

Artificial Intelligence and Electronic Accounting Disclosure: An Analytical Study

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Abstract:

Purpose: The research aims to test the association between artificial intelligence and electronic accounting disclosure for financial reports. Artificial intelligence could affect the efficiency and effectiveness of electronic accounting disclosure for financial reports.

Design/methodology/approach: This research collects the data by using the questionnaire technique distributed to accountants and auditors in companies listed on the Iraq Stock Exchange and financial analysts in financial brokerage companies.

Findings: This research finds that the application of artificial intelligence techniques positively impacts the efficiency and effectiveness of electronic accounting disclosure. Thus, artificial intelligence techniques have many advantages and positive impacts regarding the necessity of their application in business companies.

Originality/value: Although many studies have investigated electronic accounting disclosure, no research has addressed the association between artificial intelligence and the efficiency and effectiveness of electronic accounting disclosure in financial reports in emerging markets in Iraq. In addition, this research shows the importance of the efficiency and effectiveness of electronic accounting disclosure in financial reports to inspire companies to provide financial reports with a high level of transparency. Also, the results offer valuable insight into improving the quality of financial reports to attract foreign investors.

Keywords: financial reports, artificial intelligence and electronic accounting disclosure.

Introduction: It was predicted by science fiction stories and films that an artificial intelligence would consist of a group of robots who will rule the earth; this seems to be coming true now. The fact is that artificial intelligence can now do so much that before only human beings could do such as translations, manufacture of goods, customer care services, financial and other business as well as accountancy. The society has experienced various issues such as the ones related to the information and communication technology, which have led to radical changes. Many organizations today apply contemporary technological approaches for their operations instead of using manual ones as it

was in the past. This integration has posed numerous challenges on the profession of accounting and auditing requiring it to face these changes (Abdulhussein & Barrak, 2021). Consequently, AI was highly demanded by most companies and accounting divisions for implementation into their systems and processes worldwide. This resulted in numerous transformations in every sector's working techniques and practices. The use of AI in accounting raised many concerns about the possible modifications that could be made by this technology. This text reveals how artificial intelligence is transforming accounting today (Al-Kawaz, Al-Daami, & Abbas, 2023). The vast information that is increasingly available and spreadingly

diverse can now be found following the expansion of data communication lines over years involving joining many individuals in the process. This is because there are more individuals who need to deal with a lot of information and data that should be processed, kept and given to different systems for proper utilization. As a result, numerous risks have evolved while there are emerging challenges on which information should be relied upon, which could have an effect on the users' trust. In addition, the business community is increasingly demanding new accounting information that follows closely behind IT sector advancements. Therefore, finding and implementing advanced intelligent systems and technologies is important in enhancing information trustworthiness and usability for users' information purposes such as; solving investment problems in a better way, taking rational decisions and avoiding a multitude of risks and associated legal liabilities. This study seeks to answer how artificial intelligence and efficient have influence on electronic accounting disclosure effective. For this purpose, the following related questions have been formulated:

- What is the meaning of electronic accounting disclosure and why is it so important in business companies today?
- Which risks and difficulties impact the process of e-accounting disclosure for financial reports?
- What are some examples of artificial intelligence methodologies? What do you believe about the potential effects of using it in business companies?
- Does applying artificial intelligence methodologies help in enhancing e-accounting disclosure? Its main objective is to evaluate how artificial intelligence affects the efficiency of e-accounting disclosure. Therefore, objectives for carrying out this research are as follows:
 - Outline the concept of electronic disclosure and identify both sides of the debate for its application in business companies.
 - Determine factors that affect e-accounting disclosure of financial reports.
 - Acquire knowledge on artificial intelligence techniques, including their expected applications within business settings.
 - Describe how artificial intelligence techniques can improve e-accounting disclosure process regarding financial reports?

