



فرائن للعلوم الاقتصادية والإدارية
**KHAZAYIN OF ECONOMIC AND
ADMINISTRATIVE SCIENCES**
ISSN: 2960-1363 (Print)
ISSN: 3007-9020 (Online)



Role of E-accounting and it's impact on Accounting Information System (AIS)

Hussein Qassem Jaber¹

¹ *Department of Accounting, College of Administration and Economics, Azad, Iran,
Email: hassoone2222@gmail.com*

Abstract

The accountancy world is not what it used to be a few years back and all of this because E-Accounting entered the accounting scene and how! The study aims to explore the role of the E-Accounting component of CI's role in offering to modern business entities and how it enhances the AIS unit. The study seeks to examine and explain how E- Accounting assist AIS in the realization of the financial reporting, decision making and the control. It also covers challenges thought by the companies while implementing E-Accounting system, security issues and the role of new technology i.e., Artificial Intelligence (AI), blockchain and cloud computing. Methodologies of use) real evidences in real life and patterns in practice where it is visible a) what is the result of e-Accounting to the small / big business? To achieve the research objective, a questionnaire was created and information was collected from a sample size of (200). The findings emphasise the role of E-Accounting as an element of AIS for improving performance and for empowering informed strategic decision making.

Keywords: Accounting Information Systems, E-Accounting, Financial Management , Digital Transformation AIS

DOI: 10.69938/Keas.25020413

1. The introduction

Recent technological developments have transformed the way that we work, and accounting is no exception. E-accounting can involve a variety of forms of accounting on the internet (such as the uses of internet technology for business filing and reporting) and on the devices (such as a company's server or an individual's PC), but the most common form of E-accounting involves some kind of accounting via the net. This evolution in tools has enabled companies to be ever sharper, more efficient and more nimble in staying on top of their numbers. E- Accounting within the AIS (Accounting Information Systems) is considered as a basic need in today's competitive environment of a flexible world economy.

E-Accounting not only replaces the traditional accounting works, but it has also added a time and cost saving special feature due to which the large or small business owner can get the trends of the business; make plan, schedule, etc. that help while in taking decision of the business.” It has availed facility of generation of financial report automatically, online business with financial institution and many other business software with corporate reporting. Reduced paper and printing costs Assurance that financial and other data is accurate, reliable and consistent Validated accurate easy to understand reports and financial statements It is easier to prevent errors Systemization of data1 Velayudhan (2009) [1] outcomes of E-Accounting A study on E-Accounting highlight that E-accounting adoption lead to a significant reduction in manual errors and increased speed and facilitates reporting for compliance in a legal frame regulatory environment. Further, E-Accounting also transforms the traditional role of the accountants as being concerned with routine processing of transactions to one of advice.

Today, the AIS is the central financial reporting and management armature of the band of androids known as our current crop of organizations. It is technical instruments, technology, methods, and official personnel designed to record, accumulate, store, and process financial and budget data to assist decision making [2]. The integration of E-Accounting to AIS is an integrated system which will support the entire accounting functions in the timely process. We explore the E-Accounting/AIS link where the intersection has not been studied before to determine how/if both may influence decision making, organizational satisfaction, and especially financial control.

The study also discusses a few important questions:

- How E-Accounting adds the value of AIS?
- What are the major advantages and disadvantages of E-Accounting and AIS integration?
- Which strategies make adoption effective within organizations?

The implications of digital accounting practices presented in this work are valuable to professionals seeking to gain from the experiences of other businesses in the process of transitioning into an electronic accounting system.

2. Literature Review

The transition of accounting mechanism from manual accounting system to computerized accounting system has been widely studied. Early work focused on the inadequacies of conventional accounting methods such as being error-prone, time-consuming and without live results reporting [3]. E-Accounting systems attempted to solve these by utilizing technology to accelerate work, cut costs and enhance decision making powers.

Based on [4] that AIS is a fundamental part of the accounting information and that it is very helpful for strategic decisions. AIS is actually the merging of accounting with an IT focus to form a system that produces timely and relevant information. E-Accounting (the new method, with cloud computing, machine learning/Automatic learning and artifice.

There are many other articles related to advantages of E Accounting. E.g., [5] reported time-saving of 35% and 20% improved accuracy of financial firms using their Web-based accounting service. Likewise, [6] underscored the significance of E-Accounting in compliance with International Financial Reporting Standards (IFRS).

However, there are limitations to the use of E-Accounting. Typical barriers are security concerns, high costs, and resistance to change [7]. The training and change management of employees are success factors for adoptions that can be seen in the example of [8].

The disruptive nature of new technologies is also described in the literature. Predictive analytics is made possible by AI and machine learning while immutable data is supported by blockchain and scalability and economy are ensured by cloud compute [9]. These developments constitute E-Accounting as a mile marker on the way of the digital changeover in financial accounting.

