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# THE IMPACT OF USING ARTIFICIAL INTELLIGENCE ON THE QUALITY OF ACCOUNTING INFORMATION: A THEORETICAL STUDY

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## ABSTRACT

*This study presents a comprehensive theoretical analysis of the impact of artificial intelligence on the quality of accounting information within contemporary digital business environments. It aims to clarify the conceptual foundations of artificial intelligence and examine its accounting applications in relation to the qualitative characteristics of accounting information, particularly relevance, reliability, understandability, and comparability. Relying on an analytical and comparative review of Arabic and international accounting literature, the study highlights that artificial intelligence is not an automatic determinant of higher accounting information quality, but rather a technological tool whose effects depend on governance frameworks, professional judgment, and transparency of algorithms. The findings indicate that while artificial intelligence can enhance accuracy, timeliness, and predictive capabilities, it may simultaneously pose challenges related to understandability and algorithmic bias. The study contributes theoretically by proposing the notion of algorithmic reliability as an emerging dimension of accounting information quality and emphasizes the need to balance technological advancement with accounting principles and professional oversight.*

## 1. INTRODUCTION

Industrial business environments have undergone radical changes in recent decades as a result of advancements in information technology. One of the most prominent of these transformations has been the shift towards increased reliance on artificial intelligence technologies in various administrative and financial functions. This has had a direct impact on the system Accounting, which is no longer limited to recording financial events and preparing statements, has become an advanced analytical system that relies on processing massive amounts of data in a short time and with a high degree of accuracy (Vasarhelyi et al., 2022).

In light of this new reality, accounting information has emerged as the primary channel of communication between the organization and users of financial information. Financial reporting is no longer solely about complying with accounting standards, but also about providing valuable explanatory and predictive information that helps guide economic decisions. Accounting literature has emphasized that the quality of accounting information is the cornerstone of transparency and accountability, and that poor quality negatively impacts the efficiency of financial markets and investor confidence (DeFond & Zhang, 2014).

Therefore, there is a need to study the impact of artificial intelligence on the quality of accounting information from a theoretical perspective, with the aim of analyzing this relationship and achieving a deeper understanding of how digital transformation affects the qualitative characteristics of accounting information. (Kokina & Davenport, 2017)

### 1.1 Research Problem and Questions

The quality of accounting information is a central concept in contemporary accounting thought. This is due to its fundamental role in supporting the decision-making process for investors, financiers, and various management departments. This quality is embodied in the ability of accounting information to reflect the economic reality of the entity truthfully and appropriately, in a manner that can be understood and compared across different time periods (Kieso et al., 2019).

In contrast, artificial intelligence represents a fundamental technological development that has reshaped financial reporting mechanisms by automating accounting processes, analyzing historical data, and generating future forecasts based on complex mathematical and algorithmic models. The study by Al-Taie and Jameel (2025) indicated that

artificial intelligence does not lead to This doesn't mean abandoning traditional accounting principles, but rather reinterpreting them to align with an environment reliant on intelligent data processing, which necessarily impacts accounting reporting.

Despite this development, debate continues regarding whether the use of artificial intelligence enhances the quality of accounting reporting. Despite this development, debate continues regarding whether the use of artificial intelligence enhances the quality of accounting information or creates challenges related to transparency and understandability. The literature also indicates a limited number of studies that have comprehensively addressed this relationship, particularly within a theoretical framework. Therefore.

The problem addressed in this study is the following main question:

What is the impact of using artificial intelligence on the quality of accounting information?

This main question branches into several sub-questions that examine the impact of artificial intelligence on the reliability, relevance, and comparability of accounting information.

## 2. SIGNIFICANCE OF THE STUDY

The scientific importance of this study stems from its contribution to expanding the theoretical framework concerning the impact of artificial intelligence on accounting systems, particularly on the quality of accounting information—a field still developing within modern accounting literature. The study also contributes to bridging the gap between technological advancements and conceptual frameworks. Traditional accounting, thus contributing to the development of contemporary accounting thought (Al-Htaybat et al., 2018).

