

# Analysis of the Impact of Using Electronic Accounting Software on the Accuracy and Efficiency of Financial Reports in Iraqi Companies: A Field Study Through a Questionnaire of Accountants

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## Abstract

This research aims to study the impact of using electronic accounting software on the accuracy and efficiency of financial reports in Iraqi companies, with a focus on local challenges related to infrastructure and training. The results of the T-test showed a positive and statistically significant impact of using electronic accounting on improving the accuracy and efficiency of financial reports, as the actual data mean exceeded the hypothesized mean, indicating the effectiveness of these systems in enhancing financial performance. The results of the ANOVA test also revealed significant differences between industrial, commercial, and service companies in using electronic accounting, with commercial companies achieving the best results. These findings indicate that the type of company plays a pivotal role in benefiting from electronic accounting systems. Data analysis shows that electronic accounting not only improves financial reporting but also contributes to enhancing organizational structure and adapting to economic and technological challenges. The results support previous studies confirming the positive impact of these systems in boosting financial efficiency, thereby contributing to institutional performance development. The study demonstrates that despite the challenges faced by Iraqi companies in infrastructure and training, they can significantly benefit from the application of electronic accounting if these aspects are improved.

**Keywords:** *Accounting; Financial Report Accuracy; Financial Performance Efficiency.*

## 1. Introduction

In the current digital age, the world is witnessing a remarkable shift towards the use of technology in the financial and accounting fields, with electronic accounting software playing a pivotal role in improving financial operations and providing more accurate and efficient reports. However, there remains a significant gap in understanding the impact of these software on the quality of financial reporting and operational efficiency of companies, especially in the Iraqi context, which faces unique challenges due to the economic and political environment. The use of electronic accounting is an effective tool for improving the financial performance of small and medium-sized enterprises (SMEs),

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as it contributes to enhancing transparency and reducing human error. The adoption of such software in Iraq faces obstacles related to limited technological infrastructure and a lack of training on the use of these systems, which negatively impacts their effectiveness. This contradiction highlights the need for an in-depth study to determine whether the benefits of using electronic accounting outweigh the challenges in the Iraqi context. The implementation of electronic accounting systems enhances the operational efficiency of industrial companies by improving process speed and reducing operating costs. The weak commitment of Iraqi institutions to developing technological infrastructure reduces the expected efficiency, forcing companies to rely on traditional methods alongside electronic systems.

## **2. Methodology**

### **2.1 The Research Problem**

The research problem highlights the need to understand the impact of using electronic accounting software on the accuracy and efficiency of financial reporting in Iraqi companies. Do these programs contribute to improving financial performance, as is the case in other international contexts? Or do challenges related to infrastructure and training reduce their effectiveness in the local context? The current study seeks to answer these questions through a field analysis based on questionnaires directed at Iraqi accountants.

### **2.2 The Importance of the Research**

This research represents a valuable addition to academic knowledge and practical application in the field of electronic accounting and its impact on the quality and efficiency of financial reporting, particularly in the Iraqi context, which is witnessing major economic and technological transformations. The importance of this research stems from its ability to highlight the role of electronic accounting as a strategic tool for improving the financial performance of Iraqi companies, an area that has.

### **2.3 Research Objectives**

This research aims to:

1. Measure the impact of using electronic accounting software on the accuracy and efficiency of financial reporting in Iraqi companies.
2. Analyze the impact of company type (industrial, commercial, or service) on electronic accounting.
3. Provide recommendations for improving the use of electronic accounting to support companies' financial performance.

## **3. Literature Review and Hypothesis Development**

### **3.1 Literature Review**

#### **The Concept of Electronic Accounting**

Recent years have witnessed a major shift in the way accounting systems are managed, with the emergence of electronic accounting software as an effective tool for improving the accuracy and efficiency of financial reporting (Al-Dalabih, 2018) notes that electronic accounting systems represent a qualitative leap in enhancing transparency and reliability in financial reporting, which positively impacts overall corporate performance. Within this framework, this research discusses the various impacts of using electronic accounting software on financial reporting in Iraqi companies (Rahahle et al., 2024). (

Through its various applications, electronic accounting enhances companies' ability to monitor their financial operations in real-time and continuously, contributing to improved organizational efficiency and transparency.

According to (Harash et al, 2014), the transition to electronic accounting systems significantly improves financial performance, as it enables accountants to extract financial information accurately and in a shorter time than traditional systems. This enhances companies' ability to make strategic decisions based on reliable and realistic financial data (Thabit & Abbas, 2017). Additionally, electronic accounting enables companies to interact with other accounting systems in the business environment. These systems also enable continuous tracking of changes in financial data and the preparation of immediate reports on the organization's financial performance. According to (Ismael et al, 2020), integrating electronic accounting systems with other systems such as cloud storage systems and resource management systems can provide accurate analysis of financial data, enhancing the ability to predict future trends and achieve business objectives. On the other hand, electronic accounting contributes to strengthening internal control within organizations, as it enables continuous tracking of accounting activities, which helps reduce the chances of fraud or embezzlement. (Alfartoosi et al, 2023), indicate that electronic accounting systems can monitor all transactions in real time, ensuring that operations are consistent with management-approved financial policies and reducing the risks associated with financial manipulation.

