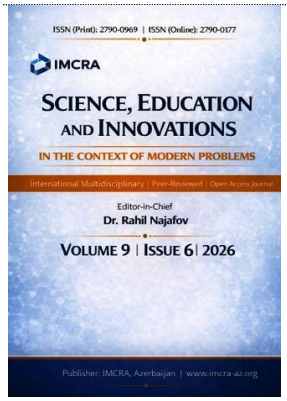

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RESEARCH ARTICLE

The contribution of digitalization to enhancing the quality of financial statements and decision-making in economic institutions: A survey study

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Keywords Financial statement quality, decision-making, digital accounting information system, accounting digitalization.

Abstract

This study aimed to identify the role of digitalization in enhancing the quality of financial statements and decision-making in economic institutions – a survey study – at the Coca-Cola branch in Rouiba, Algeria. To achieve this, a model was developed consisting of an independent variable, digitalization in the accounting system, and two dependent variables, financial statement quality and decision-making. A questionnaire was designed to collect data from a sample of 67 employees at the institution under study. After collecting the data and analyzing the results, several key findings emerged. The most significant finding was that the institution under study relies heavily on digitalization technology in its accounting system. The digitalization dimension recorded a high mean score of 4.11, reflecting a clear trend towards using integrated digital accounting systems, automating daily operations, and connecting various departments to the central accounting system in real time. This confirms the availability of a modern information infrastructure that supports highly efficient financial data processing.

Citation

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1. Introduction:

The contemporary world is witnessing rapid transformations driven by the technological revolution. Digitalization has become the primary engine for reshaping administrative and accounting concepts within economic institutions. Adopting digital technologies is no longer merely a technical option or an organizational luxury, but a strategic necessity imposed by the complex nature of the economic environment, characterized by competition and uncertainty.

Financial statements are the final output of the accounting system and a mirror reflecting the financial position and economic performance of the institution. With the increasing needs of stakeholders for accurate, reliable, and relevant information, digitalization has emerged as an effective mechanism for improving these outputs. The shift from traditional systems to a digital environment contributes to processing massive data flows at extremely high speeds and reduces the margin for human

error. This allows for the transformation of this big data into value-added information that supports real-time monitoring and ensures the production of high-quality financial statements that meet international and national accounting standards.

Despite the advantages offered by digitalization, economic institutions (particularly in the Algerian context) face varying challenges related to technological infrastructure, human resource development, and the extent to which digital systems meet accounting quality requirements.

2. Research Framework

This study investigates the extent to which digitalization enhances the quality of accounting system outputs, particularly financial statements, and improves the effectiveness of managerial and financial decision-making in economic institutions. Specifically, it examines the level of digitalization adopted within accounting information systems and evaluates its influence on the relevance, reliability, and timeliness of financial reporting, as well as its contribution to evidence-based decision-making.

The study is guided by the following hypotheses: (H1) economic institutions have adopted digital technologies extensively within their accounting information systems; (H2) digitalization exerts a statistically significant positive effect on the quality of financial statements by improving the accuracy, relevance, and reliability of financial information ($\alpha = 0.05$); and (H3) digitalization has a statistically significant positive effect on the effectiveness of administrative and financial decision-making ($\alpha = 0.05$).

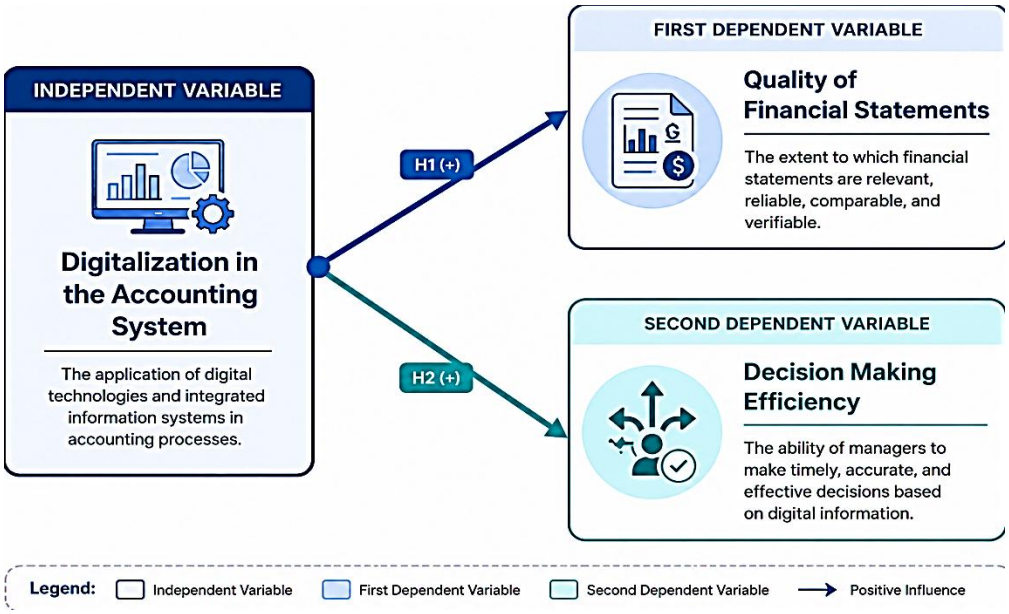
The primary objective of the study is to evaluate the role of digitalization in strengthening accounting information systems and enhancing organizational performance through higher-quality financial reporting and more effective decision-making. In addition, the study seeks to assess the current level of digital transformation in Algerian economic institutions and examine how digital accounting practices support managerial processes and strategic decisions.

