of artificial intelligence tools to improve decision-making processes in financial analysis, risk assessment, and strategic planning. The results of the research conducted by Vărzaru (2022) show that AI in management accounting enhances innovation, shortens processes, improves information utilization, and is easy to implement while maintaining automation. According to Jejeniva et al. (2024), AI technologies that provide accurate and timely data enable financial professionals to perform

deeper analysis and uncover patterns that contribute to a better understanding. These analytical capabilities extend to scenario analysis, risk assessment, and strategic planning. Accountants with automated systems can perform sophisticated analysis that supports decision-making and enables organizations to make data-driven decisions. Morozova et al. (2020) conclude that AI, along with other digital innovations, can become an applied tool for management accounting. The applications of management accounting are examined in the paper based on the implications of AI in the areas of Participate in business forecasting (Das, 2021), Participate in economic decision-making (Korobeynikova et al, 2021), and Participate in performance appraisal and evaluation (Sreseli, 2023). The above statements lead to the definition of the following specific hypothesis:

H3: There is a significant difference between the impact of AI on management accounting applications in NM and RS.

The accounting profession is changing significantly, with new roles in organizations and the functions they perform. Proponents of the AI revolution see this development as progress and preparation for the future, while opponents believe that many accountants will struggle to adapt to the new working environment (Stancheva-Todorova, 2018). According to Stancheva-Todorova (2018, p. 135), the impact of AI on the accounting profession can be described by its influence on the profession itself, new skills, new tasks and roles, education and training, and the relocation of tasks. The automation of routine accounting tasks not only optimizes processes, but also fundamentally changes the role of accountants within a company (Jejenywa et al., 2024). According to Das (2021), AI systems are replacing difficult, basic accounting work with more valuable professional judgment based on the analysis of large data sets and data mining. The widespread use of AI is gradually reducing the need for accounting staff. As a result, accounting staff are facing a retirement crisis. Technology alone cannot guide the future; it helps businesses make decisions based on their individual experiences. It is important to develop new technologies to improve them on a commercial basis. Accountants use technology to improve their performance. Therefore, the use of AI is also important. Accountant fatigue and errors can be mitigated through the use of AI, as can the prevention and detection of errors. The advent of AI is an opportunity, not a challenge, for the accounting industry and accountants (Das, 2021). Accounting professionals view AI as an understandable tool that is indispensable in accounting practice. When discussing the progress of AI implementation in the Chinese accounting industry, Mohammad et al. (2020) emphasize that accountants should place more emphasis on developing their professional skills and adhering to the ethical standards set by accounting bodies worldwide. Accounting applications were investigated

through the impact of AI on professional skills (Stancu and Dutescu, 2021), managerial skills (Stancheva-Todorova, 2018), computer literacy (Jejenywa et al., 2024), analytical skills (Stancu and Dutescu, 2021), decision-making ability (Das, 2021), predictive ability (Ahmad, 2024), and reasoning ability (Stancheva-Todorova, 2018). The aforementioned factors led to the formulation of the following specific hypothesis:

H4: There is a significant difference between the impact of AI on accounting applications in NM and RS.

4. Research Methodology and Sample Data

A survey of AI and accounting in hotel companies from August to December 2024 was conducted for the research presented in this paper. The research included hotels operating at the end of 2023 in the NM and RS. At that time, 194 hotels were operating in NM (Statistical Yearbook of the Republic of North Macedonia, 2025) and 432 in RS (Statistical Yearbook of the Republic of Serbia, 2025)¹. The questionnaire was sent by e-mail, with addresses obtained by searching the hotels' websites. A total of 108 respondents completed the questionnaire; eight incomplete responses were excluded from further analysis. Fifty respondents from NM completed the questionnaire, resulting in a response rate of 25.77%. The same number of respondents (50) from the RS completed the questionnaire, resulting in a response rate of 11.57%.

The survey is defined based on research by Li and Zgenh (2018), Lee and Tajudeen (2020), Das (2021), Ng and Alarcon (2021), and Umeorah et al. (2024). The validity of the measurement tool in this paper is corroborated by referring to the views of experts and professionals. The respondents' attitudes were evaluated using a Likert scale ranging from 1 to 5 (1-strongly disagree, 5-strongly agree). The first section of the questionnaire, which pertains to basic information about the respondents and the companies they work for, comprises 6 questions. The second part of the questionnaire consists of 3 statements, with the statements about the companies the respondents work for. The third part of the questionnaire talks about using AI, and the fourth part of the questionnaire shows implications of AI (Financial Accounting applications, Management Accounting applications, and Accounting applications, selected applications).

