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The Impact of Artificial Intelligence on Auditing and Accounting Professions: Opportunities for SMEs in Palestine

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Abstract

This study investigates AI's impact on these professions within the Palestinian SME sector, emphasizing its role in optimizing operational efficiency and decision-making processes. The rapid advancement of artificial intelligence (AI) has profoundly reshaped professional domains, particularly accounting and auditing. Given the increasing integration of AI into financial operations, a nuanced understanding of its implications for auditing accuracy, regulatory compliance, and overall financial governance is imperative. Anchored in the theoretical frameworks of digital transformation and AI-driven decision support systems, this research assesses AI's capacity to enhance audit quality and financial reporting precision while examining SMEs' adaptive strategies in a technologically evolving landscape. Using a quantitative methodology, data were collected from 50 auditors, with 30 valid responses analyzed through logistic regression and Pearson correlation. The findings reveal a strong positive correlation between AI adoption and improvements in auditing and accounting performance, particularly in terms of accuracy, efficiency, and risk management. However, inadequate infrastructure and limited AI expertise remain significant challenges. These findings underscore the critical need for targeted investments in AI literacy, regulatory adaptation, and infrastructural development to fully harness AI's potential. This study contributes to the growing discourse on AI in financial professions and highlights the need for strategic policies to optimize AI implementation in SMEs.

Keywords:
Artificial Intelligence, Accounting, Auditing, SMEs, Palestine.
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1. Introduction

Artificial intelligence (AI) has become integral to accounting and auditing, improving efficiency and fraud detection. This study examines AI's impact on small and medium-sized enterprises (SMEs) in Palestine, addressing both its advantages and implementation challenges. As AI systems continue to evolve, their adoption in accounting and auditing practices is becoming increasingly crucial for businesses striving to maintain competitiveness in a technology-driven economy (Sayed, 2020). The digital transformation of accounting and auditing, which began in the late 1990s, initially aimed to enhance efficiency, regulatory compliance, and cost reduction (Manson et al., 2001). AI-driven automation has extended AI's role beyond digitalization, allowing accountants to process financial data faster and more accurately. This development necessitates a thorough examination of AI's impact on auditing and accounting, particularly in emerging economies where small and medium-sized enterprises (SMEs) play a vital role in economic sustainability.

AI is relevant to accounting and auditing because it enhances decision-making and optimizes financial operations. SMEs, which form the backbone of many economies, including Palestine, face significant challenges in maintaining financial transparency, regulatory compliance, and operational efficiency (Anbar & Abulhussei, 2016). AI-driven auditing tools enhance data analysis, improve fraud detection, and streamline compliance. Additionally, AI-powered decision support systems enable auditors and accountants to provide more accurate insights, reducing the risk of financial misstatements and errors. As financial systems become more automated, SMEs must adopt AI to stay competitive. However, barriers such as inadequate technological infrastructure, expertise limitations, and ethical considerations require a comprehensive examination of how SMEs in Palestine can effectively integrate AI into their accounting and auditing frameworks.

Existing literature highlights AI's significant impact on auditing and accounting, yet several research gaps persist. Othman and Jamil (2012) emphasize AI's potential in improving internal auditing practices, particularly in enhancing professional care, risk management, and audit planning. Similarly, Anbar and Abulhussei (2016) provide empirical evidence of AI's effectiveness in improving audit quality and efficiency. Luo et al. (2018) further discuss AI's transformative influence on CPA auditing, proposing strategic approaches for leveraging AI in decision-making processes. Despite these findings, research remains limited regarding the specific challenges and opportunities associated with AI adoption in SMEs, particularly in developing regions such as Palestine. While several studies (Ukpong et al., 2019; Al-Jaber, 2020; Ahmed, 2022) acknowledge AI's potential to enhance financial operations, concerns regarding data security, regulatory frameworks, and workforce adaptation persist. Addressing these gaps is essential to developing AI-driven strategies for SMEs.

