



The Role of Artificial Intelligence in Developing Accounting Systems and Improving the Quality of Financial Reports

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Abstract

The accounting field is undergoing a major transformation driven by artificial intelligence technologies, which have changed the way accounting systems are designed and how financial information is generated and evaluated by automating routine tasks and analyzing large scale transaction flows in real time. AI tools help reduce human error and accelerate audit procedures, providing more transparent reports to support decision making and enhance financial forecasting and risk analysis, providing senior management with a clearer view of performance and future needs, therefore, it is necessary to invest in appropriate technologies, adhere to data protection requirements and continuously train human resources, this study explores ways to practically integrate artificial intelligence into accounting workflows to increase data reliability and availability.

Keywords: *Artificial intelligence, financial, information, human resources.*

1. Introduction

Artificial intelligence (AI) has moved from a promising technology to a practical force reshaping accounting, rather than serving only as a record keeping tool, accounting now benefits from AI as a strategic partner repetitive tasks are automated vast streams of transactions are analyzed quickly and accurately and the resulting reports are more transparent and decision ready for senior management these capabilities expand the accountants role beyond routine processing to insight generation and support for policy and strategy.

Given this shift it is essential to examine how AI enhances accounting efficiency and lifts the quality of financial reporting in modern institution, the aim is to clarify where AI creates tangible value in practice speed, accuracy, and reliability while grounding the discussion in real organizational needs and decision contexts.

2. Research methodology

2.1 Research problem

AI though tools are now widely available, many organizations still struggle to buy them to productive use in accounting, the sticking points are partial a shortage of qualified staff to operate intelligent systems high up front and Operating costs concerns about protecting sensitive financial data and a thin local evidence base on how AI adoption changes the quality of financial reporting together these hurdles slow diffusion and limit realized benefits.

2.2 Research significance

AI's rise has transformed business management broadly and accounting in particular in principle intelligent systems strengthen statement integrity accelerate audit work and make it feasible to analyze complex financial data accurately and at speed for institutions still reliant on traditional processes that invite human error delay and weak fraud detection, AI offers a path to higher reporting quality and operational efficiency, the study's value lies in showing how to integrate AI into accounting workflows what improvements to expect in data quality and which adoption obstacles to plan for across companies and banks and public bodies.

2.3 Research objectives

This study pursues five practical aims:

1. Clarify what AI is and its accounting tasks.
2. Assess AI's impact on audit efficiency and reporting accuracy.
3. Examine AI's role in fraud detection and risk analysis.
4. Identify the technical and human barriers to adoption.
5. Offer actionable recommendations for activating AI within accounting systems.

2.4 Research hypotheses

H1: Using AI technologies is positively associated with higher quality financial reports.

H2: AI reduces accounting errors and improves the accuracy and speed of financial auditing.

H3: Technical and human constraints, skill gaps, high costs, and data security risks negatively affect AI's diffusion in accounting.

3. Theoretical Framework

3.1 The concept of Artificial intelligence

Artificial intelligence (AI) is a branch of computer science focused on building systems that perform tasks traditionally requiring human intelligence. Learning, analysis, and decision making in practice, AI recognizes patterns, forecasts future events from available data, and processes large information streams quickly and accurately. These capabilities are powered by advanced algorithms in machine learning, allowing systems to self-improve and deliver precise, creative solutions across domains, including finance and accounting.

3.2 Application of AI in Business

- Big data analytics, AI can digest massive financial datasets and produce timely, actionable insight for decision makers.
- Process automation, routine work such as invoicing, transaction classification, and periodic accounting reports can run without direct human intervention.
- Financial detection, algorithms project revenues, costs, and potential risks with greater speed and consistency.
- Fraud detection, by spotting abnormal patterns, AI flags issues faster and more effectively than many traditional approaches.

3.3 AI and Accounting

Within accounting specifically, AI raises the quality and reliability of financial information by accelerating audit procedures and reducing human error. Prominent use cases include:

1. Intelligent auditing: algorithmic analysis of accounts and transactions to detect errors and inconsistencies.
2. Financial statement preparation: automated compilation and faster, more accurate reporting for managers and external stakeholders.