The practical significance lies in the potential for professional bodies and accountants to utilize the study's findings in developing accounting disclosure policies and improving the quality of financial reports within digital business environments, thereby enhancing confidence in published financial information and supporting financial stability.

### 2.1 Study Objectives

This study aims to analyze the theoretical impact of using artificial intelligence on the quality of accounting information, by clarifying the concepts related to artificial intelligence and its accounting applications, and outlining its dimensions

This study aims to clarify the dimensions of quality accounting information and analyze the

relationship between them in light of modern accounting literature. It also seeks to provide a conceptual foundation upon which future applied studies can be built.

## 2.2 Study Hypotheses

Based on the research problem and objectives, this study hypothesizes that the use of artificial intelligence has no impact. Regarding the quality of accounting information, this main hypothesis leads to sub-hypotheses concerning the lack of impact of artificial intelligence use on the reliability, relevance, and comparability of accounting information. These sub-hypotheses will be discussed theoretically.

## 2.3 Conceptual and Procedural Definitions

Conceptually, artificial intelligence refers to a set of computer systems capable of mimicking certain human cognitive abilities, such as learning, reasoning, and decision-making, using advanced algorithms (Norvig & Russell, 1995). Operationally, it refers to the level of application of these technologies in the preparation and analysis of accounting information. The quality of accounting information is conceptually defined as the extent to which accounting information possesses the qualitative characteristics that make it useful to decision-makers (Al-Khalaileh, 2023), while operationally it is measured through the dimensions of reliability, relevance, understandability, and comparability.

## 2.4 Study Limitations

The limitations of this study include its reliance on a theoretical approach, the novelty and ongoing development of artificial intelligence, and the varying results of previous studies regarding the impact of smart technologies on the quality of accounting information, which limits the generalizability of some conclusions.

## 2.5 Previous Studies

Al-Khalaileh's study (2023), titled "The Impact of Applying International Financial Reporting Standard No. (9) Relating to the Measurement of Expected Credit Losses on the Quality of Accounting Reporting in Commercial Banks Operating in Jordan," aimed to demonstrate the extent to which recent standard changes affect the characteristics of accounting reporting quality. In particular, reliability, relevance, and comparability. The researcher adopted the descriptive-analytical approach using a questionnaire, and the study results showed a statistically significant positive effect of applying the

standard on the quality of accounting information, indicating that the quality of accounting information is directly affected by organizational and standard developments in the accounting environment. In a theoretical framework, Al-Taie and Jameel's study (2025) provided an in-depth analysis of the impact of using artificial intelligence on traditional accounting principles, where the study discussed how the concepts of measurement, recognition and disclosure are being reinterpreted in light of the increasing reliance on intelligent algorithms and machine learning techniques.

The study concluded that artificial intelligence does not eliminate accounting principles, but rather contributes to their development and adaptation to the requirements of the digital environment. This indirectly impacts the nature and quality of accounting reporting.

Al-Shantouri's study (2025) also addressed the impact of accounting disclosure on the quality of accounting reporting. The study focused on Jordanian public shareholding industrial companies, aiming to analyze the role of disclosure in enhancing the quality of accounting information. Employing a descriptive-analytical approach, the study found a statistically significant positive relationship between the level of disclosure and the quality of accounting information, thus confirming the importance of transparency in these companies. Presenting financial information is a key factor in improving the quality of accounting communication.

In a related context, Abu Ali's study (2011) examined the determinants of accounting communication quality and its impact on investor decisions in listed companies. The study aimed to analyze the relationship between communication quality and The study examined the impact of high-quality accounting information on investor behavior. It found that improved accounting information enhances investors' ability to make sound investment decisions and increases confidence in published financial data, reflecting the economic importance of quality accounting information. The study by Hazla and Dhaifallah (2020) examined the impact of accounting information quality on the level of accounting disclosure in light of the trend towards applying the fair value concept. The study aimed to analyze the relationship between the characteristics of accounting information quality and the level of disclosure in financial reports. The study adopted the following methodology. The descriptive-analytical study concluded that a higher quality of accounting information contributes to improved

transparency in financial reports and enhances the quality of accounting communication directed at users of financial information. The study's significance lies in its confirmation that the quality of accounting communication cannot be achieved in isolation from the quality of the information upon which the accounting system is based.