1 Since all units in the population had an equal opportunity to respond, the sampling approach can be described as self-selection within an attempted census.

Table 2: Data on respondents and the companies they work for

	N	%
Gender of respondents		
Male	41	41
Female	59	59
Age of respondents		
Under 35	37	37
35–44	29	29
45–54	21	21
Over 54	13	13
Educational level		
High School	33	33
Bachelor	47	47
Postgraduate	14	14
PhD	6	6
Country		
NM	50	50
RS	50	50
Job position		
Financial Managers	14	14
Internal and Financial Auditors	7	7
Cost Accountants	14	14
Accountants and Assistant	24	24
Other	41	41

	N	%
Job experience		
1–10 years	45	45
11–20 years	34	34
Over 20 years	21	21
Number of beds		
1–100 beds	63	63
101–150 beds	24	24
151–300 beds	7	7
Over 300 beds	6	6
Star category		
5*	10	10
4*	44	44
3*	46	46
Management status		
Private firm	80	80
Member of domestic chain	14	14
Member of international chain	6	6

Source: Authors

As Table 2 illustrates, the majority of respondents are female (59%), aged under 35 (37%). Regarding the educational level of respondents, the majority have completed their bachelor studies (47%) and high school (33%). In order to enable comparison between both countries, it was defined that the number of respondents from both countries be identical. The paper deals with the differences in the attitudes of hotel employees between these countries. According to Job position, the majority of employees are in other jobs that are not offered (41%), but also in Accountants and Assistant (24%). 14% of the respondents are Financial Managers and Cost Accountants, and 7% are Internal and Financial Auditors. The largest number of respondents have 1-10 years of work experience (45%). The respondents are employed in hotel companies that have the greatest number of beds in the category 1-100 beds (63%), are categorized as 3* (46%), and represent Private Firms (80%).

Considering the relevance of employees' perceptions in NM and RS, the distribution of respondents' job experience is presented below. The majority of respondents reported between 1 and 10 years of professional experience (45%), whereas the smallest share indicated more than 20 years of experience (21%)

5. Results of Research and Discussion

Table 3 displays a descriptive analysis of the respondents' views on the perceived implications of AI on financial accounting applications (respondents evaluated the extent to which they agreed with statements about AI impact on specific accounting areas). (For Min and Max in Table 3, a Likert scale was used with possible answers from 1 to 5 (category)).

Table 3: Implications of AI on financial accounting applications

	Min	Max	Mean	Std. Deviation
Cash and Account Reconciliations	1	5	3.03	1.267
Receivables and Sales	1	5	3.09	1.319
Inventory	1	5	3.14	1.333
Accounts Payable	1	5	3.10	1.299

Source: Authors

Respondents agreed most with the statement that AI has an impact (as perceived by respondents) on inventory as part of financial accounting (mean = 3.14). On the other hand, they least agreed with the statement that AI has an impact (perception-based) on cash and account reconciliation as part of financial accounting applications (mean = 3.03). This is in line with the research findings of the perceived individual financial accounting categories on AI in the papers by Appel et al. (2020), Lee and Tajudeen (2020), Das (2021), Kanaparathi (2023), and Umeorah et al. (2024).

Table 4 shows the descriptive statistics of respondents' responses to Implications of AI on Management Accounting applications.

Table 4: Implications of AI on Management Accounting applications

	Min	Max	Mean	Std. Deviation
Participate in business forecasting	1	5	3.19	1.368
Participate in economic decision-making	1	5	3.09	1.223
Participate in performance appraisal and evaluation	1	5	3.19	1.228

Source: Authors

Respondents most strongly agreed with the statement that AI has an impact (as perceived by respondents) on participation in business forecasting and participation in performance appraisal and evaluation as part of management accounting applications (mean = 3.19). On the other hand, they agreed least with the statement that AI has an impact (perception-based) on participation in business decisions as part of management accounting applications (mean = 3.09). Additionally, numerous studies show the aforementioned through the research of individual categories of perceived impacts of Management accounting on AI in works: Li and Zgenh, (2018), Das (2021), Korobeynikova et al, (2021), Vărzaru (2022), Smrutirekha et al, (2022b), Sresel (2023), and Jejeniwa et al., (2024).