In short, the theoretical base is clear: AI equips organizations with tools that learn from data, automate routine work, and surface decision-ready insights that translate directly into stronger accounting processes and high-quality financial reports.

4. Practical and analytical aspects

4.1 field evidence:

What organizations actually see: This chapter shifts from concepts to practice.

- A. Major U.S. banks
- B. Industrial companies
- C. Arab institutions

4.2 The impact of artificial intelligence on the quality of financial reports

1. Increase the accuracy of financial data.
2. Detecting fraud in financial transactions.
3. More reliable decision support.

4.3 Comparative picture and takeaways

A side-by-side look across banks, manufacturers, and Arab institutions points to a clear pattern: the more an organization invests in people (training) and digital infrastructure, the stronger the uplift in reporting quality and speed. Put differently, capability and systems are the levers that convert AI potential into real performance gains. Manager's takeaway: Start where payoffs are largest (high-volume, error-prone processes), pair the rollout with targeted training,

and budget for security and data plumbing from day one. Done this way, the practical benefits documented above become repeatable rather than exceptional.

5. Results

5.1 Cleaner financial data

Adopting AI tools improves the accuracy of recorded figures and cuts routine errors. Automated checks and continuous reconciliation reduce the slip - ups that creep in with manual work, which, in turn, lifts the credibility of performance reviews.

5.2 Faster reporting and better use of staff time

AI systems process large transaction streams in minutes rather than days. The time saved allows accountants to spend less effort on data prep and more on analysis and decisions that actually move the business forward.

5.3 Earlier fraud detection

Pattern - recognition models flag anomalies quickly. Institutions that have rolled out these tools report earlier identification of suspicious activities and fewer losses from undetected fraud.

5.4 What can hold back results

Benefits are meaningful, but not automatic. Four constraints shape outcomes: high upfront costs (especially for SMEs), limited qualified talent, heightened cybersecurity risk, and organizational resistance to changing familiar routines. Addressing these areas determines how much value an institution ultimately captures.

5.5 Cross - Case takeaway

Looking across the cases in this study, the pattern is consistent: the more an organization invests in training and digital infrastructure, the stronger the gains in reporting quality and speed. Bottom line. In practice, AI raises data quality, accelerates reporting, and strengthens assurance so long as leaders plan for skills, security, and change management from day one.

6. Recommendations

1. Build people's capabilities create on going and hands on training paths so accountants and analysis can confidently use AI tools while sharpening critical thinking and data literacy skills.
2. Modernize the tech backbone invest in interoperable and platforms that connect cleanly to current accounting processes with minimal disruption.
3. Protect financial information apply defense in depth security clear policies and strong encryption and access control and continuous monitoring to safeguard data.
4. Learn globally and adapt locally benchmark leading organization and join expert networks and events and tailor proven practices to the local regulatory and organizational context.

7. References

1. Russell, S., & Norvig, P. (2021). *Artificial intelligence: A modern approach* (4th ed.). Pearson.
2. Smith, J. (2022). AI applications in accounting. *Journal of Accounting Technology*, 15(3), 45–60.
3. Brown, A., & Lee, H. (2023). Enhancing financial reporting accuracy through AI. *International Journal of Accounting Systems*, 20(1), 22–38.
4. العلي، م. (2023). الذكاء الاصطناعي وتطوير نظم المحاسبة في المؤسسات العربية. *مجلة البحوث المالية*، 10، 95–77(2).
5. Kokina, J., & Davenport, T. H. (2017). The emergence of artificial intelligence: How automation is changing auditing and accounting. *Journal of Emerging Technologies in Accounting*, 14(1), 115–122. <https://doi.org/10.2308/jeta-51730>
6. Appelbaum, D., Kogan, A., Vasarhelyi, M., & Yan, Z. (2017). Impact of business analytics and enterprise systems on managerial accounting. *International Journal of Accounting Information Systems*, 25, 29–44. <https://doi.org/10.1016/j.accinf.2017.03.003>
7. Moll, J., & Yigitbasioglu, O. (2019). The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. *The British Accounting Review*, 51(6), 100833. <https://doi.org/10.1016/j.bar.2019.04.002>

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