Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

Academia Open

By Universitas Muhammadiyah Sidoarjo

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

Table Of Contents

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

Originality Statement

The author[s] declare that this article is their own work and to the best of their knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the published of any other published materials, except where due acknowledgement is made in the article. Any contribution made to the research by others, with whom author[s] have work, is explicitly acknowledged in the article.

Conflict of Interest Statement

The author[s] declare that this article was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright Statement

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

EDITORIAL TEAM

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

Article information

Check this article update (crossmark)

Check this article impact (*)

Save this article to Mendeley

(*) Time for indexing process is various, depends on indexing database platform

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

Digital Transformation in Supporting Accounting Automation in the Industrial Bank Iraq

Ahmed Neamah Abed, Ahmed.neamah@oukerbala.edu.iq,(1)
College of Administration and Economics, University of Kerbala, Iraq
Faris Abdulzahra Abdulhussin Alkhalidy, faris.abdalzahra@iku.edu.iq,(2)
Imam Al-Kadhum University College, Iraq
Jinan Abed Khaji, jinan.abed@uokerbala.edu.iq,(3)
Department of Accounting, College of Administration and Economics, University of Kerbala, Iraq
Anmar Adnan Khudhair, anmar.a@uokerbala.edu.iq,(4)
College of Administration and Economics, University of Kerbala, Iraq
Ahmed Obayes Hussein, ahmedabaas033@gmail.com,(5)
Federal Board of Supreme Audit, Auditing Office of Third Region, Iraq

(1) Corresponding author

Abstract

General Background: Digital transformation is fundamentally reshaping accounting practices globally through technologies including artificial intelligence, automation, blockchain, and big data analytics. **Specific Background:** The Iraqi banking sector continues to rely on traditional manual processes and paper-based documentation, resulting in increased operational costs, effort, and time inefficiencies that hinder competitive performance. **Knowledge Gap:** While previous research has documented digital transformation's benefits in accounting, limited empirical evidence exists examining its specific impact on accounting automation within industrial banks in developing economies like Iraq. **Aims:** This study investigates how digital transformation contributes to enhancing accounting automation levels in the Industrial Bank Iraq, examining the relationships between digital transformation implementation, accounting practices, and automation outcomes. **Results:** Analysis of 42 accountants and auditors revealed a strong positive correlation (R=0.932) between digital transformation and accounting automation, with digital transformation explaining 86.9% of variance in accounting practices and automation performance, supporting both hypothesized relationships. **Novelty:** This research provides context-specific empirical evidence from Iraq's industrial banking sector, demonstrating quantifiable impacts of digital transformation on accounting automation in a transitioning economy. **Implications:** Findings suggest that industrial banks should prioritize digital transformation investments and provide comprehensive training programs to accountants and auditors, enabling them to leverage advanced technologies for improved financial reporting accuracy, operational efficiency, and competitive advantage.

Keywords : Digital Transformation, Accounting Automation, Industrial Banking, Financial Technology, Iraqi Banking Sector

Highlight :

- Digital transformation increases accounting automation efficiency by 86.9% in industrial banks.
- Strong positive correlation (0.932) exists between digitalization and automated financial processes.
- Modern technologies eliminate manual procedures, reducing costs and improving decision-making speed.

Published date: 2026-01-12

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

Introduction

Considering the digital trends of the programs and modern technology that dominate the world today, which is the automation, cloud computing, and artificial intelligence technology that are employed to provide services to different fields and accounting sectors, are quicker, more accurate, and less expensive to work. Moreover, these technologies are also being supported by researchers to face conventional accounting practices. A digital revolution in the recent history of business activities has taken place in many areas of operation and it has impacted greatly on the accounting profession due to the growing trends of businesses using digital technologies to ease operations and improve efficiency. There has been a need to explain the role of digital transformation in the current accounting practice [1].