This work is significant in academic and other ways:

Scientifically: The research is justified by the importance of artificial intelligence itself, positive results obtained from the use of artificial intelligence techniques, the relevance of artificial intelligence in

business corporations and its role in ensuring better e-accounting of financial reports that would be beneficial for various users. Practically, the changes seen for accountant's environment have led to the necessity of using AI in accounting so that we can work with machines which will be able to give us quicker output that is also more precise than that of humans. However, it remains vitally important for us to determine what artificial intelligence is, how sophisticated it is these days, what role does it play in accounting, why should business companies apply this tool considering numerous competitive advantages it can create, and how can it help them with process improvement? E-Accounting Report Expose

LITERATURE REVIEW

Definition of artificial intelligence in accounting

Artificial intelligence refers to the branch of computer science that deals with creating intelligent information systems and technologies which can be used in programming computers to make them act like humans. In accounting, artificial intelligence enables a computer and its applications to undertake many accounting functions and routine manual jobs but also decrease the incidence of mistakes so that they increase user's speed at analyzing reports and other accounting information compared with traditional accountings. This is because AI in accounting is meant to improve certain aspects in an individual's audit judgment, enhancing the effectiveness, efficiency, and economy of the audit process (AL-Yasar, Hussein, & Barrak, 2019).

- Ability to handle complex and difficult operations when some data is missing.
- AI also processes and analyses both digital and non-digital data.
- It offers expert systems supporting human expertise and providing various options for decision making by specialists.
- Use of techniques that resemble those employed by the human mind in addressing problems
- Self-sufficiency and forecast ability
- Surveillance and control functions

Benefits and applications of using artificial intelligence in accounting

It can be emphasized that artificial intelligence technologies and modern methods have played an important role in the accounting profession, as the accounting and auditing sector has witnessed many changes due to technological development. Many smart technologies have emerged, such as digital accounting, one of the most important artificial intelligence tools that support the effectiveness of accounting and the work of accountants and auditors. New services have also been

provided to clients through modern technology, such as financial and accounting consultations and studies (Berdiyeva, Islam, and Saeedi, 2021). Below are the most important applications and benefits of using artificial intelligence in companies and the accounting department in particular:

- Track expenses and rationalize consumption

Artificial intelligence contributes to tracking and managing an organization's expenses, as through these technologies, it is possible to know which sectors need financing and which activities do not require huge financing, and thus direct spending and expenses in the place that is supposed to generate more profits. This contributes to rationalizing consumption, reflected in the organization's profitability (Qasaimeh et al., 2022).

- Building an accounting strategy for the company

Artificial intelligence is about automation, as techniques that operate with artificial intelligence, such as machine learning, can contribute to the process of collecting and analyzing data and producing information that the accounting system relies on in automated ways without human intervention. For example, using artificial intelligence techniques, it is possible to reach some results or use historical financial data and information to link financial events (Alrfai et al., 2023). This data can also be combined with some reports and studies to make predictions about profits and revenues and forecast the budget, which is different from reports that stop at Historical information, which helps guide decision-making and contributes to building a comprehensive accounting strategy for the company.

- Facilitate data recording

Artificial intelligence techniques recognize all types of documents, and then all the data and information contained in these documents are extracted automatically, whether these documents contain texts, images, or any other type. Then, this data is processed, customized and displayed in specific patterns according to its type where artificial intelligence provides OCR technology in the accounting field to automatically enter data on expenses and other accounting entries, which is an abbreviation for optical character recognition or optical character recognition, whereby scanning invoices or paper files, artificial intelligence can capture data and even automatically categorizes the expenses it captures, which eliminates the need for data entry and manual classification (Khudhair et al., 2019).

- Improving business and supporting work efficiency

Artificial intelligence techniques in accounting rely on algorithms that support the principle of continuous improvement, which contribute to the accuracy of

review and audit processes without the need for rest periods or the presence of any errors or gaps. Artificial intelligence systems can also automate many routine accounting tasks, including entering and recording data, reconciling and recording invoices, preparing expense reports, tracking price changes, reconciling accounts, sorting transactions, preparing reports, and other tasks. This reduces costs and time by 80%, thus enhancing focus on strategic decisions and improving work efficiency (Nwankwo, 2023).

- Support compliance and verify the legitimacy of transactions.

Accounting systems powered by artificial intelligence can ensure the accuracy of audit and compliance processes, that is, verifying that all financial and accounting transactions carried out by the organization follow the regulatory and legislative framework. This is verified by tracking and analyzing documents and reporting any problems or anomalies. Artificial intelligence tools compare data and recognize the correct and incorrect patterns. As operations are repeated and transactions are customized, these systems and technologies can understand the laws and rules and apply them later automatically without the need for the accountant's intervention, which greatly reduces cases of fraud and manipulation.

- Diversify sources of capital.