The significance of this research lies in its focus on digital transformation as a critical driver of modern accounting practices. As organizations increasingly rely on digital technologies to process and manage financial information, understanding their impact on reporting quality and managerial effectiveness becomes essential. The findings are expected to provide empirical evidence on the benefits of digitalized accounting systems in improving transparency, accuracy, reliability, and operational efficiency, while offering practical recommendations for accelerating digital transformation in Algerian economic institutions and similar emerging-market contexts.

3. Methodology:

This study employed a descriptive approach, utilizing a library survey by reviewing relevant references. The analytical approach was also employed in the field study, through the distribution of a questionnaire to a sample of the study participants at the institution under investigation.

Study Model: **Figure No. (01): Study Model**



The Conceptual Framework of Digitalization and its Role in Improving the Quality of Financial Statements

The Nature of Digitalization in the Accounting Environment

Digitalization has become an urgent necessity in the modern era, contributing to changes in work methods across various fields. It is not limited to simply converting information from traditional to digital format, but also includes developing processes and services using modern technology. Therefore, this section will address the fundamental concepts of digitalization in the accounting environment.

The Concept of Digitalization:

The concept of digitalization varies depending on the specialization or context in which it is used, as well as the perspective from which it is viewed. Below are some concepts related to the term digitalization:

Charlotte Beresi defined it as a method that allows for the conversion of data and information from an analog system to a digital system (Ben Mchich, 2023, p. 7).

Terry Kanny defined it as the process of converting information sources in their various forms (books, periodicals, images, recordings, etc.) into a machine-readable format using a computer via the binary digital system (BITH). BITH is the basic information unit of an automated information system based on computer calculations. Converting information into a series of binary numbers is called "digitization," and this process is carried out using a range of specialized technologies and devices. (Ben Qwaitan & Fasih, 2025, p. 10)

It is also defined as the process of organizations transitioning from a traditional business model to one that relies on digital technologies for product and service innovation, as well as management and marketing methods. This involves providing new revenue streams through the development of a digital strategy, which can only occur with digital capabilities and a thorough understanding of the requirements for digital investment within the context of digital marketing activities, coupled with a willingness to change from management. (Radif, 2022, p. 335) From the preceding definitions, we conclude that digitization is the process of converting information or data from its traditional (analog or physical) form to a digital form, enabling its processing, storage, and transmission using computers or electronic systems (Al-Okaily et al., 2024; Honorata et al., 2025; Kotowska & Sikorska, 2023; Sampaio et al., 2025; Socoliuc, 2023). This applies whether it involves converting physical documents (such as books and articles) or analog data (such as audio or video signals). Therefore, the primary goal of digitization is to make content more accessible, processable, and distributed more efficiently and quickly via digital technology (Rasulev et al., 2025).

4. Importance and Characteristics of Digitalization

Digitalization has become a strategic pillar of organizational transformation, fundamentally changing how economic institutions generate, process, store, and utilize accounting information. Rather than merely replacing paper-based procedures with electronic systems, digitalization enables organizations to redesign business processes, improve operational efficiency, strengthen internal control mechanisms, and enhance the quality of financial information. Through integrated accounting information systems, institutions gain faster access to accurate financial data, reduce transaction costs, automate routine accounting activities, and improve coordination among organizational departments. These capabilities contribute to greater transparency, accountability, and compliance while providing managers with timely and reliable information to support strategic and operational decision-making (Abda & Taybi, 2024; Honorata et al., 2025; Mawhoub & Ben Souiki, 2024; Sampaio et al., 2025).

From an accounting perspective, digitalization significantly enhances the quality of financial reporting by improving the accuracy, completeness, relevance, and timeliness of accounting information. Automated data processing reduces human error, strengthens audit trails, facilitates real-time financial reporting, and increases the reliability of accounting outputs, thereby supporting evidence-based managerial decisions and improving organizational performance (Al-Okaily et al., 2024; Honorata et al., 2025; Kotowska & Sikorska, 2023; Socoliuc, 2023). Moreover, digital technologies reinforce the principles of total quality management by standardizing accounting procedures, minimizing bureaucratic constraints, accelerating information processing, and optimizing the use of organizational resources (Abda & Taybi, 2024; Mawhoub & Ben Souiki, 2024).