Table 5 displays a descriptive analysis of the respondents' views on AI on Accounting applications.

Table 5: Implications of AI on Accounting applications

	Min	Max	Mean	Std. Deviation
Professional ability	1	5	3.07	1.217
Management skills	1	5	3.15	1.274
Computer skills	1	5	3.21	1.305
Analytical capability	1	5	3.20	1.271
Decision-making ability	1	5	3.14	1.318
The ability to predict	1	5	3.19	1.269
Thinking ability	1	5	3.12	1.249

Source: Authors

Respondents agreed most with the statement that AI has an impact on computer skills (perceived impacts) in accounting applications (mean = 3.21). On the other hand, they agreed least with the statement that AI has an impact on professional skills (perception-based) in accounting applications (mean=3.07). The above is consistent with the research of individual categories of perceived Accounting applications on AI in the papers: Li and Zgenh (2018), Stancheva-Todorova, (2018), Mohammad et al., (2020), Das (2021), Stancu and Dutescu, (2021), Ahmad (2024), and Jejenywa et al., (2024).

The results of using AI software in accounting in NM and RS were compared using a t-test of independent samples. This is in line with the research of Lee and Tajudeen (2020) and Saleh et al. (2021). There is a significant difference between the use of AI software in accounting in NM, with a mean difference of -0.26 (p-value = 0.008) (Tables 6 and 7). This test confirmed H1: there is a significant difference in the use of AI software in accounting between NM and RS.

Table 6: T-test results - Use of AI software in accounting in NM and RS

	Country	N	Mean	Std. Deviation	Std. Error Mean
Do you use any AI software in accounting?	NM	50	1.46	.503	.071
	RS	50	1.72	.454	.064

Source: Authors

Table 7: T-test results - Use of AI software in accounting in NM and RS

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Do you use any AI software in accounting?	Equal variances assumed	10.568	0.002	-2.713	98	0.008	-0.26	0.096	-0.45	-0.07
	Equal variances not assumed			-2.713	96.951	0.008	-0.26	0.096	-0.45	-0.07

Source: Authors

The results of perceived Implications of AI on Financial Accounting applications in NM and RS were compared using the t-test of independent samples (Tables 8 and 9). Economic significance is also covered in the works of Appel et al. (2020), Kanaparthi (2023), and Umeorah et al. (2024).

No statistically significant increase was found for Cash and Account Reconciliations and Accounts Payable (p-value=0.135 and 0.167). A statistically significant difference can be observed for Receivables and Sales, with a mean difference of -0.66 (p-value=0.012). Additionally, a statistically significant difference can be observed for Inventory, with a mean difference of RS (p-value=0.035). Hypothesis 2 was partially confirmed, through the determined partially significant difference between perceived Implications of AI on Financial Accounting applications in the categories Receivables and Sales and Inventory in NM and RS.

Table 8: T-test results - Implications of AI on Financial Accounting applications in NM and RS

	Country	N	Mean	Std. Deviation	Std. Error Mean
Cash and Account Reconciliations	NM	50	2.84	1.057	.149
	RS	50	3.22	1.433	.203
Receivables and Sales	NM	50	2.76	1.061	.150
	RS	50	3.42	1.472	.208
Inventory	NM	50	2.86	1.178	.167
	RS	50	3.42	1.430	.202
Accounts Payable	NM	50	2.92	1.140	.161
	RS	50	3.28	1.429	.202

Source: Authors

The perceived implications of AI on Management Accounting applications in NM and RS were examined by applying an independent-samples t-test. Economic significance is also addressed in the works of Das (2021), Korobeynikova et al. (2021) and Sreseli (2023).

There was no statistically significant increase for Participate in business forecasting and Participate in performance appraisal and evaluation (p -value=0.068 and 0.224). A statistically significant difference can be observed for Participate in economic decision-making, with a mean difference of -0,54 (p -value=0.027) (Tables 10 and 11). Hypothesis H3 was partially confirmed, through the established partially significant difference between perceived Implications of AI on Management Accounting applications in Participating in economic decision-making in NM and RS.