As the corporate world continually evolves, the issue of digital transformation has become a necessity in organizations that will be in need of sustaining their effectiveness and competitiveness in different sectors, including accounting. The concept of accounting is critical in any business and the use of modern digital technology is substituting the conventional accounting practices that to a large extent depend on manual operations and paper files. Consequently, financial reporting has been made more precise, effective and transparent thereby making speedy decision-making possible. Digital accounting is not just about the implementation of some new software or tools, but a holistic assessment of how the financial information is managed, analyzed, and utilized to inform the strategy of a company [2]. The accounting profession needs digital automation as it is revolutionizing the traditional theories and practices of accounting functions. Quick access to big data and enhanced decision-making are also associated with overcoming such challenges as ethical dilemma and compliance issues.

It can be explained by innovative technologies, such as automation, artificial intelligence, blockchain, and big data analytics, which allow improving the accuracy of the forecast and making decisions more clearly [3]. Digital transformation enhances the capacity to collect and analyze data precisely and time wise which enhances the quality of financial reports and thus makes accounting information more useful and make effective investment decisions. Digital transformation technologies contribute to the enhancement of communication and collaboration between various departments in companies and provide users with the information that can be compared, relevant, and truly represent the performance and financial positions of businesses [4].

Besides, past researches have shown the significance of digital transformation in accounting. This study will discuss how digital transformation can enhance the degree of accounting automation in industrial banks.

The Iraqi banking sector faces many challenges and difficulties due to the use of traditional methods in all financial transactions. These methods rely heavily on manual processes and paper documents, resulting in increased costs, effort, and time. The emergence of the current digital transformation has led to increased interest in automation and modern technology to address these problems and help accountants strengthen their skills in analyzing the data being prepared and dealing with changes resulting from emerging developments. Training programs are necessary to assist them in adapting to these developments and changes. The research question can be defined as: **Does digital transformation contribute to improving the level of accounting automation in the banking sector?**

Literature review and hypothesis development:

The accounting sector must adapt to modern organizational digitization and tackle the challenges and consequences that accounting operations face due to the impact of digital transformation. It is necessary to follow a comprehensive strategy that includes skill development, technology adoption, cultural change, and proactive interaction with organizational and technological developments resulting from the accounting sector's adoption of digital transformations. This is due to the need for accounting information systems administrators to expand the scope of their skills to meet the requirements of the modern corporate environment in the context of digital transformation and to be qualified for many of the emerging future roles [5]. Digitalization is a qualitative step in financial reporting in the relevant field, contributing to the accuracy and transparency of financial information. Therefore, specific elements arise by establishing several basic needs to organize the underlying structure to adapt to a safe environment and develop effective programs in the field. Additionally, modern technology will play a pivotal role in preserving human and animal practices, with the goal of achieving partnership between spouses and accountability on unparalleled foundations [6]. Accounting itself is a manual procedure; it involves doing manual accounting, use of calculation sheets and keeping of paperwork. As the business expands, the sophistication of the financial transactions increases, and more advanced approaches to the financial data management have to be employed. The late twentieth century saw the introduction of computers and accounting software, and thus, it was the start of the major revolution as the companies tried to choose how to deal with their financial activities with the help of the advances in the field of artificial intelligence, machine learning, and cloud computing, as well as digital automation. [7].