The effectiveness of digitalization is further reflected in several technological characteristics that distinguish digitally transformed organizations from traditional ones. Modern digital systems eliminate geographical and temporal barriers by enabling real-time communication, cloud-based information storage, and continuous access to financial data regardless of users' physical locations. Interoperability among heterogeneous platforms allows seamless integration of accounting, financial, operational, and managerial information systems, while interactive communication technologies facilitate continuous collaboration among employees, managers, customers, and external stakeholders (Iman, 2024; Madini & Hajjaji, 2023). Furthermore, decentralized digital architectures improve organizational flexibility and resilience by allowing secure information exchange across multiple locations without dependence on a single centralized infrastructure. These characteristics enhance organizational responsiveness, improve knowledge sharing, and strengthen the institution's capacity to adapt to dynamic business environments (Kotowska & Sikorska, 2023; Sampaio et al., 2025).

Overall, digitalization represents a comprehensive transformation of accounting and organizational processes rather than a simple technological upgrade. By integrating advanced information technologies into accounting systems, organizations can improve the quality of financial statements, strengthen governance and internal control, enhance operational efficiency, and support more accurate and timely administrative and financial decision-making. Consequently, digitalization has become an

essential prerequisite for sustainable organizational competitiveness and long-term value creation in the digital economy (Al-Okaily et al., 2024; Honorata et al., 2025; Socoliuc, 2023; Abda & Taybi, 2024).

Objectives of Digitization

- Digitalization seeks to achieve a set of strategic objectives, most notably: (Ben Dekken & Allal, 2024, p. 9)

o Preservation and Sustainability: Digital media represent a less perishable alternative to traditional media (such as paper), which are threatened by various factors such as humidity, fire, and natural erosion;

o Optimizing Storage Space: Digital storage, whether via CDs or DVDs, allows for the storage of thousands of pages in a small physical space, thus reducing the need for large storage areas;

o Enabling Sharing and Collaboration: Through networks, especially the internet, digitization allows hundreds of users to access the same document simultaneously, thus overcoming the limitations of physical sharing;

o Rapid Retrieval and Ease of Use: Digital systems are characterized by extremely fast information retrieval, as any digitally converted material can be accessed within seconds, instead of the minutes required by traditional media; - Access to information without human intervention: Users can access digital content directly, without the need for employee or intermediary intervention, thus enhancing independence and efficiency;

o Financial gain: Digital products can be commercially viable, either by selling them on CDs or by offering them for a fee online.

- In addition to other objectives, the most prominent of which are: (Abu Dayyeh, 2023, p. 62)

o Improved operational efficiency: through the optimal utilization of time and financial resources by automating processes and reducing administrative expenses;

o Transition to e-government (paperless system): This aims to reduce reliance on traditional paper-based processes, contributing to faster workflows and maintaining information security;

o Enhanced accuracy and reliability of information: by minimizing human intervention in data processing, leading to lower procedural error rates and achieving high levels of accuracy;

o Strengthened competitive advantage: by enabling the organization to adapt quickly to environmental and technological changes, thus enhancing its market position; - Achieving timely information relevance: This is accomplished through the rapid retrieval and provision of accurate data, thus supporting timely decision-making.

- Therefore, the goals of digitization extend beyond technological transformation to include restructuring administrative and accounting processes to ensure rapid response to economic changes and achieve a competitive advantage through accurate information.

Principles of Digitalization

Among the most important principles of digitization are: (Ben Mchich, 2023, p. 9)

- Providing the best services to citizens: This requires creating an environment with the skills and competencies professionally prepared to use modern technology in a way that allows for the identification of every diagnosed problem. It also necessitates selecting information relevant to the core issue, conducting accurate and honest analyses of available information, identifying strengths and weaknesses, drawing conclusions, and proposing appropriate solutions for each problem.

- Focusing on results: E-government focuses on transforming ideas into tangible results and achieving benefits for the public by reducing the burden on citizens. - Ease of use and accessibility for all: This means making electronic technologies available to everyone in homes, workplaces, schools, and libraries, and enabling everyone to communicate.

- Cost reduction: This means that investment in information technology and the presence of multiple competitors offering services at low prices lead to cost reduction.

- Continuous change: This is a fundamental principle of e-management, as it involves regularly striving to improve and enrich existing resources and raise performance levels to attract customers or gain a competitive edge.

Therefore, the principles of digitalization emphasize the necessity of integrating human resources and technology. The success of digital transformation depends on the flexibility of systems and their ability to provide a collaborative work environment that eliminates information monopolies and ensures its secure flow.

Forms of Digitization

There are three main forms of digitization: (Badash & Qallab, 2025, p. 36)

- Image Digitization: This refers to saving documents as images that cannot be converted or modified. This method is used when researchers are primarily interested in the document's artistic value, rather than its textual content.

- Text Digitization: This refers to converting documents into digital text, allowing for easy information retrieval and modification. This is usually done using specialized character recognition software.