Table 9: T-test results - Implications of AI on Financial Accounting applications in NM and RS

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Cash and Account Reconciliations	Equal variances assumed	6.474	0.013	-1.509	98	0.134	-0.38	0.252	-0.88	0.12
	Equal variances not assumed			-1.509	90.14	0.135	-0.38	0.252	-0.88	0.12
Receivables and Sales	Equal variances assumed	8.744	0.004	-2.572	98	0.012	-0.66	0.257	-1.169	-0.151
	Equal variances not assumed			-2.572	89.074	0.012	-0.66	0.257	-1.17	-0.15
Inventory	Equal variances assumed	2.977	0.088	-2.137	98	0.035	-0.56	0.262	-1.08	-0.04
	Equal variances not assumed			-2.137	94.544	0.035	-0.56	0.262	-1.08	-0.04
Accounts Payable	Equal variances assumed	4.076	0.046	-1.392	98	0.167	-0.36	0.259	-0.873	0.153
	Equal variances not assumed			-1.392	93.386	0.167	-0.36	0.259	-0.873	0.153

Source: Authors

Table 10: T test results - Implications of AI on Management Accounting applications in NM and RS

	Country	N	Mean	Std. Deviation	Std. Error Mean
Participate in business forecasting	NM	50	2.94	1.185	.168
	RS	50	3.44	1.500	.212
Participate in economic decision-making	NM	50	2.82	.962	.136
	RS	50	3.36	1.396	.197
Participate in performance appraisal and evaluation	NM	50	3.04	1.009	.143
	RS	50	3.34	1.409	.199

Source: Authors

Table 11: T test results - Implications of AI on Management Accounting applications in NM and RS

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Participate in business forecasting	Equal variances assumed	6.137	0.015	-1.849	98	0.067	-0.5	0.27	-1.037	0.037
	Equal variances not assumed			-1.849	93.008	0.068	-0.5	0.27	-1.037	0.037
Participate in economic decision-making	Equal variances assumed	9.931	0.002	-2.252	98	0.027	-0.54	0.24	-1.016	-0.064
	Equal variances not assumed			-2.252	86.985	0.027	-0.54	0.24	-1.017	-0.063
Participate in performance appraisal and evaluation	Equal variances assumed	9.422	0.003	-1.224	98	0.224	-0.3	0.245	-0.786	0.186
	Equal variances not assumed			-1.224	88.821	0.224	-0.3	0.245	-0.787	0.187

Source: Authors

An independent-samples t-test was used to compare the perceived implications of AI for accounting applications in NM and RS. The issue of economic significance is also discussed in the works of Stancheva-Todorova (2018), Das (2021), Stancu and Dutescu (2021), Ahmad (2024), and Jejeniwa et al. (2024).

The results indicate no statistically significant increase for all observed categories of Accounting applications (p-value= 0.164, 0.137, 0.594, 0.273, 0.227, 0.182, and 0.110) (Table 12 and 13). Hypothesis H4 was rejected as no significant difference was found between perceived Implications of AI on Accounting applications in NM and RS.

Table 12: T-test results - Implications of AI on Accounting applications in NM and RS

	Country	N	Mean	Std. Deviation	Std. Error Mean
Professional ability	NM	50	2.90	1.035	.146
	RS	50	3.24	1.364	.193
Management skills	NM	50	2.96	1.124	.159
	RS	50	3.34	1.394	.197
Computer skills	NM	50	3.28	1.246	.176
	RS	50	3.14	1.370	.194
Analytical capability	NM	50	3.06	1.132	.160
	RS	50	3.34	1.394	.197
Decision-making ability	NM	50	2.98	1.116	.158
	RS	50	3.30	1.488	.210
The ability to predict	NM	50	3.02	1.059	.150
	RS	50	3.36	1.439	.204
Thinking ability	NM	50	2.92	1.027	.145
	RS	50	3.32	1.421	.201

Source: Authors

Table 13: T-test results - Implications of AI on Accounting applications in NM and RS