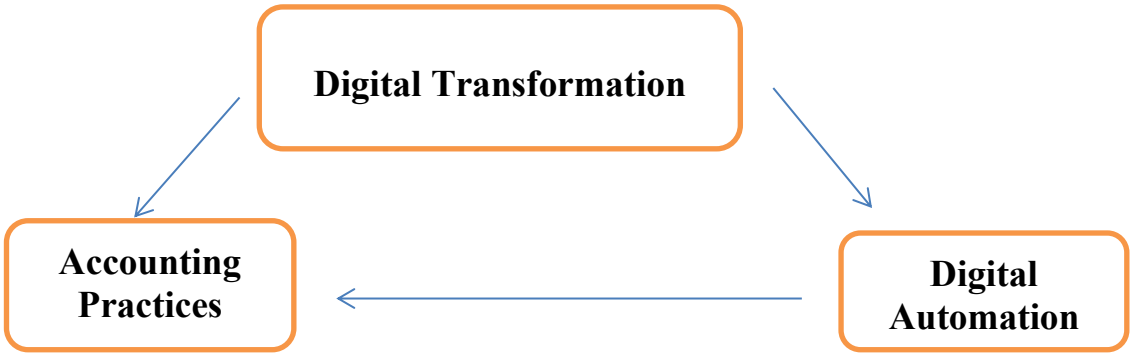

Figure 1: Research Concept

Digitalization and automation of accounting:

The most appropriate and relevant technologies in the accounting area are the application of big data, blockchain, and cloud computing, which is the digital transformation [8]. The accounting department is in the process of trying to embrace the use of information and communications

technology. The latter can be realized by the methods of digital transformation. This technology can assist in managing information associated with the bank financial transactions, which were formerly performed manually and converting them to the digital form. Information and communications technology has been used to store all financial information electronically hence making accounting to be much faster and easier [9]. Digital transformation can be used to contribute to changes in structure in case the latter occurs [10]. It assists companies in utilizing the most recent technologies to enhance the effectiveness of the financial processes, decrease the costs of the operations, and enhance the performance of the employees. It may also help in ensuring that more effective reporting and control system is developed so that companies abide with the relevant accounting regulations and standards. The use of digital transformation in accounting helps to enhance the transparency of the collection, management, and analysis of financial information to enable the high-value activity to advance the process of decision-making and raise intellectual capital [11]. Digital transformation has difficulties in executing accounting activities because of shifts in accounting profession during significant technological advances, pressure and technical obstacles, data merging, and system structure. This necessitates the seeking of efficient solutions associated with data quality and risks of data security. Banks are required to verify accuracy in the data, and meet the required law and regulations besides improving effectiveness and expertise of the accountants to stay abreast of the emerging technological trends so that they can process the financial information based on the digital technologies [12]. Moreover, digital transformation is in an understanding of the management purpose and assisting to define inner and external communication connections by creating a sequence of administrative methods and tools pertaining to planning, analysis, and accurate evaluation in the most important spheres, training and educating employees, and implementing new technological approaches [13].

It has been discovered from previous studies that digital transformation contributes to the development of the accounting field across various sectors and helps enhance the efficiency of the accounting profession among accountants. Through this, we observe a positive relationship between digital transformation and accounting practices. So, we'd like to put forward the following hypothesis:

H1: There is a positive relationship between the digital transformation and the industrial bank's Iraq accounting practices.

There is a good link between the industrial bank's accounting methods and its move to digital. The automation of accounting systems has significantly transformed how businesses manage their finances. Automating processes will enable companies to be more efficient, reduce costs, and more accurate in their processes. This assists them to make decisions that are better and to grow in a strategic manner. In the long-run, technology will be a great improvement albeit with the challenges. The market is increasingly becoming competitive and therefore, with the continual improvement in technology, businesses that purchase accounting software that autobots will be able to perform well in the market. [7]. The use of accounting automation, reducing costs, assisting business to streamline paperwork in their processes and reducing errors which could then be utilized to authenticate operations and quality of financial records are some of the most significant members of the study [14]. As accounting jobs change from paperwork and accountants to experts to keep up with the latest technology, automation makes work more accurate and smooth for businesses. This requires accountants to develop their skills to face technologies, digitization, automation, and modern technology, thereby contributing to the improvement of their levels in the field of accounting [15].

It is clear from the previous studies the importance of automation in the field of accounting, as it leads to time savings, cost reduction, and effort minimization, and increases the accuracy and speed of preparing financial reports for companies, making them capable of addressing all errors and problems due to the advancements used in modern technologies. It can be said that there is a positive relationship between digital transformation and accounting automation in industrial bank.