- Manual Re-entry: In some cases, the digitized document may not be of good quality or may contain handwritten notes or additions that are difficult to read accurately. Therefore, manual re-entry is used, where the document's content is typed directly using a word processor. This process is time-consuming and labor-intensive, as it requires entering and correcting the text. Therefore, it is not recommended except when absolutely necessary. However, digital cameras can be used as a

suitable alternative in some cases, especially for old, damaged, or handwritten documents. Therefore, digitization methods vary, ranging from visual archiving for preservation and text processing for retrieval to manual data entry for accuracy, depending on the nature of the document and the functional purpose of its digitization.

Previous Studies:

A study by Kassira Samir entitled "Evaluating the Impact of Using Information and Communication Technologies on the Effectiveness of Financial Management Decision-Making in a Sample of Algerian Institutions" (Samir, 2025). This study primarily employed an analytical and interpretive approach linking the use of Information and Communication Technologies (ICT) to increased effectiveness in financial decision-making. The researcher also focused on exploring the role of mediating variables such as the quality of financial information, transparency, and control mechanisms in enhancing this impact within Algerian industrial institutions. The study stemmed from a fundamental question: To what extent does the use of ICT contribute to improving the effectiveness of financial management decisions within Algerian institutions, and what is the level and strength of this impact in light of prevailing organizational and informational characteristics? To address the research question, the descriptive-analytical approach was adopted for the theoretical framework to establish the concepts, while the case study method was employed for the practical application. Data was collected through a questionnaire distributed to a sample of managers in Algerian industrial institutions. The data were then statistically analyzed using advanced tools such as factor analysis, correlation matrices, and multiple linear regression models.

The study concluded with several key findings, including:

- The use of information and communication technologies (ICTs) has a statistically significant positive impact on the effectiveness of financial decisions, provided there is organizational maturity to absorb these technologies;

- Technology contributes to improving financial decision-making through three main channels: increasing data accuracy, ensuring timely recording (speed), and enhancing digital control and auditing mechanisms;

- The integration of technological systems and human expertise is the only guarantee for sound financial decisions, as technology remains a support tool and does not replace the critical professional judgment of the financial manager;

- The necessity of adopting a comprehensive vision for digital transformation that links investment in technological infrastructure with the development of human competencies capable of handling the outputs of these systems. 2.3.2. Ghawali Mohamed's study entitled "The Impact of Strategic Vigilance on Decision-Making in Economic Institutions – A Case Study of the National Hydrocarbons Company 'Sonatrach'" (Ghawali, 2023)

This study highlights the role of strategic vigilance (with its technical, competitive, and commercial dimensions) in supporting and enhancing the decision-making process. The researcher sought to demonstrate how a large economic institution can transform the scattered information in its environment into a strategic resource that reduces uncertainty when formulating critical decisions. The study began with a fundamental question: What is the impact of strategic vigilance on the decision-making process in the national oil company Sonatrach? To answer this question, the descriptive-analytical approach was adopted to establish the concepts related to vigilance and decision-making, supported by the case study method. The field study relied on a questionnaire distributed to Sonatrach executives, and the data were processed using the Statistical Package for the Social Security Numbers (SPSS) to test hypotheses and measure impact relationships. The study concluded with a set of results, the most important of which are:

- The results revealed The study found a strong, direct correlation between strategic foresight and the quality of decisions made.

- Strategic foresight systems contribute to reducing decision-making time by providing readily available and analyzed data, thus supporting timely decision-making.

- The researcher concluded that technological infrastructure (software and networks) is the primary driver of successful foresight, and without it, accounting and financial information remains incapable of predicting the future.

- The study emphasized the need to deepen digital literacy among decision-makers and to rely on intelligent information systems to integrate external data with internal accounting data.

2.4 Location of the Current Study:

What distinguishes this study from previous studies is its attempt to examine the role of digitalization in enhancing the quality of financial statements and decision-making within economic institutions. It is characterized by its shift from a general description of the technology to a precise analysis of the impact of digitalization on the quality of financial reports. Furthermore, applying these hypotheses to a global company like Coca-Cola allowed us to fill a clear application gap in local studies, thus enhancing our ability to present results that reflect the reality of large institutions and support their decision-making processes.

Study Population and Sample:

The study population consisted of employees of the Coca-Cola Rouiba branch.

Data Collection Tool:

Data was obtained using a questionnaire containing questions covering all aspects of the study topic.

Analysis of Results:

Validity of the Study Instrument (Questionnaire)

Face Validity: To determine the face validity of the study instrument, it was presented to a panel of expert professors, some specializing in methodology and others in the subject matter, as well as to some staff members of the institution under study. Based on their feedback, some questionnaire items were revised to ensure clarity and comprehensibility.

Reliability of the Study Instrument (Questionnaire)

To confirm the reliability of the study instrument (questionnaire), Cronbach's alpha coefficient was calculated for the sample of 67 individuals. The following table shows the reliability coefficient of the study instrument.

Table (1): Cronbach's Alpha Coefficient for the Study Instrument

N	Cronbach's alpha coefficient
12	0,468

Source: Prepared by the researchers based on the responses of the study sample and the outputs of 20 SPSS items.