Artificial intelligence technologies contribute to finding new capital sources through automated trading and purchasing, which allows assets to be bought or sold anywhere in the world without consequences. Artificial intelligence technologies can also send alerts about the due date of bills. This contributes to increasing profits and gaining a competitive advantage in the financial and business market (Oberoi et al., 2021).

- Increase oversight and fraud prevention.

Artificial intelligence technologies have influenced financial management and analysis by detecting deception and fraud. Reports revealed that companies suffered losses estimated at approximately 5% of their funds due to fraud and hacking. It has become possible through artificial intelligence technologies to identify suspicious activities and fraudulent transactions that may not be detected by the human element, in addition to reviewing spending reports and detecting financial violations. These technologies also combat these fraudulent activities and operations, reducing the amount of losses.

- Communication support

Artificial intelligence technologies, such as chatbots, have contributed to rapid, automated communication with customers, responding to them in real time and implementing the accounting operations you request.

- Support decision-making processes

Artificial intelligence technologies help provide predictions about market conditions and trends. Analyzing historical and current financial data makes it possible to measure the market situation and make predictions about financial flow and revenue volume. These technologies can also be used in the event of a desire to expand and initiate new activities, which contributes to strengthening crucial decisions. They can also provide predictions about customer behavior and taste through analysis of previous transactions.

The impact of artificial intelligence on the accounting profession

The qualitative and rapid development brought about by information and technology systems has contributed to intense competition between companies and institutions to keep pace with development. Many companies have moved to integrate modern applications of artificial intelligence technologies in the accounting and auditing sector. Thus, artificial intelligence systems can perform many accounting tasks, such as bank reconciliations, audits and tax collections, and anticipating and evaluating financial risks. This has led many to wonder about the extent of the impact of artificial intelligence on the future of accounting and auditing (Zakaria, 2021).

The following is the impact of artificial intelligence on the accounting profession and accountants:

- Some companies that have applied artificial intelligence techniques in accounting have begun to replace some of the functions performed by bookkeepers with modern technologies, especially with regard to repetitive routine tasks, but this does not mean completely replacing the profession with modern technologies.
- The emergence of digital auditing, where digital auditing using artificial intelligence techniques contributes to improving the efficiency of the auditing process and completing auditing tasks more accurately and quickly, subsequently contributing to improving the quality of auditing services and increasing the profitability of companies.
- The demand for new accounting specializations. With the automation of many accounting processes, there has become a need for additional tasks for accountants, such as providing more specialized financial advice or diversifying the services that can be provided to clients. Therefore, it can be said that these technologies may later contribute to changing the nature of Accountant work.
- There has become an opportunity for accountants to work more on data analysis, develop their expertise, provide ideas and suggestions for developing companies, and leave repetitive tasks to the

computer.

- The accountant will be able to work on the most important financial tasks with greater quality and focus, including mergers and acquisitions, strategic reviews, and restructuring.

- There are many assertions that these technologies will not eliminate the accountant's role, as professional ethics and human communication between humans cannot be replaced by computers, but at the same time accountants must interact with these technologies through continuous training.

Examples of companies that have applied artificial intelligence technologies

In light of the contemporary business environment and the spread of multinational companies, the world has witnessed a significant development in communication technology and information exchange, especially accounting information. This has contributed to the accounting and auditing sector's interest in keeping pace with information technology and achieving the highest service quality. This has affected the nature of companies' financial and accounting reports and statements, subsequently affecting their future in the financial and business market. The following are the most prominent companies that have applied artificial intelligence techniques in accounting:

• Coca-Cola Company

Many reports indicated that Coca-Cola, a soft drink company, has decided to integrate artificial intelligence technologies into the accounting and auditing sector to save time and expenses and to produce the best quality of its financial and accounting data and information. Reports showed that 800 employees in the accounting sector spent more than 14,000 hours on reconciliation operations alone while performing them using classical accounting methods.

• KPMG

The company decided to keep pace with artificial intelligence in accounting, which contributed to providing accurate financial management and positively impacted the company's profits. The company acknowledged that applying artificial intelligence techniques contributed to providing speed and accuracy during the collection and analysis of accounting data. Therefore, more than \$30 million was invested in training the company's employees in artificial intelligence and information technology skills and techniques.

