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## The Role of AI as a Mediator in Predicting Future Costs and Accounting Practices: An Empirical Study on Iraqi Telecommunication Companies

\*Hasanain Salim Rasheed, \*\* Maytham Abbas Khudhair Al-Salmawi \*Department of Technical Accounting, Technical Collage of Management, Middle Technical University \*\*Kut Technical Institute, Middle Technical University, Iraq.

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### ABSTRACT

In this paper, we take a look at how the Iraqi telecom industry is using artificial intelligence (AI) to improve their accounting methods and foretell future expenditures. Accounting process efficiency and transparency, as well as the application of AI to increase the accuracy of cost predictions, are the primary areas of study. Three hundred and fifty managers and employees from two Iraqi telecommunications companies, Asiacell and Zain Iraq, filled out self-administered questionnaires for this quantitative study, which made use of purposive sampling. This study used SmartPLS3 for structural equation modeling using partial least squares to examine the data. Taking into account a number of contributing aspects, the study presents concrete tactics for improved financial performance, and presents empirical data on the significance of AI as a mediator. By increasing financial reporting and significantly more accurate cost projections, artificial intelligence is helping companies adjust to the shifting financial environment. The paper also calls for greater research on the long-term financial sustainability of artificial intelligence (AI) adoption in underdeveloped nations and notes knowledge gaps in the present literature on adoption in particular in domains like telecoms.

Keyword: Accounting Approach; forecasting; Future Costs; Iraqi tel section

### INTRODUCTION

Artificial intelligence (AI) used in accounting and financial management has altered the way many other industries project expenses and document those costs (Bharambe and Deshmukh, 2023). The complexity of financial operations, always shifting consumer expectations, and erratic market conditions in the telecoms sector make accurate and real-time financial forecasting indispensable. Artificial intelligence (AI) has become a necessary tool for better financial management practices, cost prediction, and accounting efficiency in developing countries including Iraq (Nicolau, 2023). Iraq's telecom market has expanded significantly over the past ten years, from a monopolistic perspective to a more competitive environment with multiple private sector players (Patel & Kumar, 2021). Mostly, the exponential expansion of digital infrastructure, internet services, and mobile networks explains this transformation. On the other hand, operational expenses are rising, income is fluctuating, and choices must be taken in real time—all of which complicate financial management (Sato, 201). In Iraq, telecommunications are defined by a fiercely competitive environment, a dynamic market, and constantly changing regulatory policies. These elements make it challenging for companies to maintain accurate financial records, project future spending, and adapt to fluctuating economic

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conditions (Jin et al., 2023). For telecom companies to better control their budgets, here accounting processes motivated by artificial intelligence are absolutely vital. In Iraqi communications companies, AI-based e-accounting systems have shown great success in streamlining financial operations, lowering operating expenses, and improving decision-making capacity (Williams, 2023; Chen et al., 2020; Marzouk and Alaraby, 2015). These systems increase data accuracy, automate typical accounting chores, use sophisticated predictive analytics to forecast future expenses, hence guiding resource allocation and enhancing general financial performance. Artificial intelligence technologies, which act as middlemen between raw financial data and practical insights, let companies better react to changes in the market and competing forces (Harris, 2023). Examining artificial intelligence (AI) as a go-between in projecting future expenses and accounting operations in Iraq's telecoms sector can help one to understand how these technologies might support financial sustainability and efficiency. Based on past research, this one looks at how artificial intelligence (AI) supports Iraqi telecoms companies with financial decision-making, internal control systems, and accounting practice forecast accuracy (Mat Hussin et al., 2024; Adeyelu et al., 2024).

### **RESEARCH METHODOLOGY**

### **The Research Problem**

These technologies, which help to improve the accuracy of financial reports and simplify administrative decisions, have become even more crucial in enhancing accounting processes and forecasting future costs with the fast growth of artificial intelligence technology. Studies on how artificial intelligence may work as a mediator to enhance these processes, particularly in the Iraqi corporate environment and notably in the telecoms industry, are lacking, nevertheless. This study so aims to address the following questions:

- 1. What is the impact of using artificial intelligence on the accounting practices of Iraqi telecommunications companies?
- 2. What is the impact of artificial intelligence on the accuracy of predicting future costs in Iraqi telecommunications companies?
- 3. Can AI act as a mediator to improve the relationship between accounting practices and predicting future costs?