In the context of voluntary accounting disclosure, Al-Raqab's study (2018) examined the strategic impact of voluntary accounting disclosure on the quality of accounting information in companies. The study aimed to demonstrate the role of voluntary disclosure in enhancing quality characteristics, such as reliability and understandability. The study's results showed Increasing the level of voluntary accounting disclosure contributes to improving the quality of accounting information and enhances the confidence of financial statement users in the published information, thus supporting the economic decisions based upon it.

A study by Kokina and Davenport (2017) discussed the impact of automation and artificial intelligence on the accounting profession. The study, focusing on accounting and auditing, explained that the use of smart technologies has led to a reduction in routine accounting tasks, while simultaneously enhancing the analytical and advisory roles of accountants. It also indicated that this shift has positively impacted the quality of financial reports in terms of accuracy and timeliness. However, it also raised questions regarding the transparency and interpretability of outputs from automated systems.

In the field of accounting information systems development, a study by Vasarhelyi et al. (2015) addressed the role of big data and advanced analytics techniques in improving the quality of accounting information. The study showed that Integrating artificial intelligence technologies with big data contributes to enhancing the predictive power of information and reducing human errors, which positively impacts the quality of accounting information, provided that clear regulatory frameworks are available to ensure the reliability and verifiability of information.

The study by Raisch and Krakowski (2021) also addressed the relationship between automation and enhancement in the use of artificial intelligence within organizations, indicating that smart technologies can contribute to enhancing the quality of information and decisions if used to support human judgment, while they may lead to negative outcomes if relied upon. It is applied excessively without sufficient professional supervision.

## 2.6 What distinguishes the current study from previous studies

The current study differs from previous studies in that it seeks to analyze the impact of using artificial intelligence on the quality of accounting information as an independent dependent variable, within a comprehensive analytical theoretical framework. It links technological development with the quality characteristics of accounting information. It also integrates Arabic and foreign literature, contributing to bridging an existing knowledge gap in accounting literature, thus giving it added scientific value and making it complementary to previous studies rather than a mere repetition.

## 3. THEORETICAL AND METHODOLOGICAL FRAMEWORK OF THE STUDY

### 3.1 The Concept of Artificial Intelligence in Accounting

Artificial intelligence is defined as a set of technologies and systems that enable computers to mimic human cognitive abilities, such as learning, reasoning, and decision-making, relying on algorithms, machine learning models, and big data analysis (Russell & Norvig, 2021). This concept has witnessed significant development. Notably, in recent years, this has been driven by advances in computing power and the increasing volume of available data.

### 3.2 Artificial Intelligence Applications in Accounting

Artificial intelligence applications in accounting encompass a wide range of tools and techniques, such as systems Machine learning, natural language processing, and predictive analytics are used to analyze financial data in real time, predict future trends, and detect anomalies, thereby improving the accuracy of information and the speed of financial reporting (Vasarhelyi et al., 2015).

### 3.3 The Concept of Quality Accounting Information

The quality of accounting information is a fundamental concept in contemporary accounting thought. It refers to the extent to which accounting information presented in financial reports meets the needs of its users and enables them to make sound economic decisions. The quality of accounting information is linked to several qualitative characteristics, most notably Relevance, reliability, understandability, comparability, and timeliness (DeFond & Zhang, 2014).

### 3.4 Dimensions of Accounting Information Quality

The quality of accounting information is embodied in a set of dimensions that reflect the characteristics of good accounting information. Relevance is one of the most important of these dimensions, as it refers to the ability of information to influence User decisions are informed by the provision of data with predictive or confirmatory value. The reliability dimension relates to the degree to which information is free from errors and bias, and its ability to accurately represent economic reality.

The quality of accounting information also includes the comprehensibility dimension, which reflects the clarity and ease of understanding of the information.