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Professional ability	Equal variances assumed	5.732	0.019	-1.404	98	0.163	-0.34	0.242	-0.82	0.14
	Equal variances not assumed			-1.404	91.392	0.164	-0.34	0.242	-0.821	0.141
Management skills	Equal variances assumed	4.851	0.03	-1.5	98	0.137	-0.38	0.253	-0.883	0.123
	Equal variances not assumed			-1.5	93.788	0.137	-0.38	0.253	-0.883	0.123
Computer skills	Equal variances assumed	0.488	0.487	0.534	98	0.594	0.14	0.262	-0.38	0.66
	Equal variances not assumed			0.534	97.127	0.594	0.14	0.262	-0.38	0.66
Analytical capability	Equal variances assumed	3.708	0.057	-1.102	98	0.273	-0.28	0.254	-0.784	0.224
	Equal variances not assumed			-1.102	94.047	0.273	-0.28	0.254	-0.784	0.224
Decision-making ability	Equal variances assumed	8.708	0.004	-1.217	98	0.227	-0.32	0.263	-0.842	0.202
	Equal variances not assumed			-1.217	90.857	0.227	-0.32	0.263	-0.842	0.202
The ability to predict	Equal variances assumed	10.03	0.002	-1.345	98	0.182	-0.34	0.253	-0.842	0.162
	Equal variances not assumed			-1.345	90.038	0.182	-0.34	0.253	-0.842	0.162
Thinking ability	Equal variances assumed	8.82	0.004	-1.614	98	0.11	-0.4	0.248	-0.892	0.092
	Equal variances not assumed			-1.614	89.23	0.11	-0.4	0.248	-0.893	0.093

Source: Authors

The comparative analysis of AI implementation in accounting between NM and RS, based on independent samples t-tests, indicated both statistically significant and non-significant differences across the examined categories. A significant disparity was observed in the overall use of AI software in accounting, with a higher level of adoption reported in RS ($p=0.008$). In the domain of financial accounting applications, significant differences emerged in receivables, sales, and inventory ($p=0.012$; $p=0.035$), whereas no significant variation was recorded for cash reconciliations and accounts payable. Within management accounting, a significant difference was confirmed only in participation in economic decision-making ($p=0.027$), while no differences were identified in forecasting and performance appraisal. Furthermore, the analysis did not reveal statistically significant differences in accounting-related competencies, such as professional ability, management skills, analytical capability, and related attributes.

6. Conclusion

AI has led to numerous advantages that theorists and practitioners will increasingly discuss in the future and will progressively measure the impact of AI on various aspects of work within a company. One of these aspects is undoubtedly the field of accounting and related activities. Given the traditional division of accounting into financial and managerial accounting, this division has also been used in monitoring the impact of AI on specific parts of Financial Accounting and Management Accounting. Additionally, due to the significance of accountant characteristics, accountant implications have been included, and the impact of AI has been explored. The aforementioned has been examined by assessing whether there are differences between countries, using examples from NM and RS.

The research results indicate significant differences in the use of AI software in accounting between NM and RS. Additionally, significant differences were found in the implications of AI on financial accounting applications in the areas of Receivables and Sales, as well as Inventory. Similarly, there was a significant difference in the implications of AI on management accounting applications in the area of participating in economic decision-making. There is no significant difference in the implications of AI on Accounting applications between NM and RS in the observed categories in this paper.

The novelty of this paper is reflected in the consideration of AI in accounting, especially in the hotel industry, and the comparative analysis of attitudes between the two countries. The theoretical implications of the paper are reflected in the scope of literature and the consideration of the broad impact of AI on accounting, as well as AI on accounting in the hotel industry. The practical implications are reflected in the possibility of apply-

ing the results in improving the efficiency of financial reporting and developing digital computer competencies. While the results cannot be fully generalized due to the limited sample, they represent a good basis for future research in other sectors and a broader international context. This research can serve as a starting point for investigating the use of AI in accounting and for comparisons across countries. In this direction, the sample of countries and respondents can be expanded. Similarly, we can consider more characteristics within the observed categories of Financial Accounting, Management Accounting, and Accounting applications. The limitations of the study are represented by the sample of two countries used in the research - NM and RS, the sample of 50 respondents per country for research is relatively limited, as well as the inclusion of the hotel sector in these countries. Comparative analyses of different sectors and industries can provide significance and influence the dissemination of the results of this research.

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