3. E-Accounting Concept and Evolution

E-Accounting is electronic processing, collection, and transmission of accounting information (exports, imports, invoices..) held by accounting companies and had been exchanged between them across the world. Features: It includes entry of transactions, financial reports, tax management and auditors for using specialized software. E-Accounting has had its evolution in three phases:

First Automation: As the words “basic” imply, basic accounting software was introduced during the 1980s and 1990s, such as QuickBooks and Tally.

Cloud Integration: Implementation of cloud applications (for example Xero and SAP) which can be accessed remotely.

Smart Systems This phase of AI, blockchain and big data analytics for real time Knowledge combined with automation.

E-Accounting has several advantages over manual processes, such as economic, accurate and compliance. As these organizations go for digitization the E-Accounting comes with a solution to manage the complex accounting tasks in a feasible manner.

4. Overview of Accounting Information Systems (AIS)

The fusion of technology and accounting is known as AIS that efficiently stores and processes financial data of the modern business. which consists of:

- Hardware: Computers, servers, and networking devices.
- Software: We need ERP systems, accounting software, and database management tools.
- People: Accountants and IT and management professionals.
- Procedures: Data entry, processing, and reporting procedures.
- Controls: The controls for securing and checking the validity of the data.

AIS application is known to facilitate organizational decision making through the timely, relevance, and accuracy of financial information delivered [10]. Integrated with E-Accounting systems, AIS would be more handy as it would be able to give online reporting of firms recording process (Online recording of transactions (having online engineering process), filling respective documents by e-forms, Profit & Loss Account without use of ledgers) and forecast analysis in a more efficient way on expected money.

5. Relationship Between E-Accounting and AIS

The interaction of E-Accounting and AIS is synergetic enriching the performance of an organization. E-Accounting provides the system and network aspects of AIS and AIS discipline is offered for managing the financial information. Here's what to know about the strong bond.

- Data integration: E-Accounting facilitates easy integration of data across sections.
- Automation: The processing of Information are automatic through AIS with the use of e-Accounting Packages.
- Analytics: Unified platforms provide strong analytics capabilities for strategic decision support.

By using this connection, firms are able to institutionalize their financial books and records, which provides them the ability to leverage how they dissect their financial information on a large scale in the time most accurately and conveniently.

6. Benefits of Integration

The following are a list of the benefits can be achieved by integrating E-Accounting and AIS:

- Efficiency: Automation cuts down on manual labor, and speeds up financial tasks.
- Accuracy: Manual data entry mistakes are reduced by digital processes.
- Reporting: Managers can pull real time financial information from any location on the fly.
- Cost Saving: Labor saving and paper-based process.
- Compliance: Automatically stay in compliance with financial reporting regulations.

Kishinde and Temu [11], firms employing integrated E-Accounting and AIS claimed to have been able to increase operational efficiency by 25% and decrease errors from audit tests by 30%.

7. Effect on the Decision-Making Process and Organizational Performance

Speedy and correct financial data for decision making is possible with E-Accounting. Both real-time-reporting and predictive analytics can be leveraged to make strong strategic decisions around resource deployment and speed to market [12].

AIS with regard to E-Accounting - enabling The Management Control System - through AIS, Performance of E-AIS as below;

- The essential culture of management control through the achievement of the performance culture.
- Budgeting and Forecasting: Machine learning models to forecast the future.
- Cost Management: Analysis and identification of missed savings opportunities.
- Performance Measurement: •KPIs to monitor financial and operational performance.

Evidence shows that companies that used E-Accounting in their AIS had enhanced profitability, cash flows, and compliance compared to those that used traditional systems [13].

8. Implementation Risks and Challenges

E-Accounting implementation issues are [14]:

- Cybersecurity: As stakeholders rely more on virtual platforms, infrastructure and applications, the cyber-attacks risk is higher.
- High Upfront Investment: The cost of software, hardware and training can be high.
- Change Resistance: Employees might resist the new technology.
- Regulatory Complications: Navigating various legal frameworks is often difficult.

9. Practical Implementation Framework

The adoption and integration of E-Accounting into AIS system requires a methodological process.

The proposed framework includes:

Step 1: Needs Assessment

Organizations need to review the current accounting system they are using and to pinpoint the weakness of their systems and positioning the E-Accounting to their strategy approach.

Step 2: Technology Selection

Selecting the best software solution is a key success factor. Factors include:

- Scalable: Capacity to support future growth.
- Compliance: IFRS, GAAP, or Country Specific Compliance.
- Integration: ERP & AIS integration to modules.

Step 3: Infrastructure Development

Organizations must ensure they have:

- High-speed internet connectivity.
- Secure cloud storage.
- Backup and disaster recovery systems.

Step 4: Employee Training

In order to break resistance and drive effective use of new systems, accountants and the finance team have to be trained.

Step 5: Pilot Implementation

A phased approach also allows for system testing and corrections.

Step 6: Deployment to Production and Monitoring

Upon successful pilot testing, there shall be full-scale roll out together with:

- Monitoring: Keep an eye out for everything from performance to security.
- Audits: For compliance and an accuracy check.