This study is based on AI-driven financial transformation and SME sustainability. AI in accounting and auditing is often analyzed through technological adaptation theories, such as the Technology Acceptance Model (TAM) and the Resource-Based View (RBV). These frameworks highlight factors influencing AI adoption and its impact on organizational competitiveness. TAM posits that AI adoption is influenced by perceived usefulness and

ease of use, factors that significantly impact SMEs' willingness to integrate AI-driven financial solutions. Meanwhile, RBV emphasizes AI's strategic importance as a competitive resource that enhances an organization's capabilities and fosters long-term sustainability (Al-Shuwaiman, 2021). By aligning AI implementation with these theoretical perspectives, this study provides a structured framework for understanding AI's influence on accounting and auditing functions in SMEs. AI's incorporation in financial decision-making, risk assessment, and compliance mechanisms will be analyzed to determine its efficacy in improving financial transparency and operational efficiency.

This study aims to examine AI's impact on the accounting and auditing professions in Palestine, with a particular focus on SMEs. The primary objective is to evaluate how AI-driven automation influences financial reporting accuracy, auditing efficiency, and risk mitigation strategies. Additionally, this study explores the extent to which AI adoption enhances SMEs' ability to comply with evolving regulatory standards and maintain a competitive edge in the digital economy. The findings are expected to bridge gaps in existing research by providing empirical insights into AI's role in shaping auditing and accounting practices. By identifying both the benefits and challenges associated with AI integration, this study contributes to the broader discourse on AI's implications for financial sustainability in SMEs.

Based on the theoretical framework and prior research, three key hypotheses are formulated. The first hypothesis (H1) postulates that AI does not have a significant impact on the accounting profession within the SME sector in Palestine. The second hypothesis (H2) suggests that AI does not significantly influence the auditing profession within SMEs. Lastly, the third hypothesis (H3) posits that SMEs face substantial obstacles in implementing AI within their accounting and auditing frameworks. These hypotheses will be tested using a structured research methodology, providing empirical insights into AI's impact on financial practices. Statistical analysis will be employed to validate these hypotheses and assess the correlation between AI adoption and SMEs' financial performance.

The significance of this study lies in its potential to inform policymakers, industry stakeholders, and SME practitioners about AI's transformative role in accounting and auditing. As businesses increasingly rely on AI for financial decision-making, regulatory bodies must establish frameworks that ensure ethical AI deployment, data security, and workforce adaptation. Additionally, SMEs require targeted strategies to overcome barriers to AI adoption, including access to technological resources and AI literacy among financial professionals. This study contributes to the growing discourse on AI integration in financial professions by offering policy recommendations, practical guidelines, and empirical insights that support SMEs in harnessing AI's potential. By addressing both the opportunities and challenges, this research aims to enhance financial sustainability and operational efficiency in SMEs, fostering economic resilience in the digital era.

2. Methods

This study examines the impact of artificial intelligence (AI) on auditing and accounting practices, with a particular emphasis on its role in enhancing financial decision-making

within Palestinian SMEs. AI has transformed financial management by automating complex auditing processes, improving data accuracy, and optimizing risk assessment strategies (Anbar & Abulhussei, 2016). As AI becomes increasingly integrated into global financial systems, assessing its applicability to SMEs is crucial, particularly in developing economies where technological adoption faces infrastructural and regulatory constraints (Othman & Jamil, 2012). Given the vital role of SMEs in Palestine's economy, AI's impact on auditing and accounting efficiency is crucial for fostering financial stability and ensuring regulatory compliance.

This study focuses on SMEs due to their economic importance and financial constraints compared to large corporations. Unlike multinational firms, SMEs often operate with limited technological resources, making their transition to AI-driven auditing and accounting practices a subject of growing academic interest (Luo et al., 2018). While AI adoption in large financial institutions has been extensively studied, research on its implications for SMEs—particularly in emerging markets such as Palestine—remains limited (Ahmed, 2022). This study aims to bridge this gap by systematically analyzing AI's effects on audit quality, compliance effectiveness, and cost-efficiency in SMEs. To achieve this objective, the study focuses on Palestinian SMEs that have either implemented AI-based auditing systems or operate within sectors where AI-driven financial tools are increasingly adopted. Key variables under examination include financial performance, audit accuracy, fraud detection efficiency, and regulatory compliance. By providing empirical insights into the extent to which AI contributes to operational improvements, this research offers a nuanced understanding of AI's role in enhancing auditing and accounting practices within SMEs, particularly in Palestine.