Table (1) shows that Cronbach's alpha coefficient for the study instrument's axis reached 0.864 based on 12 items. This high value reflects a very good level of internal reliability among the questionnaire items, exceeding the statistically acceptable minimum of 0.70. This indicates a high degree of consistency in the sample's responses regarding the statements used to measure the study variables. This confirms that the instrument possesses a suitable degree of reliability, allowing for the use of the extracted data in subsequent statistical analyses and the confident testing of the study's hypotheses.

.1Transcribing and Analyzing the Responses of the Study Sample Regarding the Personal and Professional Characteristics Axis

In this section, we will analyze the personal and professional characteristics of the study sample, namely: educational level, experience, and professional level. The results are as follows:

Table (2): Distribution of Demographic Data for the Study Sample

Variable	Category	n (%)
Educational Level	Postgraduate Studies	17 (25.4)
	Bachelor's Degree	21 (31.3)
	Master's Degree	29 (43.3)
Professional Experience	Less than 10 years	20 (29.9)
	10–15 years	17 (25.4)
	More than 15 years	30 (44.8)
Job Position	Head of Accounting Department	3 (4.5)
	Accountant	5 (7.5)
	Internal Auditor	4 (6.0)
	Financial Information Systems Officer	5 (7.5)
	Other Position	50 (74.6)

Note. Percentages may not total exactly 100% because of rounding.

Source: Prepared by the researchers based on the responses of the study sample and the outputs of SPSS 20.

Table (2) and the accompanying graphs, which relate to the distribution of the sample according to educational level, show that the largest percentage (43%) held a Master's degree, followed by those with a Bachelor's degree (31%), and then those with postgraduate studies (25%). This reflects the high educational level of the participants and indicates their possession of the appropriate academic background to understand the study topic and provide accurate and objective answers regarding the impact of digitalization technology on the accounting system.

Transcribing and Analyzing the Responses of the Study Sample Regarding the Study Axes

To identify the general trend in the responses of the study sample, frequencies, percentages, arithmetic means, and standard deviations were calculated for the responses of the study sample to the questionnaire items. The results are as follows:

Axis: Level of Digitalization Application in the Accounting System - Digital Environment

Table 3: Arithmetic Mean, Standard Deviation, and Trend of Responses for the Axis: Level of Digitalization Application in the Accounting System (Digital Environment)

Item	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	SD	Interpretation
The organization relies on an ERP (Enterprise Resource Planning) system or integrated accounting software rather than paper-based accounting records.	0.0	1.5	6.0	50.7	41.8	4.33	0.66	Strongly Agree
Daily accounting transactions (e.g., sales, purchases, and production) are entered automatically with minimal human intervention.	3.0	6.0	7.5	58.2	25.4	3.97	0.92	Agree
All organizational departments (e.g., warehouses, production, and sales) are integrated with the central accounting information system in real time.	3.0	4.5	10.4	50.7	31.3	4.03	0.94	Agree

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Mean and Standard Deviation for the Dimension of Digitalization Application in the Accounting System (Digital Environment): 4.11, 0.66 (Agree)

Source: Prepared by the researchers based on the responses of the study sample and the outputs of 20 SPSS analyses.

From the results in Table (3), which relates to the level of digitalization application in the accounting system (digital environment), we find that the institution under study demonstrates a high level of reliance on digital technology in its accounting system. The overall arithmetic mean for this dimension reached 4.11 with a standard deviation of 0.66, falling within the "agree" trend. This indicates a clear trend towards adopting and utilizing digital accounting systems in various financial and accounting operations.

The statement related to relying on an integrated digital accounting system (ERP) or accounting software instead of paper books ranked first, with an arithmetic mean of 4.33 and a standard deviation of 0.66, also falling within the "strongly agree" trend. This reflects the significant shift of institutions towards using modern electronic systems for processing and storing accounting data.

The results also showed that linking various departments, such as warehouses, production, and sales, to the central accounting system in real time achieved a mean score of 4.03 with a standard deviation of 0.94, indicating a good level of integration and information exchange. The statement regarding the automatic and direct input of daily operations, such as sales, purchases, and production, without extensive human intervention, recorded a mean score of 3.97 with a standard deviation of 0.92, also indicating a good level of automation in operational processes, albeit to a lesser extent than the other statements. Overall, these results confirm that the organizations under study rely heavily on digitization in their accounting systems.