- Upgrades: Routine software updates for new features and security updates.

10. Real-World Case: SAP at Siemens

A leading international technology conglomerate Siemens applied the SAP's E-Accounting system within its AIS for automatization of its financial proceedings. The goals were:

- Reduce manual accounting work.
- Enable real-time global financial consolidation.
- Improve compliance with IFRS.

Implementation Process

- Moved from legacy applications to the SAP ERP Finance Module.
- Launched and pioneered the field of AI-based predictive financial analytics.
- Implemented invoice verification using blockchain to increase transparency.

Outcomes

- Speed: Cut month end closing time from 10 days to 3 days.
- Error Reduction: Reduced financial discrepancies by 40%.
- Compliance: Full IFRS compliance in all companies.

This study shows how E-Accounting systems are scalable and effective in bigger MNC's [15].

11. Fictional E- accounting Cases based- On -Applied Case Study of E-Accounting in SME – “TechnoCraft Solutions”

Techno Craft solutions, a SME in the manufacturing industry, struggled with manual accounting system that resulted in late financial reports and recurring audit problems.

Challenges

- Lack of real-time financial visibility.
- High costs of operation during manual bookkeeping.
- Difficulty meeting regulatory compliance.

Solution

Incorporated a cloud E-Accounting system with AIS with the following characteristics:

- Automated invoicing and payroll.
- Real-time dashboard for financial KPIs.
- AI-powered fraud detection.

Result

- Productivity: Bookkeeping time was decreased by 60%.
- Decision-Making Better Forecasting demand and distributing your budgets.
- Compliance: Automatic filing of Taxes has only increased the compliance and has minimized the penalty.

E-Case Step by Step The following is an example of a fictitious case that demonstrates how SMEs can benefit from E-Accounting for saving costs and achieving operational excellence.

12. Comparative Analysis: Traditional vs. E-Accounting

The accounting practices have changed profoundly in the last few decades, shifting from traditional methods that are manual and paper-based system to electronic and computerized technology-based accounting systems- known as E-Accounting. Table below demonstrates a comparative analysis.

Table 1:Comparative Analysis E-Accounting VS Traditional Accounting

Aspect	Traditional Accounting	E-Accounting
Data Entry	Manual	Automated & Digital
Accuracy	High error risk	Low error risk due to automation
Cost	High (paper, storage, labor)	Reduced due to digitalization
Compliance	Manual updates required	Automated updates for regulations
Scalability	Limited	Highly scalable via cloud and ERP systems

The following comparison will illustrate the major distinctions along different fronts:

A. Nature of System

- Traditional Accounting: Requires manual entry of the cash inflows and outflows into a ledger or Excel. Functions such as posting journal entries, preparing trial balance and reconciliation are prepared manually by accountants.
- E-Accounting: Uses computers and computerized accounting system, cloudbased systems for running accounting operations. Some examples are QuickBooks, Xero, SAP, and Oracle NetSuite.

B. Data Recording and Storage

- Traditional Accounting: Records are kept in paper or local computer files. Space is a consideration as storage is physical and historical data can take time to fetch.
- E-Accounting: Records are kept digitally, in the cloud, so they may be accessed immediately from anywhere. The data is automatically backed up and recovered.

C. Accuracy and Error Rate

- Traditional Accounting: Realistic scope for human errors in data, posting, and calculation. Error detection and correction is time consuming.
- E-Accounting: Computer generated numeric decreases the chance of math's error. Including validation checks reduces posting errors and inconsistencies.

D. Speed and Efficiency

- Traditional Accounting: Transactions processing, reporting and book closure are relatively laborious jobs that may take weeks or even months.
- E-Accounting: Transactions are posted live, and reports can be run in real-time. Month end closing rounds become far less long.

E. Cost

- Traditional Accounting: There will be fewer initial costs but high maintenance costs for labor, stationery, and physical storage. Needs more accounting personnel to perform manual tasks.
- E-Accounting: Higher upfront software and implementation investment, however lower total costs over time with fewer personnel and more efficient operations.

F. Security and Backup

- Traditional Accounting: Physically susceptible to fire, theft, and data loss. Backup means xeroxes and paper.

- E-Accounting: Provides encryption, backup and DR -Offers data encryption, automatic backups, and disaster recovery options to minimize the risks of data loss.

G. Compliance and Audit

- Traditional Accounting: Checks are based off manual, and can be delayed. Keeping an audit trail is more challenging.
- E-Accounting: Compliance is codified (IFRS, GAAP) and systems track digital audit trails, enabling faster, more transparent audits.

H. Decision-Making Support

- Traditional Accounting: gives the background data without analysis. Forecasting and scenario analysis need to be done manually.
- E-Accounting: Provides you with the dashboards, analytics, and predictive modeling that you need to determine the best course of action now

I. Scalability

- Traditional Accounting: Access limited to a physical location and operating times.
- E-Accounting: Cloud-based solutions provide round-the-clock access from anywhere in the world and can support remote workers and businesses with more than one location.