### The Importance of Research

Due to the increasing importance of artificial intelligence in the development of financial and accounting operations, this research is of great importance, especially in light of the digital transformation currently taking place in the Iraqi telecommunications sector. At a theoretical level, the research contributes to enriching the scientific literature on the impact of artificial intelligence on accounting and financial forecasting, focusing on its mediating role in improving the accuracy of financial forecasts and improving accounting practices. In this way, it fills the gap in studies that have addressed this topic in developing business environments such as Iraq. At a practical level, the research provides Iraqi telecommunications companies with insights and practical recommendations on how to use artificial intelligence as a tool to analyze financial data more accurately, thereby improving resource allocation, reducing operational costs, and increasing the transparency of financial reporting

### **Research Objectives**

- 1. Analyze the impact of artificial intelligence on accounting practices of Iraqi telecom companies, examining the extent to which these technologies can improve the accuracy and transparency of financial reports and reduce accounting errors.
- 2. Investigate the role of artificial intelligence in improving forecasting of future costs in the Iraqi business environment in light of changing economic challenges facing telecom companies, such as exchange rate volatility and financial market instability.
- 3. Test the mediating role of artificial intelligence in the relationship between accounting practices and forecasting of future costs, reflecting the reality of the Iraqi environment, which requires advanced tools to analyze financial data and make accurate decisions.

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4. Provide practical solutions and recommendations to Iraqi telecom companies to adopt artificial intelligence technologies to develop accounting systems and improve the efficiency of financial resource allocation, which will help improve financial sustainability and reduce operational risks.

### **Research Hypotheses**

- Hypothesis 1: Accounting strategies are improved by AI.

- Hypothesis 2: The use of AI improves the accuracy of projected costs.

- Hypothesis 3: As accounting standards are more strictly adhered to, the influence of AI on future cost estimates grows.

### **RESEARCH METHODS**

There were primarily two methods used to accomplish the research goals and ensure the hypotheses were correct: 1. Inductive approach: This method entailed collecting relevant prior literature on the subject and its axes, then analyzing and drawing inferences from that data to back up the study notion. The use of AI in cost prediction and accounting process improvement can be better understood with the help of this method, which adds to an existing integrated cognitive framework.

2. A descriptive-analytical approach: This method is centered on investigating the practical application of AI technology in the financial management and accounting of Iraqi telecom firms. It assesses the level of adoption of these technologies and how they affect the precision of cost estimates and the effectiveness of accounting processes. To further investigate if AI mediates better financial performance and more accurate financial decisions, statistical approaches and structural equation models are applied to the data.

### **Temporal and Spatial Limitations of the Research**

- 1. Locational constraints: with a focus on accounting and future cost forecasting using AI in Iraqi telecommunications companies, this study offers a practical framework for evaluating the extent to which these technologies are adopted and their effect on financial performance. The research was carried out on a sample of employees from Asia-cell and Zain Iraq.
- 2. Timeframe restrictions: Data for this study came from questionnaires sent to employees and collected between 2014 and 2024. Also, we looked at what others have written about this subject, which helps fill us in on what happened with AI in accounting and costing throughout that time.

### Source of Data Collection

To ensure the completeness and accuracy of the analysis, the researcher relied on various sources for data collection. These sources included theoretical sources such as academic books, scientific journals, previous studies, university dissertations and relevant scientific research papers whether published locally or internationally, as well as information available on the internet. The research also relied on field sources as a special questionnaire was developed to collect data from employees of the targeted Iraqi telecommunications companies. The questionnaire was distributed to a carefully selected sample and the responses were analyzed using appropriate statistical methods. This helped in understanding the impact of artificial intelligence on predicting future costs and improving accounting practices. This dual methodology helped in improving the reliability of the results and providing a clear vision about the role of artificial intelligence in the Iraqi telecommunications sector.

### LITERATURE REVIEW

After the monopoly era ended, the telecommunications industry became the most pervasive service sector in the world, and it has been a major driver of national development ever since. In recent years, communication has exploded in popularity, becoming an integral part of many expanding industries and driving private investment growth. Gupta (2021) notes that there is a heightened interest in the Iraqi economy and how it affects the growth of economies worldwide. Fuzzy clustering and other AI-powered cost forecasting methods find widespread application in the

### 43

44

5M1) 2025, Vol. No. 15, Issue No. 1, Jan-Mar

telecom business (Tandiono, 2023). Companies can more accurately predict future expenses with the help of AI-driven models that improve cost forecasting. Neural networks and other machine learning algorithms outperform traditional statistical models when it comes to cost prediction, making AI an essential tool for financial planning (Walker, 2022).