The interpretation of financial statements by users, and the comparability dimension, which allows users to compare financial performance across time periods or between different economic units. In addition, there is the timeliness dimension, which reflects the importance of providing information in a timely manner for decision-making (Al-Shantouri, 2025).

### 3.5 The Theoretical Relationship Between Artificial Intelligence and the Quality of Accounting Reports

Accounting literature indicates that the use of artificial intelligence can contribute to improving the quality of accounting reports by enhancing the accuracy and speed of information processing, reducing human error, and improving Predictability. Intelligent systems are capable of analyzing large amounts of financial data in a short time, which supports the relevance and timeliness dimensions of accounting reporting (Appelbaum et al., 2017).

Conversely, some studies suggest that excessive reliance on artificial intelligence may have negative impacts Some dimensions of accounting information quality, particularly understandability and transparency, are compromised if the algorithms used are not user-friendly. Therefore, striking a balance between using smart technologies and maintaining the accountant's professional judgment is crucial to ensuring the highest possible level of accounting information quality (Raisch & Krakowski, 2021).

### 3.6 Study Population and Sample

The study population consists of the scientific literature related to artificial intelligence and the quality of accounting information. This includes

Arabic and foreign studies published in peer-reviewed scientific journals, specialized books, and professional accounting standards. Due to the theoretical nature of the study, a purposive sample was used From this literature, selected works were chosen based on scientific criteria, most notably the recency of publication, the reliability of the source, and the relevance of the study to the research topic.

## 4. DATA ANALYSIS METHODOLOGY

Theoretical data were analyzed using descriptive and comparative analysis methods, through comparison The results of previous studies, the identification of general trends in accounting literature, and the development of theoretical conclusions explaining the relationship between the use of artificial intelligence and the quality of accounting information.

### *The Place of the Current Study within the Theoretical and Methodological Framework*

In light of the above, the current study presents a comprehensive theoretical analysis of the impact of using artificial intelligence The impact of artificial intelligence on the quality of accounting information is examined within a framework that combines theoretical grounding with methodological explanation. This chapter forms the basis from which the study proceeds to discuss its theoretical findings and draw its conclusions.

### *A Critical Discussion of the Impact of Using Artificial Intelligence on the Quality of Accounting Information*

The impact of artificial intelligence on the quality of accounting information cannot be categorically considered as either entirely positive or entirely negative, as contemporary accounting literature reveals a clear divergence in theoretical perspectives on this impact. While some studies view artificial intelligence as a transformative tool Regarding the quality of accounting information, other studies adopt a more cautious stance, pointing to potential risks that could affect the transparency and understandability of information.

Through this divergence, this chapter offers a critical reading of the relationship between artificial intelligence and information quality The aim of this study is not to reiterate what has been presented in the literature, but rather to deconstruct the theoretical assumptions upon which that literature is based and analyze them in light of the objectives of the current study.

Based on what was presented in the first chapter regarding the development of the concept of accounting information quality, and what it addressed Previous studies in Chapter Two yielded mixed results regarding the impact of modern technologies on this quality. The current study seeks to critically re-examine these findings, balancing theoretical frameworks with practical applications in an accounting environment undergoing rapid digital transformation.

### *Artificial Intelligence: A Tool for Improving or Reshaping the Quality of Accounting Information?*

Much of the foreign literature focuses on the ability of artificial intelligence to improve the quality of accounting reporting by enhancing speed and accuracy and reducing human error. This argument rests on the implicit assumption that the quality of accounting reporting is achieved as the efficiency of financial data processing increases. Kokina expressed this view.

Davenport (2017) addressed this trend, asserting that artificial intelligence contributes to transforming accounting from a purely record-keeping function to an analytical one with added value.

However, the current study argues that this assumption, while important, remains insufficient to fully explain the quality of accounting information. Quality is not solely related to processing efficiency, but also to users' ability to understand it.

Information, its interpretation, and trustworthiness. Therefore, artificial intelligence does not necessarily improve the quality of accounting reporting; rather, it may reshape the very concept of quality, necessitating a re-examination of the traditional dimensions of accounting reporting quality.