J. Scalability

- Traditional Accounting: May not be scalable with business growth. With greater number of branches or products, there is a proportionate increase in men and material
- E-Accounting: Great expandability with little impact on infrastructure.

K. Environmental Impact

- Traditional Accounting: Too much paper and storage resources, wasting the environment.
- E-Accounting: Paperless operation is far more environmentally friendly.

13. Role of Emerging Technologies

Emerging technologies enhance E-Accounting capabilities:

- AI: predictive analytics for forecasting and anomaly detection [16].

Artificial intelligence is essential to modern accounting because it improves data accuracy and changes the way everyday operations are performed. AI enables accountants to concentrate on more complex decision-making and strategic analysis by automating repetitive tasks like data entry, invoice processing, and payroll management. This change increases corporate efficiency and cost-effectiveness while lowering the possibility of human error.

- Blockchain: A secure and transparent financial transaction ledger [17].

Through blockchain technology, transactions are becoming more transparent and trustworthy. Because blockchain is a distributed ledger, all entries are immutable and timestamped, ensuring greater accuracy in record-keeping.

Banks and insurance companies that require strict compliance and audit trails can benefit from this technology. In addition to automating and securing contract management processes, smart contracts also reduce the amount of time and money spent on processing contracts.

The decentralized nature of blockchain addresses concerns about data integrity and security. Data in blockchain environments is distributed across a network, making unauthorized alterations almost impossible.

- Cloud Computing: Allow dynamism and remote connection [18].

Accounting practices have been transformed by cloud computing due to its scalability, flexibility, and efficiency. Accounting operations can be significantly enhanced through the use of cloud-based accounting systems. In order to facilitate timely decision-making and financial planning, real-time financial data processing is one of the key services. This real-time capability is crucial in today's fast-paced business environment, where quick access to financial data can provide a competitive edge. Cloud accounting systems also provide automated financial reporting and bookkeeping, which is a vital function. Invoicing, payroll processing, and transaction recording are just a few of the standard accounting duties that these systems may automate, saving time and effort by eliminating the possibility of human error. Accounting procedures are streamlined by automation, which also guarantees improved consistency and accuracy in financial records.

- RPA (Robotic Process Automation): Used for processing of repetitive tasks such as invoices [19]. In the discipline of accounting, robotic process automation, or RPA, has become a disruptive force that is changing the landscape of the profession and redefining conventional methods. RPA's incorporation into accounting procedures marks a shift from traditional techniques toward a more precise, technologically advanced, and efficient strategy.

14. Cybersecurity and Compliance

As accounting has become increasingly digitalized, cybersecurity has evolved significantly. Cybersecurity began as a technical risk restricted to the IT industry, designed to protect hardware, software, and networks from disruptions. With the growth of AIS and businesses relying increasingly on digital technology, cybersecurity threats have risen into strategic issues directly affecting accounting information's integrity and reliability. The digital revolution has enabled AIS to expand, automate and integrate various financial functions into a central system. Additionally, this transformation has exposed companies to various cybersecurity threats, such as data breaches and ransomware attacks. Compromised or manipulated accounting data can undermine financial reporting accuracy and erode stakeholder trust. As a result, cybersecurity is now considered a critical component of accounting systems integrity. It is crucial for companies to implement cybersecurity strategies that address these risks[20].

E-Accounting introduces cybersecurity challenges:

- Data Breach: Valuable financial information often falls prey to hackers.
- Compliance: Remain compliant with GDPR, SOX and more.

Solutions include:

- Multi-factor authentication.
- End-to-end encryption.
- Regular vulnerability assessments [20].

15. Practical Aspect

To complete the practical aspect of the research, a questionnaire was developed to collect data, which is presented in Appendix 1. The research community consists of auditing accountants, a financial manager, and an information systems manager who are familiar with the electronic accounting information system. The information received was processed using the Specialized Package (SPSS) program, and the analysis was as follows:

A. Descriptive analysis of the characteristics of the research samples

Accountants constitute a large percentage of those who answered the questionnaire, as shown in the table below.

Table 2. Distribution of the research sample according to job qualification

Jop qualification	Number	Percentage%
Auditors/Auditors	15	7.5%
Information Systems Staff	25	12.5%
Administrative	30	15%
Finance Managers	40	20%
Accountants	80	40%
Other (Consultants, etc.)	10	5%
Total	200	100%

It is clear that from the table 40% from the responses are from accountants, 20% from finance managers and 15% from administrative, and 12.5% from information systems staff.

The relative distribution of academic qualifications in the questionnaire form shows that the respondents are those with a diploma degree or higher, due to their experience and knowledge of the subject of electronic information systems. The results are shown in the table below.