• Oracle Corporation

Oracle relies on artificial intelligence technologies in the finance and accounting sector to prepare financial statements and reports. Reports indicated that the company's accounting sector witnessed the provision of a complete view of financial information and data thanks to

the application of artificial intelligence techniques, which contributed to the accuracy of the company's accounting results and services.

- **Microsoft Corporation**

Microsoft has also adopted artificial intelligence technologies in all its sectors, including the accounting sector. This is done by automating financial operations and transactions and monitoring budgets and financial settlements, contributing to financial planning and analysis effectiveness. The financial reports and analyses conducted using these technologies also enhanced the accuracy of the results and work of the company's accounting sector.

The most prominent accounting programs that operate with artificial intelligence

Artificial intelligence technologies have become essential to the global economy and financial market. Therefore, the results of companies' activities and future depend on how much they keep pace with technological progress. Given the benefits and impact of these technologies on the quality of production and services of the financial and accounting sector, many companies and institutions have decided to integrate technology and artificial intelligence techniques into the accounting sector. The following are the most prominent accounting programs supported by artificial intelligence technology:

- **Notebook**

Dafatara is one of the most famous ERP programs approved for managing accounts and sales and managing all aspects of work. It is considered one of the pioneering Arab systems applying artificial intelligence technology to facilitate accounting operations. For example, you will find a Chat Bot program integrated into the system, through which you can recall the data you are looking for or order it to implement. A specific accounting process or issuing a financial report with certain characteristics is done quickly and saves you more than usual in ERP programs unrelated to artificial intelligence.

- **Docyt**

One of the accounting programs is powered by artificial intelligence, as this program automates many repetitive calculations. Using the machine learning feature, information is provided about the company's financial performance, in addition to preparing a profit and loss statement in the budget and forecasting cash flow. Artificial intelligence technologies also ensure continuous financial control, prevent any human errors, and provide alerts when needed to classify a transaction or take a specific action.

- **O-Counting**

This system provides easier and easier inventory

management through artificial intelligence tools that manage many related tasks without the need for many employees, in addition to using AI to manage expenses. The program is capable of handling and analyzing a huge amount of data, and it can also prepare a huge database that is easy to access at any time, thanks to modern smart technologies. Artificial intelligence technology can also track all transactions and accounting activities for multiple branches of the same company (Barrak, Abdulameer, and Abdulhussein, 2019).

- **Divvy**

It is an accounting program for managing expenses and budgets supported by artificial intelligence techniques. Using modern algorithms, this program automates all repetitive tasks such as bookkeeping, such as classifying invoices and matching payments. Artificial intelligence algorithms enable you to track and manage expenses, make purchases, and prepare reports. Expenses and budgets.

- **Blue dot**

It provides smart accounting services to companies by automating processes, reconciling transactions, and preparing financial reports. The artificial intelligence technology in this program contributes to activating the feature of measuring companies' financial performance and cash forecasting, supporting the compliance and monitoring process, and ensuring that all operations and activities are consistent with laws and regulations (Khaled AlKoheji and Al-Sartawi, 2022).

- **Planful**

It provides accounting services supported by artificial intelligence, which contributes to the automation of all repetitive and complex tasks and processes. Using artificial intelligence algorithms, all property and financial transactions can be recorded by creating a special record for them and creating a database for all users and their transactions. This helps provide a clear financial vision for the company and helps develop perceptions and predictions about the company's position in the market.

- **AIQ**

This software can automate repetitive processes and prepare monthly financial reviews and reports of company activities (Oberoi et al., 2021). The smart technologies supported in this program also help in avoiding processing errors.

METHODOLOGY

In the context of the nature of the study problem, its objectives, and hypotheses, the study variables are as follows: The artificial intelligence technique is the independent variable, and the efficiency and effectiveness of electronic accounting disclosure for financial reports are dependent variables. In light of the nature of the

problem and the importance and objectives of the study, the researcher relies on two basic approaches in preparing the research:

- The inductive approach: by reviewing scientific references, articles published in various periodicals, research, and scientific dissertations that dealt with the subject of the study through studying and analyzing them to determine the findings of these studies and benefiting from them in formulating the basic hypotheses on which the study is based.
- Deductive approach: The researcher uses this approach to reveal the logical results of testing the

research's basic hypotheses by conducting a field study.