This study employs a quantitative research design utilizing a survey method to systematically assess AI's influence on auditing and accounting performance among SMEs in Palestine. A quantitative approach is well-suited for examining relationships between measurable variables, enabling statistical validation of AI's impact on financial accuracy, operational efficiency, and regulatory compliance (Ukpong et al., 2019). The descriptive survey method facilitates structured data collection from auditing and accounting professionals, ensuring that the findings reflect industry trends and SME-specific challenges (Al-Jaber, 2020). The choice of a quantitative survey design is justified by its capacity to capture objective financial and operational metrics, minimizing researcher bias while allowing for broader generalization of findings (Kovalenko, 2021). Given the complexity of AI implementation in financial auditing, this methodology provides a structured framework for assessing AI's effects on audit quality, fraud detection, and cost-efficiency. To conduct the study, a structured questionnaire was developed and distributed to 50 auditors and accountants working with SMEs in Palestine. The questionnaire consisted of 33 items measured using a 5-point Likert scale (ranging from strongly disagree to strongly agree). The survey covered key areas such as AI adoption in financial auditing, its role in fraud detection, efficiency in regulatory compliance, and perceived cost-benefit impacts. The data collection process spanned four weeks, ensuring an adequate response rate and representative insights from SME financial practitioners.

The study draws upon both primary and secondary data sources to provide a comprehensive understanding of AI's impact on auditing and accounting in SMEs. Primary data were obtained through structured surveys targeting financial professionals working with SMEs in Palestine, ensuring the study captured practical insights regarding AI adoption (Ahmed, 2023). Direct engagement with industry professionals allowed for an assessment of real-world challenges and opportunities associated with AI-driven auditing systems. Secondary data sources included peer-reviewed journal articles, financial reports, and regulatory guidelines that contextualize AI's role in modern financial auditing. Literature from academic databases such as Scopus, Web of Science, and Google Scholar was extensively reviewed to position the study within the broader discourse on AI adoption in finance (Hamouda, 2022). Additionally, reports from financial regulatory authorities were analyzed to assess existing policies and frameworks governing AI integration in auditing and accounting. The selection of sources was based on relevance, credibility, and recent publication dates, given the rapid advancement of AI technology. Recent publications (within the past five years) were prioritized to ensure that the study reflects contemporary trends in AI adoption (Al-Sayyed, 2021). By integrating both primary and secondary data, the study establishes a robust methodological foundation for analyzing AI's implications for SMEs in Palestine.

A structured survey method was employed to collect quantitative data on AI adoption in auditing and accounting. This format ensures consistency in responses, allowing for standardized comparisons across participants (Chabon, 2022). Given that financial decision-making relies on quantifiable performance metrics, survey responses provided measurable insights into AI's impact on financial accuracy, efficiency, and risk assessment.

The survey was administered electronically via email and online platforms to enhance accessibility and improve response rates. To ensure validity and reliability, the questionnaire underwent a pilot testing phase with 10 auditors, allowing for refinement before full-scale distribution. Feedback from the pilot phase informed modifications to improve clarity and relevance. Upon finalization, the survey was distributed to 50 auditors and accountants, yielding 30 valid responses, a response rate conducive to meaningful statistical analysis. Additionally, document analysis was conducted to complement survey findings. Reports from international financial institutions and AI service providers were reviewed to identify trends in AI adoption for SMEs. This dual approach—combining survey responses with document analysis—ensures a comprehensive evaluation of AI's role in accounting and auditing practices.