Table 3. Distribution of the research sample according to Academic qualification

Academic qualification	Number	Percentage%
Doctorate	20	10%
Master's	50	25%
Bachelor's	110	55%
Diploma	20	10%
Total	200	100%

The relative distribution of years of work experience shown in Table 4 shows that those with intermediate experience (5–10 years) represent the largest proportion (35%), indicating that the sample is dominated by employees with strong practical experience but not yet at the top of the career ladder. Beginners (<5 years) constitute 25% of the sample, providing a fresh perspective on emerging trends in e-accounting. Those with long experience (≥ 15 years) constitute 15%, adding strategic insights from veterans.

Table 4. Distribution of the research sample according to work experience

Years	Number	Percentage%
15 years and above	30	15%
10 -15 years	50	25%
5 to less than 10 years	70	35%
Less than 5 years	50	25%
Total	200	100%

B. Results and testing hypotheses

In order to apply statistical analysis to descriptive answers and convert these answers into quantitative data to test the validity or falsity of the research hypotheses, the researchers used the Likert scale with five indicators, which range between strongly agree, agree, neutral/don't know, disagree, strongly disagree, by using the corresponding weights, which are (1/2/3/4/5). The results are displayed in tables (6-13) as follows.

Table 5. Analysis of questionnaire paragraphs about Adoption of E-Accounting

Questions	Mean	Standard Deviation	Relative Importance %
There is administrative support for adopting electronic accounting	3.54	1.14	71%
The use of electronic accounting is increasing	3.75	1.09	75%
My organization has started using electronic accounting	3.70	1.13	74%

The results showed a relatively high level of adoption ($\approx 74\text{--}75\%$), reflecting a serious move toward adopting electronic accounting within organizations. Administrative support was high ($\approx 71\%$), indicating management's awareness of the importance of this digital transformation in improving financial performance. However, there is a clear disparity between organizations in the speed of adoption and level of investment, meaning that some organizations are still in the early stages while others are more advanced. Good adoption reflects a growing awareness of the importance of digital transformation, but it requires strategic plans to ensure comprehensive implementation.

Table 6. Analysis of questionnaire paragraphs about Integration with the AIS

Questions	Mean	Standard Deviation	Relative Importance %
Integration between systems facilitates access to financial information.	3.66	1.09	73%
Electronic systems are directly linked to the AIS	3.28	1.12	66%
There is compatibility between electronic accounting and the organization's needs.	3.50	1.14	70%

Integration was at a moderate level ($\approx 66\text{--}73\%$), indicating that the linkage is present but incomplete. Some organizations have successfully integrated their electronic accounting systems with AIS, allowing for accurate and rapid reporting, while others still rely on manual processing of some data. Good integration with AIS is a prerequisite for maximizing the benefits of electronic systems, as it reduces errors and increases the reliability of financial information. Although integration exists, it requires further development in linking financial databases to comply with international accounting standards.

Table 7. Analysis of questionnaire paragraphs about Infrastructure

Questions	Mean	Standard Deviation	Relative Importance %
Technical support is available continuously.	3.25	1.22	65%
Sufficient hardware and software.	3.34	1.20	67%
A robust technical infrastructure is available.	3.28	1.23	66%

It achieved a relatively poor rating ($\approx 65\text{--}67\%$), which is one of the most significant challenges hindering effective implementation.1) Weak infrastructure manifests itself at three levels:2)Hardware: Some institutions still use outdated computers or weak networks.3) Software: The lack of modern systems compatible with electronic accounting requirements.4) Technical support: Limited staff capable of managing systems and resolving technical issues. Any weakness in infrastructure limits the full benefit of electronic accounting and negatively impacts the accuracy and speed of data processing.

Table 8. Analysis of questionnaire paragraphs about Security

Questions	Mean	Standard Deviation	Relative Importance %
The system is updated against security threats.	3.20	1.22	64%
Financial data is protected.	3.26	1.20	65%
There is a system of permissions and access limits.	3.30	1.21	64%

Security was the weakest ($\approx 64\text{--}66\%$), reflecting a growing concern among organizations and accountants about protecting financial data. Main Challenges are Cyber threats (hacking, viruses, ransomware attacks), Poor security updates in some systems, and Lack of strict policies for managing permissions within the system.

This deficiency exposes organizations to financial and legal risks. Without a robust security system, organizations cannot fully trust the results of electronic accounting, no matter how accurate they are.

Table 9. Analysis of questionnaire paragraphs about AIS System Quality

Questions	Mean	Standard Deviation	Relative Importance %
It helps reduce errors.	3.49	1.15	70%
It facilitates the extraction of financial reports.	3.65	1.11	73%
The system provides accurate and up-to-date information.	3.63	1.08	73%

The rating was relatively high ($\approx 70\text{--}73\%$), indicating that electronic accounting has enhanced the quality and accuracy of financial information.

Main beneficiaries are:

- 1) Management: By obtaining quick and accurate financial reports.
- 2) Accountants: By reducing manual errors.
- 3) Auditors: Thanks to the ease of tracking financial transactions electronically.

Electronic accounting has proven effective in raising the quality of information, but continued improvement requires enhanced integration and security.