6.2The Impact of Digitalization on the Quality of Financial Statements

Table (4): Mean, Standard Deviation, and Direction of Responses for the Axis: The Impact of Digitalization on the Quality of Financial Statements

Descriptive Statistics for the Impact of Digitalization on the Quality of Financial Statements (n = 67)

Item	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	SD	Interpretation
Digitalization has reduced the time required to prepare financial statements.	1.5	0.0	4.5	49.3	44.8	4.36	0.71	Strongly Agree
Digitalization has reduced errors resulting from human intervention in preparing financial statements.	0.0	1.5	11.9	50.7	35.8	4.21	0.71	Strongly Agree

Digitalization has improved the accuracy of financial comparisons across reporting periods and organizational branches.	0.0	0.0	6.0	50.7	43.3	4.37	0.60	Strongly Agree
Digitalization has facilitated tracing financial transactions from their original source to the financial statements (audit trail).	0.0	1.5	4.5	56.7	37.3	4.30	0.63	Strongly Agree
Digitalization has contributed to improving the overall quality of financial statements.	0.0	3.0	7.5	56.7	32.8	4.19	0.70	Agree

| Overall Dimension | | | | | | 4.29 | 0.51 | Strongly Agree |

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Source: Prepared by the researchers based on responses from the study sample and the outputs of 20 SPSS analyses.

The results in Table (4), concerning the impact of digitization on the quality of financial statements, indicate that the sample strongly agrees that digitization technology significantly contributes to improving the quality of financial statements. The overall arithmetic mean for this dimension was 4.29, with a standard deviation of 0.51. This reflects a high degree of agreement and clear consistency in the respondents' opinions regarding the positive role of digitization in enhancing the qualitative characteristics of accounting information, particularly relevance and reliability.

The statement regarding facilitating accurate financial comparisons between previous years or between branches of the organization ranked first, with a mean of 4.37 and a standard deviation of 0.60, indicating strong agreement. This demonstrates that digitalization has enhanced the organization's ability to conduct comparative analyses and derive more accurate and objective financial indicators. The statement concerning digitalization's contribution to reducing the time required to prepare financial statements ranked second, with a mean of 4.36 and a standard deviation of 0.71, also indicating strong agreement. This reflects the important role of digital systems in accelerating data processing and the timely preparation of financial reports.

The statement regarding the ease of tracing financial transactions from their initial source to their appearance in the financial statements recorded a mean score of 4.30 with a standard deviation of 0.63, indicating strong agreement. This suggests that digitization has enhanced auditability and increased transparency and internal control. The statement that digitization has contributed to reducing human error achieved a mean score of 4.21 with a standard deviation of 0.71, also indicating strong agreement. This underscores the role of automation in improving data accuracy and reducing manual errors.

Meanwhile, the statement regarding digitization's contribution to increasing the quality of financial statements ranked last, despite achieving a high mean score of 4.19 with a standard deviation of 0.70, indicating agreement. This reflects a clear consensus on the positive impact of digitization on improving the quality of accounting outputs. These results confirm that digitization plays a pivotal role in enhancing the quality of financial statements by expediting their preparation, reducing human error, and improving comparability and traceability.

6.3 The Impact of Digitalization on Decision-Making

Table (05): Arithmetic Mean, Standard Deviation, and Trend of Responses for the Axis: The Impact of Digitalization on Decision-Making

Item	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	SD	Interpretation
Digital dashboards support rapid decision-making related to pricing, production, and inventory management.	0.0	3.0	13.4	58.2	25.4	4.06	0.72	Agree
Digitalization enables *what-if* analysis to predict the potential impact of financial decisions before implementation.	0.0	4.5	10.4	64.2	20.9	4.01	0.71	Agree
Digitalization has reduced the time required between preparing financial information and making managerial decisions.	0.0	3.0	6.0	56.7	34.3	4.22	0.69	Strongly Agree
The accuracy of digital financial data has improved the effectiveness of investment	0.0	7.5	11.9	56.7	23.9	3.97	0.82	Agree

decisions (e.g., purchasing new production lines).								

| Overall Dimension | | | | | | 4.07 | 0.55 | Agree |

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Source: Prepared by the researchers based on responses from the study sample and the outputs of 20 SPSS analyses.

Table (5), concerning the impact of digitalization on decision-making, shows that the sample agrees that digitalization technology clearly contributes to enhancing the effectiveness of administrative and financial decisions within the organization. The overall arithmetic mean for this dimension was 4.07, with a standard deviation of 0.55. This reflects a high level of agreement and remarkable consistency in the respondents' opinions regarding the role of digitalization in supporting the decision-making process.

The statement regarding the contribution of digitalization to reducing the time wasted between preparing financial information and making decisions based on it ranked first, with a mean of 4.22 and a standard deviation of 0.69, indicating strong agreement. The statement about using digital dashboards to make quick decisions regarding pricing, production, or inventory ranked second, with a mean of 4.06 and a standard deviation of 0.72, also indicating agreement. This reflects the importance of digital presentation and analysis tools in providing real-time indicators to assist decision-makers.

On the other hand, the statement regarding the possibility of conducting a "what-if analysis" to predict the impact of a financial decision before its implementation recorded a mean of 4.01 and a standard deviation of 0.71, indicating agreement. This suggests that digitalization provides analytical tools that help evaluate alternatives and reduce potential risks before making a decision. The statement regarding improved efficiency of investment decisions due to accurate digital financial data ranked last, with a mean of 3.97 and a standard deviation of 0.82, indicating agreement. However, this high mean confirms that the respondents recognize the positive impact of digitalization on improving the quality of investment decisions. These results generally confirm that digitalization plays a significant role in supporting administrative and financial decisions by accelerating information provision, enhancing analytical tools, and improving data accuracy.