Statistical analysis techniques provided a systematic framework for evaluating the influence of AI on financial auditing practices. The data were processed using SPSS

Version 25, with Pearson correlation analysis assessing the strength of associations between AI implementation and audit quality, while logistic regression estimated the probability of AI-driven efficiency improvements in SMEs (Qiu, 2021). The analysis began with organizing raw survey responses, categorizing them into key themes to identify dominant trends in AI adoption. Correlation and regression models were then applied to measure AI's impact on financial transparency, fraud detection, and compliance adherence. Finally, the findings were examined within the context of existing AI literature, linking statistical results to theoretical perspectives on financial governance and technological adaptation (Al-Akour, 2022). Results were presented in quantitative summaries, including tables and graphical visualizations, to enhance clarity and accessibility. Ethical considerations, such as data confidentiality and respondent anonymity, were maintained in accordance with international research ethics guidelines. The methodological approach ensures replicability, validity, and reliability, offering valuable insights into AI's role in auditing and accounting for Palestinian SMEs.

3. Results and Discussion

Results

The results related to each research question and hypothesis are presented separately to ensure clarity and coherence. The following table presents the demographic characteristics of the study sample, comprising auditors from Hebron Governorate:

Table 1. Demographic Characteristics of the Study Sample

Variable	Category	Number	Percentage
Sex	Male	24	79%
	Female	6	21%
Total		30	100%
Job Title	Sub-auditor	23	76%
	Lead Auditor	7	24%
Total		30	100%
Years of Service	Less than 5 years	12	40.5%
	5–10 years	8	26.5%
	More than 10 years	10	33%
Total		30	100%

Source: Processed Data 2024

The data indicate that the majority of respondents are male (79%), while female auditors constitute 21% of the sample. Additionally, most participants (76%) hold the position of sub-auditor. Regarding experience, 40.5% have less than five years of service, while 33% have more than ten years of experience. This study highlights AI's transformative role in improving efficiency and quality in accounting and auditing. AI significantly contributes to expediting task completion and improving the accuracy and reliability of financial reports. These results lead to the rejection of hypotheses H1 and H2, which posited no significant impact of AI on these professions. The data clearly demonstrate that AI

integration enhances accuracy and enables the efficient execution of complex tasks, reinforcing its status as a pivotal technological advancement.

Moreover, AI-powered computerized systems have been shown to strengthen internal control mechanisms, allowing accountants to perform their responsibilities with greater speed, precision, and ease. This finding aligns with previous research, which underscores AI's potential to elevate professional standards and efficiency in accounting and auditing.

The study emphasizes that providing auditors with essential IT skills and foundational knowledge significantly improves auditing effectiveness. The data support the assertion that training and continuous skill development are critical in maximizing AI's potential, ensuring auditors are well-prepared to leverage AI-driven tools in their professional practice. Despite the evident advantages, the study confirms hypothesis H3, identifying several challenges that hinder the full-scale adoption of AI in accounting and auditing. Key obstacles include the absence of comprehensive principles, regulatory frameworks, and ethical guidelines governing AI use in financial practices. These barriers underscore the urgent need for well-defined regulatory policies and ethical considerations to ensure responsible AI integration in accounting and auditing.

While AI offers substantial benefits in improving efficiency and work quality in accounting and auditing, addressing the existing challenges is essential for its widespread adoption. Strategies to facilitate AI implementation should prioritize structured training programs, the development of comprehensive guidelines, and the establishment of ethical standards to support the responsible and effective use of AI in SMEs. By providing empirical insights into AI's contributions to operational improvements, this research offers a nuanced understanding of AI's role in enhancing auditing and accounting practices, particularly in Palestine.

Discussion

This study investigates the impact of artificial intelligence (AI) on auditing and accounting practices within Palestinian SMEs, emphasizing its role in enhancing financial decision-making. The findings reveal that AI significantly influences these professions, contradicting the initial hypothesis (H_1) that proposed no impact on the accounting field. This result aligns with prior research (Ahmed, 2023; Hamouda, 2022), which highlights AI's ability to streamline data analysis, improve accuracy, and minimize human errors in accounting processes.

Similarly, the second hypothesis (H_2), which suggested no significant effect of AI on auditing, is not supported. The study demonstrates that AI enhances auditing by facilitating comprehensive data analysis, accelerating audit procedures, and improving anomaly detection. These findings corroborate earlier studies (Ahmed, 2023; Anbar & Abulhussei, 2016), which emphasize AI's role in automating routine tasks and improving the accuracy and reliability of audit practices. By leveraging AI, auditors can provide deeper insights, enhance fraud detection, and ensure compliance with regulatory standards.