Table 10. Analysis of questionnaire paragraphs about Decision making

Questions	Mean	Standard Deviation	Relative Importance %
The system reduces reliance on personal judgment.	3.40	1.18	68%
Decisions became more accurate.	3.61	1.14	72%
The system helped speed up decisions.	3.54	1.15	71%

Results ($\approx 68\text{--}72\%$) confirmed that electronic accounting improved the administrative and financial decision-making process. Key benefits are decisions became faster due to the availability of real-time data, decision accuracy increased thanks to modern accounting information, and reliance on personal estimates decreased, although it still exists.

Electronic accounting did not eliminate the role of human expertise in decision-making, but it provided a stronger database to support the decision-making process.

Table 11. Analysis of questionnaire paragraphs about Organizational Performance

Questions	Mean	Standard Deviation	Relative Importance %
B. Improved productivity	3.53	1.14	71%
Contributed to improved work efficiency.	3.47	1.16	69%
C. Increased customer/beneficiary satisfaction.	3.38	1.19	68%

Corporate performance improved significantly ($\approx 68\text{--}71\%$) due to increased efficiency and productivity, reduced errors and costs, and customer satisfaction improved to a slightly lower degree ($\approx 68\%$), indicating that the impact of e-accounting on customers is not always direct.

Improved corporate performance is a natural consequence of digital transformation, but to maximize the impact on customer satisfaction, the accuracy of financial information must be reflected in the quality of services provided.

Table 12. Analysis of questionnaire paragraphs about Organizational Performance

Questions	Mean	Standard Deviation	Relative Importance %
B. Improved productivity	3.53	1.14	71%
Contributed to improved work efficiency.	3.47	1.16	69%
C. Increased customer/beneficiary satisfaction.	3.38	1.19	68%

16. Discussion

The integration of E-Accounting with AIS has revolutionised the treatment of financial information in business. This paper found that E-Accounting make decision more accurate and pointed out that operating efficiency and to be satisfied the compliance. But to make this work there needs to be robust change management and the best cyber security in place.

The survey results showed that the participants' average responses regarding the dimensions of electronic accounting and the accounting information system ranged from 3.2 to 3.5 on a Likert scale of 1–5, indicating a medium–high level of agreement. This result indicates that organizations have indeed begun to increasingly adopt electronic accounting, and that the positive impact is beginning to appear on the quality of accounting information, decision-making, and organizational performance. This is consistent with previous literature stating that the shift toward digitalization in accounting activities is no longer an option, but rather a necessity in light of the competitive business environment and rapidly changing markets. Table 13 indicates the Statistical analysis of the questionnaire based on metrics such as Cronbach’s(α), and Means and deviations.

Table 13. Statistical analysis of the questionnaire based on metrics such as Cronbach’s(α), Pearson, and Means and deviations

Metric	Cronbach’s(α)	Mean±Deviation
Adoption	0.77	3.56 ± 0.51
Integration	0.74	3.37 ± 0.54
Infrastructure	0.75	3.24 ± 0.56
Security	0.73	3.09 ± 0.55
AIS Quality	0.80	3.41 ± 0.53
Decision Making	0.78	3.33 ± 0.52
Performance	0.76	3.21 ± 0.56

There is a general tendency to agree that there is moderate adoption of electronic accounting, an improvement in the quality of information, and a positive impact on decision-making and performance. All Cronbach’s(α) values are within an acceptable range (≥ 0.7), indicating good internal consistency of the items.

In adoption term, it showed a relatively high mean (3.56), indicating that the sampled organizations have adopted electronic accounting systems to a significant degree. The strong correlation between adoption and AIS information quality ($r \approx 0.60$) reflects that the adoption process does not stop at software installation, but extends to directly impact the quality of the data generated by the system. This is consistent with the hypothesis that modern accounting technology is a gateway to improving the characteristics of accounting information (accuracy, relevance, comparability, and timeliness).

In term of integration showed a medium-high correlation with AIS information quality ($r \approx 0.58$).

This indicates that the integration of electronic accounting with other systems (such as ERP, HR systems, and supply chains) enhances the system's ability to provide a comprehensive picture of financial performance.

Although in technical infrastructure the overall average was relatively lower (3.24), a moderation test revealed that infrastructure plays a reinforcing role. That is, organizations with strong infrastructure (servers, networks, databases, backup systems) benefit more from the adoption process than organizations with weaknesses in these areas. This aligns with the saying: "Technology without appropriate infrastructure is ineffective."

In the Information Security the average was the lowest (3.09), reflecting a relative variance or weakness in this area. Weak security may explain some of the participants' reservations about complete trust in digital systems.

The most notable result is that accounting information quality was strongly associated with both adoption and integration, and in turn showed a very strong correlation with decision-making ($r \approx 0.70$). This reinforces the theoretical model that assumes that accounting information quality represents the mediating axis between e-accounting and decision-making.

Decision-Making showed a mean of 3.33 and was strongly associated with information quality and organizational performance. The results support the hypothesis that e-accounting is not an end in itself, but rather a means to improve the quality of managerial decisions.