### *A Critique of the Traditional Dimensions of Accounting Report Quality in the Context of Artificial Intelligence*

#### *Relevance Dimension: Between Predictive Value and the Risk of Over Analysis*

The literature suggests that artificial intelligence enhances relevance by providing predictive information based on big data analytics (Vasarhelyi et al., 2015). However, the current study argues that over-reliance on predictive analytics may lead to the presentation of complex information that exceeds the needs of some list users. In the financial sector, this raises the question of whether all this information is truly relevant to all users. Thus, artificial intelligence

may expand the scope of accounting information, but at the same time, it may create a gap between the information available and what is actually usable in decision-making.

#### *The Reliability Dimension: Algorithmic Bias as a Theoretical Problem*

Some studies assert that artificial intelligence reduces human error and enhances the reliability of accounting reports (O'Leary, 2022). However, this assertion presupposes the neutrality of the algorithms used, an assumption not without theoretical problems. Algorithms are designed by humans and trained on data that may contain prior biases, which can affect their output.

From this perspective, the current study argues that the reliability of accounting information in the context of artificial intelligence is no longer solely a matter of computational accuracy, but is now linked to what can be termed algorithmic reliability—a dimension that has not yet received sufficient attention in Arabic accounting literature.

#### *The Understandability Dimension: The Most Problematic Challenge*

Understandability is one of the dimensions of accounting information quality most affected by the use of artificial intelligence. Sutton et al. (2016) pointed out that the complexity of intelligent models can limit users' ability to interpret accounting information. The current study argues that this challenge is not merely a technical issue, but fundamentally a matter of accounting communication.

If the user of financial statements cannot understand the logic behind the presented results, the quality of the accounting information becomes questionable, even if those results are mathematically accurate.

#### *A Critical Comparison Between Arabic and Foreign Literature*

A comparison between Arabic and foreign literature reveals a significant difference in the angle of approach. While Arabic literature tends to focus on the technological potential of artificial intelligence, Arab studies are more cautious, concentrating on issues of disclosure, governance, and the readiness of the institutional environment. Arab studies, such as those by Al-Shantouri (2025) and Abu Ali (2011), have confirmed that the quality of accounting information is strongly linked to the clarity of disclosure and user trust in the information.

The current study partially agrees with what Kokina and Davenport (2017) indicated regarding the transformation of the accountant's role under artificial intelligence, but it differs with them in assuming that this transformation necessarily leads to an overall improvement in the quality of accounting information, as it believes that this improvement remains conditional on the context of use and the level of algorithmic governance.

The current study argues that this difference reflects not so much a contradiction as it does a difference in contexts, which necessitates adopting an integrative perspective that balances technological development with institutional requirements.

### ***The Position and Theoretical Contribution of the Current Study***

The theoretical contribution of the current study lies in presenting a critical perspective that argues that artificial intelligence does not improve the quality of accounting information is not automatic; rather, it is contingent upon certain conditions, the most important of which are the existence of clear regulatory frameworks, algorithmic governance, and the preservation of the accountant's interpretive role. The study also highlights the need to broaden the concept of accounting information quality to include new dimensions, such as the interpretability of algorithms and the transparency of intelligent models.

### ***Summary***

This chapter concludes that the relationship between artificial intelligence and the quality of accounting reporting is complex and multidimensional, and cannot be reduced to simply improving efficiency and accuracy. While artificial intelligence offers real opportunities to enhance the quality of accounting reporting, it also presents theoretical and professional challenges that necessitate a re-evaluation of traditional quality frameworks. Conclusions, Recommendations, and Proposals for Future Studies

### ***General Conclusions of the Study***

The current study reached a set of theoretical conclusions that contribute to clarifying the nature of the relationship between the use of artificial intelligence and the quality of accounting information. These conclusions can be summarized as follows.