Therefore, we propose the following hypothesis:

H2: There is a positive relationship between digital transformation and accounting automation in the industrial bank Iraq.

Methodology

Community and study sample

The sample of the study was the entire accountant and auditor of the Industrial Bank. It included the survey process with the accounts manager, the assistant, department heads, accountants and auditors since they are aware of all financial processes within the bank. The way they liaise with the senior management helps in assessing the extent of the financial activity of the bank. The questionnaire prepared contained 20 items, requiring the participants to evaluate the degree of utilization of digital transformation techniques into the accounting practices and automation at the bank and evaluate the item using a five-point Likert scale. This study used the sample size of 42, which is 100 percent of the questionnaires that were received in this exploratory survey.

Data collection and sample description:

This research is considered a causal study, as it seeks to examine the impact and relationship between the study variables. The research methodology was chosen to align with this objective, which is a quantitative data approach, as causal studies are inherently quantitative. The quantitative method and research strategy were used, which involved conducting an electronic survey to measure the variables, as it facilitates quick access to respondents. Moreover, this facilitated data collection, as electronic surveys are considered one of the most effective methods for obtaining response [16]. WhatsApp and Telegram. These methods were used, as the survey forms were immediately sent to each participant in the sample to avoid responses from outside the specified group. The survey is organized into three portions, each of which aims to evaluate a distinct variable in the research. The first portion includes demographic questions such as gender and marital status. The survey consists of twenty items, all of which are closed-ended questions, and the answers are used to evaluate the data in accordance with the study's methodology. Ten components of the current study's evaluation of accounting practices and digital transformation come from. And to evaluate accounting automation through digital transformation, it included 10 items derived from [7][17] .

This study is appropriate to demonstrate the importance of digital transformation for accounting practices and automation for managers and employees, with the aim of evaluating all operations related to the financial aspects of the bank [18][19][20].

Data Analysis

In order to accomplish the study's goals and answer its issues and problems, data analysis was done.

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

The SPSS program was used to do the analysis. To show the gender frequencies among the participants, the demographic information of the respondents—which was gathered for analytical purposes—was displayed in tables. Descriptive statistical measures were used, including standard deviation and measures of central tendency, especially the arithmetic mean. The Cronbach's alpha test was conducted to verify the reliability of the constructs. But I focused on identifying the potential relationships between the variables of interest. The Pearson correlation coefficient test was conducted to measure the statistical relationships between the variables of interest. To verify the validity of the hypotheses related to the direct relationships of interest, linear regression tests were conducted. Finally, a mediation analysis was conducted to test the hypothesized mediation relationships in this study.

Results and Discussion

Table 1 presents the demographic characteristics of the respondents (42). For analysis purposes, demographic characteristics were collected with a focus on gender.

Table 1. shows the sample demographics by gender.

	Regularity	Percent	Valid percent	Cumulative percent
Male	26	62	62	62
Female	16	38	38	
Total	42	100%	100%	100%

The sample, as shown in Table 1, consists of (42) individuals currently employed, according to the outlined methodology. The data indicate that the number of male participants in the survey exceeds the number of females, with the percentage of females being 38% and males 62% of the sample.

Table 2 presents the reliability coefficient based on the segmentation scale, specifically focusing on split-half reliability.

Table 2. Reliability coefficient according to the segmentation scale

Dimensions	Number of Paragraphs	Split-half Reliability
First	10	.878
Second	10	.847
Total	20	.865

From Table 2 it is clear that the data are stable by measuring them with the split-half reliability scale and that the dimensions of all axes exceeded 0.60, which indicates their stability. The same applies to all questions, which reached 0.865, and this is a good indicator, meaning that the percentage of difference was small and acceptable, meaning that the reliability reached 86%.