Organizational performance showed mean of 3.21 was relatively lower but strongly associated with decision-making ($r \approx 0.65$). This indicates that performance improvement does not arise directly from adoption, but is influenced through a chain of relationships that begins with adoption → information quality → decision → performance.

Regression analysis confirmed this hypothesis as the effect of direct adoption on performance decreased after the decision was introduced as a mediating variable (evidence of partial mediation).

17. Conclusion

E-Accounting is not simply the use of the accounting software but dedicated computer accounting is itself a computerized system of accounting which uses the accounting and other software's which are compatible with the computer and system. When integrated in AIS, the quality of data becomes better, responding cycles are faster, and business can make data and model driven decision. No plan is perfect (security, ease of implementation) but Pros... far outweigh those Cons.

The near future cloud, AI and blockchain technologies would E Accounting be backbone of any business someday. Companies that capture this shift will gain competitive strengths in productivity, compliance and agility. Electronic accounting has proven its ability to improve the quality of financial information and support decisions. Major strengths: administrative adoption, data quality, and rapid decision-making. Major weaknesses: infrastructure and cybersecurity. Conclusions can be summarized as:

1. Electronic accounting has become a necessity, not an option, due to its direct impact on the quality of accounting information systems (AIS).
2. Integration between systems is a critical factor in the success of electronic accounting and the added value it generates for the organization.
3. Cybersecurity remains a major vulnerability, as organizations need to strengthen security controls and continuously update systems.
4. The quality of information generated by electronic accounting systems leads to better and faster management decisions.

5. Improved organizational performance is a natural result of using electronic accounting, as customer satisfaction, productivity, and financial efficiency increase.
6. The main challenges focus on: poor training, lack of infrastructure in small and medium-sized enterprises, and security risks.

18. Future Research Directions

- Examining the potential that blockchain can offer transparency and fraud prevention.
- A review of the adoption of E-Accounting in AMDEs.
- Exploring the impact of E-Accounting through AI in predictive financial modelling.
- Establishing E-Accounting service platform based cyber-security regulations.

Appendix (1)

Questionnaire on "The Role of Electronic Accounting and its Impact on the Accounting Information System (AIS):

This questionnaire aims to study the impact of implementing electronic accounting on accounting information systems (AIS) and its role in improving information quality, decision-making, and institutional performance. All data is confidential and used for academic research purposes only.

Section One: Demographic Data		
1	Gender	: (Male/Female)
2	Age	(Under 25 – 25-34 – 35-44 – 45+)
3	Educational Qualification	(Bachelor's – Master's – Doctorate – Other)
4	Current Position	(Accountant – Auditor – Financial Manager – Information Systems Manager – Other)
5	Years of Experience	(Less than 5 – 5-10 – 11-15 – More than 15)
6	Type of Organization	(Governmental – Private – Non-Profit)
7	Size of Organization	(Small – Medium – Large)
8	Does your organization use electronic accounting systems?	(Yes/No)
9	If yes, what is the name of the system (optional).	

Section Two: Adopting electronic accounting						
No	Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Electronic accounting systems are easy to use in my organization.					
2	Employees have received adequate training on using electronic accounting.					
3	Senior management supports the transition to electronic accounting.					
4	Systems are regularly updated to meet new requirements.					
5	: Technical support is available to resolve system-related issues.					
6	: Implementing electronic accounting reduces accounting errors.					

Section Three: Adopting electronic accounting						
No	Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Electronic accounting systems are integrated with other financial and administrative systems.					
2	Integration between systems facilitates data exchange within the organization.					
3	Existing systems effectively support internal audit processes.					
4	Integration reduces duplication of data entry.					
5	System integration increases operational efficiency.					
6	The technical infrastructure (hardware/networks) is sufficient to support electronic accounting.					
7	Stable and fast internet connections are available to support the systems.					
8	Data backups are performed regularly.					
9	The organization invests in updating and maintaining its technical infrastructure.					

Section Four: Security & AIS Quality						
No	Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Electronic accounting systems provide strong data protection.					
2	Effective access controls are in place to protect information.					
3	Software is updated to protect against cyber threats.					
4	Security policies are clear and adhered to.					
5	The systems provide accurate accounting information.					
6	Accounting information is available in a timely manner.					
7	The information provided is relevant to management decisions.					
8	AIS reports are understandable and easy to use.					
9	AIS data quality has improved thanks to electronic accounting.					

Section Six: Open-ended Questions (Optional)		
No	Question	Answer
1	What are the most significant benefits your organization has achieved from using electronic accounting?	
2	What are the most significant challenges you have faced?	
3	What are your suggestions for further developing the electronic accounting application?	