Regarding the challenges of e-accounting, (Ibrahim et al, 2014) point to some of the obstacles that companies in Iraq may face, such as technical and cultural challenges in adopting these systems. Although e-accounting offers many advantages, some organizations may face difficulties in training employees to use these new systems or in providing the appropriate technical infrastructure. Companies must invest in training employees to use these systems to ensure full benefits from e-accounting. Moreover, e-accounting can be part of a larger strategy to improve organizational efficiency and integrate various departments within the organization. (Al-Hashimy et al, 2022) They noted that e-accounting is a powerful tool for improving financial performance in companies, both small and large, including the construction sector in Iraq. However, the effective implementation of these systems requires full commitment from management, as well as ongoing technical support to ensure the smooth operation of the systems (Salur & Kattar, 2021). E-accounting software is a pivotal tool for improving the accuracy of financial reports, as it enables accountants to enter and analyze data efficiently and accurately. According to (Alfartoosi et al, 2021), the use of electronic systems reduces human errors that may result from traditional manual processes. A study by (Alkafaji et al, 2023) also confirmed that these programs contribute to ensuring the consistency of accounting data and improving its reliability, making financial reports more accurate and relevant for managerial decision-making.

**Operational Efficiency and Financial Reporting:** Electronic accounting systems improve operational efficiency by accelerating data recording and financial reporting processes (Jasim & Raewf, 2020) noted that electronic accounting software saves the time and effort required to prepare financial reports, enabling companies to respond quickly to market changes. Additionally, these programs support real-time data analysis, enhancing accountants' ability to provide accurate and timely reports.

**Challenges Associated with the Use of Electronic Accounting Software:** Despite its numerous benefits, Iraqi companies face significant challenges in implementing electronic accounting software. According to (Hameedi et al, 2021) these challenges include a lack of qualified personnel to use these systems, as well as limited financial resources needed to adopt modern technology. (Al-Waeli et al, 2020) also noted that the lack of appropriate technical infrastructure is a major obstacle to the full use of these programs.

**Impact of Electronic Software on the Quality of Accounting Information:** Electronic accounting software directly impacts the quality of accounting information, contributing to the provision of accurate and reliable data. According to (Al-Dalabih, 2018), implementing these systems enhances companies' ability to provide accurate and transparent financial information. (Al-Hashimy et al, 2022) support this view, noting that electronic systems reduce the chances of tampering with accounting data, ensuring better financial reporting quality (Sayed, 2019).

**The Experience of Iraqi Companies in Using Electronic Accounting:** Field experiments have shown that many Iraqi companies have begun adopting electronic accounting software to improve their financial performance. According to

(Munaf et al, 2019), companies that have adopted these systems have demonstrated significant improvements in the accuracy of their financial reports and operational efficiency. However, (Kareem et al, 2021) note that the technology gap between Iraqi companies and global companies remains a significant challenge, requiring greater investments in employee training and infrastructure improvements (Wali & Darwish, 2021).

We discuss the importance of investing in electronic accounting: Companies' success in using electronic accounting software depends on sustained investment in technology and infrastructure. According to (Al-Waeli et al, 2020), providing adequate training for employees and using the latest accounting software contributes to maximizing the benefits of these systems. (Harash et al, 2014) also noted that companies that invest in modern technology can improve their financial performance and increase their competitiveness in the market. The Role of Electronic Accounting in Compliance with International Standards

Electronic accounting software helps companies comply with international accounting standards, enhancing their ability to attract foreign investment. According to (Sabir, 2022), the implementation of electronic systems contributes to standardizing accounting procedures and ensuring compliance with international standards, such as International Financial Reporting Standards (IFRS). A study by (Ibrahim et al, 2014) also added that Iraqi companies can benefit from these programs to develop their accounting practices in line with international standards.

#### 4. Research Results

##### 4.1 First: Measuring the Impact of Using Electronic Accounting Software on the Accuracy and Efficiency of Financial Reports in Iraqi Companies

The t-test value was calculated based on data from a sample of 153 individuals. The arithmetic mean was 61.72, and the standard deviation was 4.57. The arithmetic mean was compared to the hypothetical mean of 45. Using the t-test formula, the t-value was 45.3, while the degree of freedom was 152. This value was also compared to the table value of 1.96. Since the calculated t-value (45.3) is greater than the table t-value (1.96), this indicates a statistically significant difference between the arithmetic mean and the hypothetical mean. Table (1) illustrates this.