**First**, the study concluded that artificial intelligence is not an independent or automatic factor for improving the quality of accounting reports, but rather a technological tool whose positive or negative

effects depend on how it is used and the institutional and regulatory framework within which it is integrated. While artificial intelligence can contribute to improving the speed of preparation. While the accuracy of reports and data processing does not necessarily guarantee higher quality accounting information, it is crucial to consider the dimensions of understandability, transparency, and trustworthiness.

**Secondly**, the study demonstrated that the traditional dimensions of accounting information quality, such as relevance, reliability, and understandability, remain fundamentally important. However, their application within the context of artificial intelligence necessitates a reinterpretation.

The analysis revealed that some of these dimensions, particularly understandability, become more problematic when relying on complex algorithmic models, posing new challenges for users of accounting information.

**Third**, the study concluded that artificial intelligence contributes to enhancing the relevance dimension by providing analytical and predictive information. However, an excess of this type of information can complicate rather than simplify decision-making, especially for non-specialist users. Therefore, the quality of accounting information is not determined solely by its quantity, but also by its relevance and practical usability.

**Fourth**, the study confirmed that the reliability of accounting information in the context of artificial intelligence is no longer related only to computational accuracy, but has come to include what can be called algorithmic reliability, that is, the extent of the transparency of the algorithms used and their lack of bias, and the accountant's ability to interpret and defend their outputs professionally.

**Fifth**, a comparison between Arabic and foreign literature showed a difference in the angle of treatment; foreign studies tend to focus on the technical capabilities of artificial intelligence, while Arabic studies are characterized by greater caution, focusing on issues of disclosure, governance, and trust. The current study argues that this variation reflects differences in institutional and organizational contexts, rather than a fundamental contradiction in the concept itself.

## **5. RECOMMENDATIONS**

In light of the preceding findings, the study presents a set of theoretical and professional recommendations that can contribute to improving the quality of accounting information in the context of using artificial intelligence.

The study recommends that artificial intelligence should not be treated as a replacement for the professional judgment of the accountant, but rather as a supporting tool for it, so that the accountant retains a pivotal role in interpreting and explaining accounting information to its users, thereby enhancing trust and the quality of accounting information.

The study also recommends the need to develop accounting frameworks and standards that are compatible with the use of smart technologies, and that ensure the transparency of the algorithms used in preparing financial reports, and help users of financial statements to understand the logic of the results presented.

The study also recommends the importance of including the concepts of artificial intelligence and the quality of accounting information within accounting education and professional training programs, with the aim of qualifying accountants to deal with modern technologies in a conscious and responsible manner, and in a way that enhances their ability to achieve higher quality accounting information.

The study also underscores the importance of adopting clear technology governance policies within organizations to ensure the ethical and responsible use of artificial intelligence in accounting and to mitigate the risks associated with algorithmic bias or data misuse.

## 6. PROPOSALS FOR FUTURE STUDIES

In light of the theoretical findings of the study, the study suggests a number of future research paths that could contribute to deepening the scientific understanding of the subject of artificial intelligence and the quality of accounting information.

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The study proposes conducting quantitative or qualitative field studies to measure the actual impact of using artificial intelligence on the quality of accounting information in various sectors, such as banks, industrial companies, or technology companies.

It also proposes conducting comparative studies between different accounting environments, both Arab and international, to analyze the impact of context. The study examines the institutional and organizational relationship between artificial intelligence and the quality of accounting information.

It also proposes addressing the concept of algorithmic reliability as a new dimension of accounting information quality, and exploring its integration within established accounting theoretical frameworks and standards.

Finally, the study suggests future research exploring the role of accounting education and professional development in enhancing accountants' ability to use artificial intelligence in a way that improves the quality of accounting reporting without compromising professional and ethical principles.

## 7. CONCLUSION

This study concluded with a theoretical and critical analysis of the impact of artificial intelligence on the quality of accounting information, demonstrating that this relationship is not linear or automatic, but rather complex and influenced by several professional, organizational, and technological factors. The study aimed to contribute a theoretical framework for rethinking the concept of accounting information quality in the context of digital transformation. This opens new horizons for scientific research in this field.

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