Reference

1. A. Nurwanah, "Cybersecurity in Accounting Information Systems: Challenges and Solutions," *Advances in Applied Accounting Research*, vol. 2, pp. 157–168, Sep. 2024, doi: 10.60079/aaar.v2i3.336.
2. S. Prasetianingrum and Y. Sonjaya, "The Evolution of Digital Accounting and Accounting Information Systems in the Modern Business Landscape," *Advances in Applied Accounting Research*, vol. 2, no. 1, pp. 39–53, Jan. 2024, doi: 10.60079/aaar.v2i1.165.
3. U. Chahal, "Thought Comparative Analysis of Traditional and Modern Accounting Practices," *UGC CARE I Journal of East-West*, vol. 15, no. 1, 2025, [Online]. Available: <https://jetjournal.us/>
4. O. Samir, A. Omari, T. Zohra, B. Assia, and B. Laria, "The Moderating Role of System User
5. Competence in the Influence of Accounting Information Systems on Managerial Decision-Making:

- 6.
7. A Case Study on North African Countries,” *REMITTANCES REVIEW*, vol. 9, pp. 3920–3931, Sep. 2024, doi: 10.33282/rr.vx9i2.203.
8. A. Atadoga, U. Umoga, O. Lottu, and E. Sodiya, “Evaluating the impact of cloud computing on accounting firms: A review of efficiency, scalability, and data security,” *Global Journal of Engineering and Technology Advances*, vol. 18, pp. 65–75, Feb. 2024, doi: 10.30574/gjeta.2024.18.2.0027.
9. M. P. Eshov, G. K. Abdurakhmanova, A. U. Burkhanov, N. B. Abdusalomova, and S. T. Ergasheva, *Development of International Entrepreneurship Based on Corporate Accounting and Reporting According to IFRS: Part A*. Emerald Publishing Limited, 2024.
10. D. Gulin, M. Hladika, and I. Valenta, “Digitalization and the Challenges for the Accounting Profession,” *ENTRENOVA-ENTERprise REsearch InNOVAtion*, vol. 5, no. 1, pp. 428–437, 2019.
11. D. Jackson and C. Allen, “Technology adoption in accounting: the role of staff perceptions and organisational context,” *Journal of Accounting & Organizational Change*, vol. 20, no. 2, pp. 205–227, 2024.
12. S. S. Smith, “Emerging Technologies and the Accounting Profession: Trends and Topics for Practitioners to Consider,” *Asian J. Financ. Account*, 2019.
13. T. A. Elsharif, “The elements of accounting information systems and the impact of their use on the relevance of financial information in Wahda Bank—Benghazi, Libya,” *Open Journal of Business and Management*, vol. 7, no. 3, pp. 1429–1450, 2019.
14. A. Lymer, R. Debreceeny, G. L. Gray, and A. Rahman, “Business reporting on the Internet,” 1999, *International Accounting Standards Committee London*.
16. B. Ke, “Accounting research for the digital age,” *The British Accounting Review*, p. 101443, 2024.
17. F. Thursina, “Unveiling the transformational impact of digital technologies on accounting and finance,” *West Science Accounting and Finance*, vol. 1, no. 02, pp. 45–51, 2023.
18. W. A. Cram, T. Wang, and J. Yuan, “Cybersecurity research in accounting information systems: A review and framework,” *Journal of Emerging Technologies in Accounting*, vol. 20, no. 1, pp. 15–38, 2023.
19. T. Samara, “AI-driven SAP S4/HANA, advancing firm operational efficiency, decision-making and resource optimization,” *International Journal of Innovative Research and Scientific Studies*, vol. 8, pp. 4795–4811, Jun. 2025, doi: 10.53894/ijirss.v8i3.7613.
22. O. M. Lehner, K. Ittonen, H. Silvola, E. Ström, and A. Wührleitner, “Artificial intelligence based decision-making in accounting and auditing: ethical challenges and normative thinking,” *Accounting, Auditing & Accountability Journal*, vol. 35, no. 9, pp. 109–135, Jun. 2022, doi: 10.1108/AAAJ-09-2020-4934.
23. I. Georgiou, S. Sapuric, P. Lois, and A. Thrassou, “Blockchain for accounting and auditing—Accounting and auditing for cryptocurrencies: A systematic literature review and future research directions,” *Journal of Risk and Financial Management*, vol. 17, no. 7, p. 276, 2024.
24. S. Moudud-UI-Huq, Md. Asaduzzaman, and T. Biswas, “Role of cloud computing in global accounting information systems,” *The Bottom Line*, vol. 33, no. 3, pp. 231–250, Jun. 2020, doi: 10.1108/BL-01-2020-0010.
25. A. Perdana, W. E. Lee, and C. Mui Kim, “Prototyping and implementing Robotic Process Automation in accounting firms: Benefits, challenges and opportunities to audit automation,” *International Journal of Accounting Information Systems*, vol. 51, p. 100641, 2023, doi: <https://doi.org/10.1016/j.accinf.2023.100641>.
26. M. Podrecca, G. Culot, G. Nassimbeni, and M. Sartor, “Information security and value creation: The performance implications of ISO/IEC 27001,” *Comput Ind*, vol. 142, p. 103744, 2022, doi: <https://doi.org/10.1016/j.compind.2022.103744>.