1. Testing the Study Hypotheses

After presenting and analyzing the various responses from the study participants regarding the questionnaire's themes, this section will test the study hypotheses to verify their empirical validity. To do this, we will test the hypotheses by addressing:

-Testing the first hypothesis;

-Testing the second hypothesis;

-Testing the third hypothesis. To test the first hypothesis, we will rely on the results of the descriptive analysis of the first axis, which pertains to the level of digitalization in the accounting system. This will be done through arithmetic means, standard deviations, and trends in the responses of the sample members, with the aim of verifying whether the organization relies heavily on digitalization in its accounting system (Rasulev et al., 2025).

The second and third hypotheses will be tested using simple linear regression. Digitalization technology will be considered the independent variable, while the quality of financial statements will be the dependent variable in the second hypothesis, and the effectiveness of decision-making will be the dependent variable in the third hypothesis. The significance of the regression model will be assessed through the results of the analysis of variance (ANOVA), while the direction and strength of the effect will be interpreted based on the regression coefficients and the values of the statistical significance level.

Testing the first hypothesis: The organization relies heavily on digitization in its accounting system.

The descriptive analysis results for the digitization technology axis in the accounting system showed an overall arithmetic mean of 4.11, with a standard deviation of 0.66 and a general trend of "agreement." This indicates a high level of agreement among the sample regarding the organization's reliance on digitization in its accounting system. Furthermore, all statements within this axis recorded high arithmetic means ranging from 3.97 to 4.33, collectively confirming that the organizations under study rely heavily on digitization technology in managing their accounting systems. This reflects a sophisticated information infrastructure and a clear trend towards automation and digital integration in processing financial and accounting data. Therefore, the analysis results support the first hypothesis, which states that the organization relies heavily on digitization in its accounting system, and this hypothesis is thus accepted.

7.2Testing the second hypothesis: Digitalization has a statistically significant positive impact on the quality of financial statements, thanks to the accuracy of the digitized financial data at the 0.05 level, as perceived by the sample.

Table No. (06): Linear Correlation Coefficient for the Impact of Digitalization on the Quality of Financial Statements

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,453[a]	,206	,193	,45765

Source: Prepared by the researchers based on responses from the study sample and SPSS 20 output.

The results of the linear regression model indicate a positive correlation between digitization technology and the quality of financial statements, with a correlation coefficient of 0.453. This value reflects a moderately strong positive relationship, meaning that the higher the level of digitization implementation in the accounting system, the better the quality of financial statements in terms of relevance and reliability.

The coefficient of determination (R-squared) was 0.206, indicating that digitization technology explains 20.6% of the changes in financial statement quality. The remaining 79.4% is attributed to other factors not included in the statistical model. This suggests that digitization is a significant factor in improving financial statement quality, despite the presence of additional variables affecting this aspect. Overall, the results reflect a positive correlation between digitization technology and financial statement quality, demonstrating considerable explanatory power. This provides initial support for the second hypothesis, which posits a statistically significant positive effect of digitization on financial statement quality. The final decision on accepting or rejecting the hypothesis will be based on the results of the analysis of variance (ANOVA), the regression coefficient, and the level of statistical significance. Therefore, we will test the overall significance using the ANOVA table as follows:

Table No. (07): ANOVA of the Impact of Digitalization on Financial Statement Quality

ANOVA Results for the Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.524	1	3.524	16.826	< .001
Residual	13.614	65	0.209	—	—
Total	17.138	66	—	—	—

Note. Dependent variable: *Quality of Financial Statements* (or specify your dependent variable). Predictor: *Digitalization*. The regression model is statistically significant, $F(1, 65) = 16.826$, $p < .001$, indicating that digitalization significantly explains variation in the dependent variable.

Source: Prepared by the researchers based on the responses of the study participants and SPSS 20 outputs.

The ANOVA table shows that the regression model used to measure the impact of digitalization technology on the quality of financial statements has high statistical significance. The F-test value reached approximately 16.826 at a significance level of 0.000, a value significantly lower than the established significance level of 0.05. This indicates that the statistical model as a whole is valid for interpretation and analysis, and that the relationship between digitalization technology and the quality of financial statements is not random but statistically significant.

This result indicates that digitalization technology significantly affects the quality of financial statements, and that changes in the level of digitalization implementation are associated with real changes in the perceived quality of financial statements from the perspective of the participants. This confirms that the use of digital systems in processing accounting data and preparing financial statements contributes to enhancing the characteristics of financial information, particularly in terms of accuracy, reliability, and relevance. Therefore, the second hypothesis, which states that there is a statistically significant positive effect of digitalization technology on the quality of financial statements at a significance level of 0.05, can be supported.