Table (3) Correlation and Interpretation Ratio between (Digital Transformation, Practices, and Accounting Automation)

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.932[a]	.869	.866	1.33927
a. Predictors: (Constant), x				
b. Dependent Variable: y				

From the above table 3, the Model Summary shows that the R Square value (digital transformation, practices, and accounting automation) has reached (0.869), meaning that the explanatory power of practices and accounting automation based on digital transformation is 86.9%. The same applies to the adjusted R-squared value, and the Pearson correlation coefficient (R) has reached (0.932). It indicates a strong positive correlation, with a Std. The error of the estimate reached (1.33).

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13273

Table 4. Analysis of variance between variables

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	488.646	1	488.646	272.431	.000[b]
	Residual	73.540	41	1.794		
	Total	562.186	42			
a. Dependent Variable: y						
b. Predictors: (Constant), x						

Through the above table 4, differences between the studied variables were shown based on the Fisher (F) scale, where the significance (Sig) was less than (0.05). That is, the calculated (F) value (272.431) is greater than the tabulated value, which indicates the model's suitability for hypothesis testing, meaning there is an impact of digital transformation on accounting practices and automation.

Table 5. Statement of the impact of the independent variable, digital transformation, on accounting practices and automation.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.137	1.716		11.153	.000
	X	.659	.040	.932	16.505	.000
a. Dependent Variable: y						

Thru the table 5 above, it shows us the values of the regression coefficients, where the value of the constant (Constant) is (19.137) and the value equals (659). It is called the slope of the regression, meaning that whenever the digital transformation variable changes by one unit, the dependent variable, practices, and accounting automation will increase by (0.659). This indicates a direct relationship between digital transformation and practices and accounting automation. We also observe thru the (t) test that it shows there is an effect between digital transformation and accounting practices and automation, where the value (Sig=0.00) is less than the assumed value (0.05). This confirms the validity of the hypotheses that state there is an effect and a relationship of the digital transformation variable on accounting practices and automation.

Summary of the results

After a thorough examination of the data using cross-sectional analysis and linear regression, the following results were reached:

There is a significant positive relationship between digital transformation and accounting practices, supporting the acceptance of hypothesis H1. Moreover, the impact of digital transformation significantly improves the performance of accounting automation, supporting H2.

Conclusions

The findings of the work emphasized that digital transformation is one of the key factors in accounting practice and automation because of the creation of modern technology. It also helps in increasing the level of accountants and auditors so that they are able to handle these advanced technologies. Moreover, it will facilitate in the elimination of traditional accounting processes by virtue of the speed and flexibility of the financial data entry, and it will assist banks to make the right decisions. In the meantime, digital transformation aims to make innumerable and promising opportunities in the accounting practice and automation, and it also attempts to mitigate the threats and risks. The purpose of accounting automation is to make financial processes more accurate, facilitate the increase in the quality of provided services, lessen costs, and process the incoming information amount by ensuring a secure environment like encryption. It will be able to solve critical issues facing the accounting and banking professions, which will help towards realization of competitiveness among banks to offer the best banking services.

More studies will be necessary to discuss the significance of accounting automatization using the latest technologies like artificial intelligence, block chain, and cloud computing to help develop a skilled labor force in the digital transformation environment