**Table (1):** Measuring the Impact of Using Electronic Accounting Software on the Accuracy and Efficiency of Financial Reports in Iraqi Companies.

| Sample | arithmetic mean | standard deviation | Hypothetical mean | Degree of freedom | value T-test | Table T value |
|--------|-----------------|--------------------|-------------------|-------------------|--------------|---------------|
| 153    | 61.72           | 4.57               | 45                | 152               | 45.3         | 1.96          |

Based on the above, and since the calculated T value exceeds the table value, the null hypothesis, which states that there is no difference between the arithmetic mean and the hypothetical mean, is rejected. This indicates that the results support the alternative hypothesis, which assumes a statistically significant difference between the two means. This reinforces the idea that the use of electronic accounting in Iraqi companies has a significant impact on the efficiency and accuracy of financial reporting.

Through this analysis, we can confirm that the implementation of electronic accounting in Iraqi companies has a positive impact on financial performance. This is consistent with the results of previous studies that confirm the impact of electronic accounting systems on financial performance in Iraq (Hameedi et al., 2021; Ismael et al., 2020).

Thus, we can conclude that the impact of electronic accounting is strong in Iraqi organizations, demonstrating that the use of these systems not only enhances financial performance but also contributes to the development of the organizational structure of companies, making them more adaptable to modern challenges and market changes. Based on these results, it can be concluded that electronic accounting is not just a tool for improving financial reporting, but

rather an essential element in improving the effectiveness and efficiency of corporate performance in general, which is supported by many recent studies in this field (Sabir, 2022).

#### 4.2 Second: Analyzing the impact of company type (industrial, commercial, or service) on electronic accounting.

An analysis of variance (ANOVA) was conducted to analyze the differences between three types of companies (industrial, commercial, and service) based on the sample data provided. The results revealed significant differences between these companies. The mean for industrial companies was 58.47 with a standard deviation of 5.17, for commercial companies 63.11 with a standard deviation of 6.45, and for service companies 60.81 with a standard deviation of 4.29. The calculated F value was 103.1, which is significantly greater than the tabular F value of 3.05, indicating significant differences between these types of companies in the arithmetic mean. Therefore, it can be concluded that company type significantly affects the results achieved in this analysis. Tables (2) and (3) illustrate this:

**Table (1): Means and deviations for each type of company.**

| Company type | Sample | arithmetic mean | standard deviation |
|--------------|--------|-----------------|--------------------|
| Industrial   | 51     | 58.47           | 5.17               |
| Commercial   | 52     | 63.11           | 6.45               |
| Commercial   | 50     | 60.81           | 4.29               |

**Table (3): ANOVA test for the means of the types of companies according to the effect of accounting on the quality of the company.**

| Source         | set of squares (SS) | degree of freedom(df) | mean square(ms) | value F | Table value F |
|----------------|---------------------|-----------------------|-----------------|---------|---------------|
| Between groups | 5998.24             | 2                     | 2999.12         | 103.1   | 3.05          |
| Within groups  | 4360.19             | 150                   | 29.07           |         |               |
| Kidney         | 10358.43            | 152                   |                 |         |               |

Based on the results of the analysis of variance (ANOVA) test, the calculated F value (103.1) is significantly greater than the table value (3.05), indicating statistically significant differences between the three groups (industrial, commercial, and service). This suggests that the type of company has a clear impact on the studied variable. Previous studies, such as those conducted by (Al-Waeli et al, 2020) and (Alfartoosi et al, 2023), indicate that different types of companies differ in their adoption of electronic accounting technologies and accounting information systems, which impacts their financial performance. (Al-Hashimy et al, 2022) also indicates that companies that rely on electronic accounting systems achieve better economic performance due to improved accuracy and efficiency of financial operations. This is consistent with the results of the analysis of variance (ANOVA) test, which demonstrates the superiority of commercial companies in this area.

## 5. Conclusions

1. The Strong Impact of E-Accounting: The results showed that the use of e-accounting in Iraqi companies has a significant and positive impact on the accuracy and efficiency of financial reporting, enhancing financial performance and developing the organizational structure of companies.
2. Significant Differences Between Types of Companies: Analysis of Variance (ANOVA) revealed clear differences in the impact of e-accounting based on company type (industrial, commercial, and service). Commercial companies achieved the best arithmetic mean, indicating that company type plays a significant role in leveraging e-accounting.
3. Consistency of Results with Previous Studies: The results support previous research confirming that companies that adopt e-accounting systems achieve better financial and organizational performance.
4. The Importance of E-accounting in Adapting to Challenges: The adoption of e-accounting systems enhances companies' ability to cope with market changes and the challenges of the modern era.

## 6. Recommendations

1. Encourage the adoption of electronic accounting to improve the efficiency and accuracy of financial reporting.
2. Provide training programs for accountants to enhance their skills in using electronic systems.
3. Design customized accounting solutions suitable for different types of companies (industrial, commercial, or service).
4. Stimulate investment in technological infrastructure to enhance the effectiveness of accounting systems.
5. Support future studies on the impact of electronic accounting in various sectors.
6. Promote collaboration between academics and companies to develop practical applications of accounting systems.

## 7. Conflict of Interest

The authors declare that they have no conflict of interest.

## 8. Funding Declaration

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