The research also confirms the third hypothesis (H3), identifying key challenges in AI adoption within SMEs. Major obstacles include limited access to advanced technological

infrastructure, financial constraints, and inadequate training among professionals. These barriers hinder the full-scale implementation of AI, echoing findings from Al-Sayyed (2021) and Chabon (2022), who emphasize the necessity of regulatory frameworks and ethical guidelines to govern AI's application in accounting and auditing.

Despite these challenges, the study underscores AI's transformative potential in enhancing financial management within SMEs. Unlike large enterprises, SMEs often lack the resources needed to seamlessly integrate AI-driven solutions. Addressing this gap requires strategic initiatives such as partnerships with technology providers, targeted training programs, and regulatory support (Al-Jaber, 2020; Ukpong et al., 2019). By adopting these approaches, SMEs can leverage AI's capabilities to optimize efficiency, improve decision-making, and maintain competitive advantage in the market.

Furthermore, the findings suggest that a structured AI adoption strategy can yield long-term benefits, including enhanced operational efficiency and financial sustainability. To fully realize these advantages, stakeholders—policymakers, industry leaders, and financial institutions—must play a proactive role in supporting AI integration through funding, capacity-building initiatives, and the development of comprehensive policy frameworks (Al-Akour, 2022; Ahmed, 2022). These efforts will enable SMEs to overcome adoption barriers and harness AI's full potential within the accounting and auditing domains.

This study thus affirms that AI significantly enhances auditing and accounting practices in Palestinian SMEs while acknowledging the challenges that must be addressed for effective implementation. Overcoming these barriers through strategic interventions will pave the way for more efficient and effective financial management. The insights from this research contribute to the broader discourse on AI adoption in SMEs and serve as a foundation for future studies exploring AI's role in financial systems (Kovalenko, 2021; Qiu, 2021).

4. Conclusion

This study examines the impact of artificial intelligence (AI) on auditing and accounting within the SME sector in Palestine. The findings confirm that AI significantly enhances audit quality, accounting accuracy, and process efficiency, providing empirical evidence of AI's transformative role in financial management. Statistical results indicate a strong positive correlation between AI adoption and audit performance, with a Pearson correlation of 93.3% ($p = 0.000$) for audit quality, 95.6% ($p = 0.000$) for complex audit execution, and 93.5% ($p = 0.000$) for operational efficiency. These findings reinforce the argument that AI-driven automation improves financial reporting accuracy, fraud detection, and regulatory compliance. Furthermore, AI enables accountants and auditors to perform complex analytical tasks with greater precision and speed, reducing human error and increasing cost-effectiveness. By integrating AI-driven decision-making tools, SMEs can enhance financial transparency and sustainability, positioning themselves more competitively in an increasingly digitalized economic landscape.

The significance of these findings extends beyond operational improvements in accounting and auditing. This study contributes to academic discourse on AI in financial professions by addressing a research gap concerning AI's role in SME financial ecosystems, particularly in developing economies. While most research focuses on AI in large

corporations, this study examines SME-specific challenges, including infrastructure gaps, budget constraints, and limited AI literacy. These challenges align with the findings of Al-Sayyed (2021) and Chabon (2022), who emphasize the necessity of AI regulatory frameworks and training programs to enhance professional competency. Additionally, this study highlights the importance of aligning AI-driven financial solutions with SMEs' operational needs and strategic goals to ensure sustainable and ethically responsible AI adoption. The study also offers practical implications for policymakers, industry regulators, and business leaders, advocating for structured AI integration policies, digital finance incentives, and AI-capacity-building programs tailored for SMEs.

Despite its valuable contributions, this study has certain limitations that suggest directions for future research. The sample size (30 auditors) is relatively small, limiting the generalizability of findings. Future studies should expand the sample across diverse SME sectors and multiple geographic locations to strengthen external validity. Additionally, while this study focused on AI's impact on financial process automation, future research could explore the ethical, regulatory, and cybersecurity dimensions of AI in auditing. Comparative studies between developed and developing economies could further elucidate regional disparities in AI adoption and financial digitalization trends. Moreover, AI's role in Islamic accounting and Shariah-compliant auditing remains an underexplored area, presenting opportunities for future scholarship in Islamic business and economics. Addressing these areas in future research can contribute to a more inclusive, secure, and ethically sustainable AI-powered financial ecosystem.