Testing the third hypothesis: Digitalization has a statistically significant positive impact on the decision-making process at the 0.05 level from the perspective of the sample members.

Table No. (08): Linear correlation coefficient of the impact of digitalization on the decision-making process

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,563[a]	,317	,306	,45796

Source: Prepared by the researchers based on responses from the study sample and SPSS 20 output.

The results of the linear regression model indicate a positive correlation between digitization technology and decision-making processes. The correlation coefficient (R) was 0.563, reflecting a moderate to strong positive relationship. This suggests that the higher the level of digitization implementation in the accounting system, the more effective the administrative and financial decisions within the organization become.

The coefficient of determination (CID) was 0.317, meaning that digitalization explains 31.7% of the changes in the decision-making process. This is a good explanatory percentage, reflecting the relative importance of digitalization in supporting administrative and financial decisions. These results generally indicate that digitalization is positively correlated with the decision-making process and possesses considerable explanatory power. In fact, its explanatory power in this model exceeds that recorded in the financial statement quality model, suggesting that the impact of digitalization is more pronounced in supporting administrative and financial decisions. This provides a strong initial indication supporting the third hypothesis. The final confirmation of the significance of this impact will be based on the results of the ANOVA table, as follows:

Table No. (09): ANOVA of the Impact of Digitalization on the Decision-Making Process

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6,316	1	6,316	30,113	,000[b]
	Residual	13,632	65	,210		
	Total	19,948	66			

Source: Prepared by the researchers based on responses from the study sample and SPSS 20 output.

The ANOVA table shows that the regression model used to measure the impact of digital technology on decision-making has a high degree of statistical significance. The F-test value reached approximately 30.113 at a significance level of 0.000, a value significantly lower than 0.05. This indicates that the statistical model as a whole is valid for interpretation and that the relationship between digital technology and decision-making is not random but rather a real and statistically significant relationship.

This result indicates that digital technology significantly affects the effectiveness of administrative and financial decisions within the organization. Therefore, the ANOVA results confirm a statistically significant positive impact of digital technology on decision-making at a significance level of 0.05. Consequently, the third hypothesis is accepted, which states that digitalization has a statistically significant positive impact on decision-making from the perspective of the sample.

CONCLUSION

This study examined the contribution of digitalization to improving the quality of financial statements and enhancing administrative and financial decision-making in an Algerian economic institution. The empirical findings demonstrate that digitalization has become a strategic component of contemporary accounting systems, extending beyond the automation of routine accounting tasks to fundamentally transforming the way financial information is generated, processed, and utilized. By integrating digital technologies into accounting information systems, organizations are able to improve the efficiency, accuracy, and transparency of financial reporting while strengthening managerial decision-making.

The results indicate that the institution has achieved a relatively high level of digitalization within its accounting information system, particularly through the implementation of integrated accounting software, automation of accounting processes, and real-time information sharing across organizational units. These capabilities have significantly improved the timeliness, comparability, traceability, and reliability of financial statements by reducing human error and accelerating financial reporting processes.

Furthermore, the statistical analyses confirmed that digitalization exerts a significant positive influence on decision-making effectiveness. Digital accounting systems provide managers with timely, accurate, and comprehensive financial information, enabling faster responses to operational challenges, more informed investment decisions, and improved organizational planning. The availability of real-time financial data and digital analytical tools enhances the organization's ability to evaluate alternatives, anticipate future outcomes, and reduce decision-making uncertainty.

Overall, the findings support the study hypotheses and reinforce the growing body of evidence that digital transformation strengthens accounting information systems and contributes to higher-quality financial reporting and more effective managerial decision-making. From a practical perspective, economic institutions should continue investing in advanced digital accounting technologies, integrated enterprise systems, employee digital competencies, and data governance practices to maximize the benefits of digital transformation. Future research could extend this work by examining multiple organizations across different sectors, incorporating longitudinal data, and exploring the moderating effects of organizational culture, digital maturity, and artificial intelligence on accounting system performance and financial decision-making.

Author Contributions

Cheblal Ali: Conceptualization, methodology, investigation, data collection, formal analysis, writing—original draft, and visualization.

Khelladi Radhia: Research design, supervision, validation, writing—review and editing, interpretation of findings, and final approval of the manuscript.

Both authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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Institutional Review Board Statement

The study was conducted in accordance with the ethical principles governing research involving human participants. Participation in the survey was voluntary, and all respondents provided informed consent prior to completing the questionnaire.

Informed Consent Statement

Informed consent was obtained from all participants involved in the study.

Data Availability Statement

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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Ethical Approval

Ethical approval was not required for this study under the applicable institutional regulations because the research involved an anonymous questionnaire survey, posed minimal risk to participants, and did not collect sensitive personal data.

AI Declaration

The authors declare that no generative artificial intelligence (AI) tools were used to generate, analyze, or interpret the research data. Any AI-assisted language editing, if employed, was limited to improving grammar and readability, while all scientific content, analyses, interpretations, and conclusions remain entirely the responsibility of the authors.

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