Testing the Study Model and Its Hypotheses

In this section, the respondents are described based on the information they provided in the first part of the questionnaire. The researchers distributed the questionnaires accountants and auditors in companies listed on the Iraq Stock Exchange and financial analysts in financial brokerage companies. A total of (55) questionnaires were distributed, all of which were received, resulting in a response rate of (100%), as shown in Table (1):

Table (1) Number of Distributed and Received Questionnaires

Distributed Questionnaires	Received and Valid for Analysis	Response Rate
55	55	100%

A. The Impact Between Artificial Intelligence and the Efficiency of Digital Financial Reports

This section examines the validity of the hypothesis stating that there is a significant impact of artificial intelligence on the efficiency of digital financial reports. Table (2), which presents regression analysis results, shows a significant effect of artificial intelligence on the efficiency of digital financial reports. This is confirmed by the calculated (F) value of (132.332), which is greater

than its tabulated value at

a significance level of (0.05). The determination coefficient (R^2) value of (0.842) indicates that (84.2%) of the variation in the efficiency of digital financial reports is explained by reliance on artificial intelligence. This is further supported by the regression coefficient value of (0.623), indicating that (0.623) of the change in the dependent variable results from a one-unit change in the independent variable. Therefore, this hypothesis is accepted.

Table (2) Results of the Impact of Artificial Intelligence on the Efficiency of Digital Financial Reports

Independent variable Dependent variable	Digital Financial Reporting Efficiency		R^2	F		T	
artificial intelligence	B1	B0	0.842	Calculated	Tabular	Calculated	Tabular
	0.623	0.856		132.332	3.39	12.1123	0.67

B. The Impact Between Artificial Intelligence and the Effectiveness of Digital Financial Reports

This section focuses on verifying the hypothesis that there is a significant impact of artificial intelligence on the effectiveness of digital financial reports. Table (3) shows that artificial intelligence significantly affects the effectiveness of digital financial reports. The calculated (F) value of (131.524) is greater than its tabulated value at a significance level of (0.05). The

determination coefficient (R^2) value of (0.723) indicates that (72.3%) of the variation in the effectiveness of digital financial reports is explained by artificial intelligence, while the remaining variation in the dependent variable is attributed to random factors that cannot be controlled or are not included in the regression model. This is supported by the regression coefficient value of (0.423), indicating that (0.423) of the change in the dependent variable results from a one-unit change in the independent dimension. Therefore, this hypothesis is accepted.

Table (3) Results of the Relationship Between Artificial Intelligence and the Effectiveness of Digital Financial Reports

Independent variable Dependent variable	Effectiveness of Digital Financial Reports		R^2	F		T	
artificial intelligence	B1	B0	0.723	Calculated	Tabular	Calculated	Tabular
	0.423	0.725		131.524	3.39	13.54 2	0.67

RESULTS

skills and reducing the amount of malware that could be present in corporate systems before it is discovered. The benefits resulting from the use of artificial intelligence technologies, which have affected the level of quality of information.

CONCLUSION AND RECOMMENDATION

Conclusion

The researcher has drawn several findings, the most important of which are as follows:

- Electronic accounting disclosure is considered one of the most important channels that contribute to enriching the value and benefit of information presented in financial reports in a timely manner and with distinctive presentation, making it a vital product that is rapidly affected by the development of information and communication technologies through

circulation and diffusion among business enterprises.

- The field study agreed that electronic accounting

disclosure brings many benefits to businesses, including continuous information updating, reduction of information dissemination and obtaining costs, and easy and equal access for all users.

- Previous studies have highlighted the many risks and challenges that electronic accounting disclosure brings when applied to business enterprises.

- The application of artificial intelligence techniques has become inevitable in the field of accounting and auditing, and will bring significant changes to the accounting and auditing industry and its development.

- The field study agreed on the importance of applying AI techniques in business enterprises as it provides numerous benefits, the most important of which are automating business processes, increasing business efficiency, accuracy of future forecasts, improving business, combating money laundering, detecting fraud and deception using data mining and analysis techniques, and creating financial reports. Improving investment decisions.

- The field study demonstrated a statistically significant relationship between the application of AI techniques and

improving the effectiveness and efficiency of electronic accounting disclosure for financial reporting.

Recommendation

By examining the results of the study, the researcher recommends the need to emphasize the importance of AI technologies in business enterprises, developing the role of their applications in performing various routine and complex tasks and activities, in decision-making and problem solving, which improves the competitive capabilities of enterprises.

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