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References

Ahmed, Saeed Abdel Azim. (2023). The impact of cloud artificial intelligence techniques on improving the quality of audit evidence in light of the associated auditing standards. Scientific Journal of Financial and Commercial Studies and Research, 4(1).

Ahmed, H. (2022). Artificial Intelligence (AI) in Accounting & Auditing: A Literature Review. Open Journal of Business and Management, 10(1)., Tanta University, No1.

Al-Akour, Samer Muhammad Hussein. (2022). The impact of artificial intelligence on reducing costs in Jordanian industrial companies listed on the Amman Stock Exchange [Unpublished master's thesis]. International Islamic Sciences University.

Al-Jaber, G.M.O. (2020). The Impact of Artificial Intelligence on the Efficiency of Accounting Systems in Jordanian Banks, Unpublished Master Thesis, Accounting Department, Middle East University, Amman, Jordan

Al-Sayyed, S. M., Al-Aroud, S. F., & Zayed, L. M. (2021). The effect of artificial intelligence technologies on audit evidence. Accounting, 7, 281–288. http://dx.doi.org/10.5267/j.ac.2020.12.003

Al-Shuwaiman, Nizar bin Saleh. (2021). The role of international accounting standards for

accounting education in improving the quality of accounting as a profession. Scientific Journal of Trade and Finance, 41(1).

Anbar, S. G., & Abulhussei, M. (2016). Auditing Quality According to Artificial Intelligence Applied Research on a Sample of Regulatory Bodies Working in the Federal Board of Supreme Audit-2016. (Journal?) http://dx.doi.org/10.13140/RG.2.2.27487.82080

Chabon, Abu Bakr Muftah, Al-Arabi, Aisha Muhammad. (2022). The impact of applying international accounting education standards on the quality of the accounting and auditing profession in light of the requirements of the labor market in Libya. Journal of Economics and Business Studies, (2).

Hamouda, Manal Muhammad. (2022). The Impact of Artificial Intelligence Technologies on the Tasks of the Management Accountant: A Field Study on Saudi Industrial Companies. Ramah Journal for Research and Studies, Center for Research and Development of Human Resources, (74).

Kovalenko, S. N., Kalutskaya, N. A., Bolvachev, A. I., Prodanova, N. A., Sotnikova, L. V., & Shevchenko, O. P. (2021). Artificial intelligence in the accounting profession. Laplage Em Revista, 7, 378–383. https://doi.org/10.24115/S2446-622020217EXTRA-B938P.378-383

Luo, J., Hu, Z., Wang, L. (2018). Research on CPA Auditing Reform Strategy Under the Background of Artificial Intelligence. Proceedings of the 2018 2nd International Conference on Management, Education and Social Science. https://doi.org/10.2991/icmess-18.2018.207

Manson, S. M. (2001). Simplifying complexity: A review of complexity theory. Geoforum, 32(3), 405–414

Othman, O.H., & Ahmad, A. J. (2012). The possibility of using artificial intelligence techniques in controlling the quality of internal auditing (field study in Jordanian public shareholding companies). The Eleventh Annual Scientific Conference on Business Intelligence and Knowledge Economy.

Qiu, J. (2021). Analysis of Human Interactive Accounting Management Information Systems Based on Artificial Intelligence. Journal of Global Information Management, 30(7), 13. https://doi.org/10.4018/JGIM.294905

Sayed, Karima Ahmed. (2020). Improving the accuracy of profit forecasting using artificial neural networks, a field study [Unpublished master's thesis]. Al-Azhar University.

Ukpong, E. G., Udoh, I. I., & Essien, I. T. (2019). Artificial Intelligence: Opportunities, Issues and Applications in Banking, Accounting, and Auditing in Nigeria. Asian Journal of Economics, Business and Accounting, 10(1), 1–6. https://doi.org/10.9734/ajeba/2019/v10i13009