References

1. J. Jesus, O. K. T. Kilag, J. Gamboa, R. Solatorio, and P. Matis, "Exploring the Role of Digital Transformation in Modern Accounting and Business Practices: A Systematic Review," International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence, vol. 1, no. 6, 2024.
2. M. Kholdarov and Z. Khatamova, "Digital Transformation of Accounting and Financial Management," International Journal of Scientific Researchers, vol. 10, no. 1, pp. 588-592, 2025.
3. V. Kanaparthi, "Exploring the Impact of Blockchain, AI, and ML on Financial Accounting Efficiency and Transformation," in Multi-Strategy Learning Environment, V. Vimal, I. Perikos, A. Mukherjee, and V. Piuri, Eds. Singapore: Springer Nature Singapore, 2024, pp. 353-370. https://doi.org/10.1007/978-981-97-1488-9_27
4. V. A. Jones, "Business Intelligence Solutions for Enhanced Accounting Decision-Making in Digital Transformation," Engineering Science Letter, vol. 3, no. 1, pp. 11-15, Apr. 2024. https://doi.org/10.56741/esl.v3i01.468
5. S. Hendrawan, A. Chatra, S. Hidayatullah, and D. Suprayitno, "Digital Transformation in MSMEs: Challenges and Opportunities in Technology Management," Jurnal Informasi dan Teknologi, vol. 6, no. 2, pp. 141-149, 2024. https://doi.org/10.60083/jidt.v6i2.551
6. S. Julius, "The Digital Transformation of Accounting Standards: Past Developments, Current Practices, and Future Directions for Research," International Journal of Novel Research in Marketing Management and Economics, vol. 11, no. 3, 2024.
7. O. K. Xudoymurodovna, "The Automation of Accounting Systems: Transforming Financial Management," Researchbib Impact Factor (SJIF), 2024.
8. K. Aqili, "The Impact of Digital Transformation on the Foundations of Formulating Accounting Standards and Its Implications for International Convergence in Accounting - A Comparative Theoretical and Applied Study," Journal of Financial and Commercial Research, vol. 26, no. 1, 2025.
9. M. Cerna and J. Pokorny, "Digital Transformation of Tax and Accounting Processes," in Proc. Academic Conferences International, 2024.
10. O. K. Loang, Z. Ahmad, and R. V. Naveenan, "Non-Performing Loans, Macroeconomic and Bank-Specific Variables in Southeast Asia During COVID-19 Pandemic," The Singapore Economic Review, vol. 68, no. 3, pp. 941-961, 2023.
11. R. Marota, "Digital Transformation of Accounting in the Industrial Revolution Era 4.0," Jurnal Ilmiah Akuntansi, vol. 4, no. 2, 2021.
12. S. Herath and L. Herath, "Emerging Trends and Challenges in the Digital Transformation of Accounting: A Review of the Literature," Global Journal of Accounting and Economy Research, vol. 5, no. 2, 2024.
13. A. Yasinska, "Accounting Procedures Digital Transformation for Business Processes Improvement," Economics, Entrepreneurship, Management, vol. 8, no. 2, 2021.
14. V. Kanaparthi, "Exploring the Impact of Blockchain, AI, and ML on Financial Accounting Efficiency and Transformation," arXiv preprint arXiv:2401.15715, Jan. 2024. https://doi.org/10.48550/arXiv.2401.15715
15. D. Gulin, M. Hladika, and I. Valenta, "Digitalization and the Challenges for the Accounting Profession," in Proc. Entrenova, 2019.
16. A. Gebur, A. Mohammed, and R. Abbasov, "The Impact of Digital Leadership on Employee Digital Performance in Manufacturing Organizations in Iraq: The Mediating Role of Digital Maturity," International Journal of Social Science Research and Review, vol. 8, no. 6, 2025.
17. B. N. F. Zunaedi, H. R. Annisa, and M. Dewi, "Fungsi Internal Audit dan Manajemen Risiko Perusahaan: Sebuah Tinjauan Literatur," Jurnal Bisnis dan Akuntansi, vol. 24, no. 1, pp. 59-70, 2022.
18. S. V. Samoilenko, Digitalization: Contexts, Roles, and Outcomes. Boca Raton: CRC Press, 2023.
19. T. Khanom, "The Accountancy Profession in the Age of Digital Transformation Challenges and Opportunities," International Journal of Creative Research Thoughts (IJCRT), vol. 8, no. 2, 2020.
20. A. Nifise, O. Odeyemi, N. Mhlongo, C. Ibeh, O. Elufioye, and K. Awonuga, "The Future of Accounting: Predictions on Automation and AI Integration," World Journal of Advanced Research and Reviews, 2024.