Dynamic cost prediction driven by artificial intelligence (AI) also enables companies to adapt to new financial reality, therefore enhancing their allocation of resources and planning. Predicting client turnover, which affects cost control, also depends critically on artificial intelligence. Predicting customer attrition using Boost and other artificial intelligence models by the telecom sector is one instance of how predictive analytics may help companies monitor their customer base and modify their pricing policies in line. On the other hand, artificial intelligence has brought strategic insights into financial statements, enhanced data accuracy, and automation that has changed established accounting techniques (Jejeniwa, et al., 2024). With the use of AI-based thinking, financial statement errors can be better found, fraud can be stopped, and correct financial reporting can be assured (Husain, 2019). Another advantage of AI-based systems that rapidly process enormous volumes of financial data is better financial reporting. Support vector machines and naïve Bayesian algorithms have been successful in sentiment analysis of financial data (Yi et al., 2023) therefore helping one to better grasp the financial situation of a corporation. Real-time data analysis made possible by accounting artificial intelligence also lets auditors find disparities and stop efforts at fraud. Brown and Smith (2022) state: As mentioned by Jones (2020). Particularly with regard to accounting standards and future expenses for telecommunications businesses running in Iraq, there is sadly a shortage of research in Iraq that examines how artificial intelligence (AI) mediates financial decision-making and cost forecasting. Though interest in artificial intelligence's possible uses in financial management and accounting worldwide is growing, research on the function of AI as a mediator between accounting techniques and cost forecasting in Iraq's telecom sector is rare.

### THE THEORETICAL ASPECT

### The Artificial Intelligence (AI)

Recent technological developments have brought about radical changes in the practice of the accounting profession. Such as developments in big data, machine learning, artificial intelligence and blockchain technology, which are being used in general business practices and by specialized practitioners in accounting around the world. Therefore, the rapid development of technology requires that all professionals, such as the accounting profession, continue to develop fast and accurate working methods so that they do not become outdated and are effective in achieving goals. As technology becomes more sophisticated, accountants need to know how to best utilize the technology. This is evident from the presence of artificial intelligence (AI), which is widely discussed in accounting (Ahmed & Shadi,2024).

### The Concept and Definition of Artificial Intelligence in accounting

The world has witnessed many developments and changes in recent times, perhaps the most significant of these developments is information and communication technology. Institutions and businesses now rely on modern technology techniques to carry out their work instead of doing it manually and in the traditional way. In turn, the profession of accountant and auditor has faced many challenges in recent times, forcing it to keep up with changes and developments.

Artificial intelligence can be defined according to Martinez (2019) in his definition analysis of artificial intelligence in such a way that as long as the definition is flexible and covers new developments in artificial intelligence, a general definition can be applied across domains and applications. He also stated, "What is artificial intelligence?" This is a difficult question in itself, but it is made even more complicated by the fact that it is not clear who can or should answer it(Martinez, 2019). (Grewal,2014) defined AI as a mechanical simulation system for knowledge and information acquisition. It involves collecting and interpreting knowledge, information and conclusions and ultimately communicating them to qualified parties in the form of usable information.

The Artificial intelligence aims to simulate the human mind (Martinez, 2019) by handling the description of objects and processes based on their quantitative properties and their logical and computational relationships more quickly and accurately. The AI in accounting can also be defined as the ability of computers and their programs to perform many accounting tasks, which helps reduce human errors and improve the accuracy and speed of analyzing accounting reports and information compared to traditional accounting methods (Layadi, 2023). Therefore, many companies and accounting sectors have tried to use artificial intelligence technologies and tools, which has led to major changes in the way and style of work in all sectors (Zhang et al., 2020). Therefore, one of the most effective and advanced tools

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that play a role in improving the processes of forecasting future profits for companies. Its importance lies in several main aspects:

- 1. AI's ability to handle and analyze massive volumes of data allows for more precise profit forecasts. This is achieved through the use of machine learning and other approaches that teach trained models to spot patterns in past data and then apply them to new data (Mandumah, 2022).
- 2. AI can track and evaluate market and economic patterns in real time, which is useful for analyzing changes and trends.
- 3. The third benefit is improved prediction of future changes in production volume and how they will affect profitability (Qoyod, 2023).
- 4. Strategic decision-making: With accurate profit estimates, management can use data to inform data-driven strategic decisions, like growing the business or investing in new projects.
- 5. Enhancing operational efficiency: AI has the potential to streamline data gathering and analysis, cut down on report preparation time, and free up resources to tackle strategy improvement instead of mundane tasks (Zhang et al., 2020).
- 6. AI's ability to analyze relevant data opens up new markets and goods, which in turn opens up new opportunities for exploration and, ultimately, bigger earnings (Layadi, 2023).
- 7. Finding future chances that have not been explored yet that offer organizations a leg up in the digital business world (Mandumah, 2022).

A radical departure from conventional wisdom is the incorporation of AI into accounting. Strategies that cause a sea change in how financial statements are prepared and analyzed. The purpose of this comparison is to show how AI-driven accounting differs from traditional approaches, as well as the advantages and disadvantages of each.

### The Artificial Intelligence in Predicting Future Costs

Particularly with the advent of artificial intelligence, in this technologically advanced era data production and gathering capability has expanded greatly. The ability to sort through all the material available and identify what is pertinent has become more and more crucial given the explosion of knowledge sources during this development. Many people may thus be passing on important information right at their hands (Odonkor et al., 2024). Making wise decisions regarding the future therefore depends on knowing how things have behaved in the past. Examining their financial records and key performance indicators helps companies to learn a lot about prior successes and failures. Thus, understanding how things have gone in the past provides a strong basis for producing reliable financial projections. El-Mousowitz et al. (2023) provide a strategy for reaching this:

Reviewing Financial Statements: Among other things, statements of income, balance, and cash flow expose much about the financial situation and performance of a company. Analyzing sales growth, profitability ratios, liquidity ratios, and debt levels helps companies to identify trends and create reasonable projections on future profitability. Employ critical performance metrics: Key performance indicators (KPIs) are quantitative assessments of an organization's relative performance in respect to its stated goals. By monitoring important performance indicators including sales growth, client retention rates, and gross profit margins, companies can more effectively project their future profitability. These indicators enable the company to both see areas of strength and weakness.

Examining sales, expenses, and profit margins over time will help companies consider the past and learn a lot about future development possibilities, economic swings, and seasonal patterns. Using this past data helps one to more precisely forecast future profit and loss projections.

Financial predictions help companies reach maximum profitability by means of financial goals, plans, and strategies, thereby predicting future incomes and expenses. One can compare them to a compass guiding the business toward its financial goals.

Financial forecasts, despite their seeming complexity, are really based on a basic principle: they project future financial performance by means of historical financial data. Though they are rarely perfect, financial predictions help to highlight where a company's finances most likely will go.

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### METHODOLOGY

### The population and Sample selection

The research included basic questions about the demographic characteristics of the respondents, as well as questions that reflected their propensity to make different individuals on Iraqi Telecommunication companies (Asiacell and Zain Iraq) The questionnaire also evaluated the role of AI in Telecommunication, mirroring the predicting future costs and accounting practices. We formulated those specific questions as statements and set the answers on a 5-point Likert scale (1 strongly disagree, 5 strongly agree). We distributed the 350 questionnaires to individuals and employees of (Asiacell and Zain Iraq telecommunication companies for 2024) and eliminate 21 questionnaires.

### **Relative distribution**

Table.1 shows the relative distribution of the study sample (n=329) according to demographic variables as follows:

**Job Title**: The largest percentage was AI Specialist 57 (17.3%), and the lowest percentage was Finance Manager 37 (11.2%).

**Years of Experience**: The highest percentage was for the category "Over 10 years" 104 (31.6%), while the other age categories were close as follows: 77 (23.4%) "4-7 years", 76 (23.1%) "3 years", 72 (21.9%) "8-10 years".

**Company Size**: Most companies were Small 119 (36.2%), followed by Large 111 (33.7%), and finally Medium 99 (30.1%).

Gender: The relative distribution of the sample was close between Male 160 (48.6%) and Female 169 (51.4%).

**AI Awareness**: The distribution among the samples was as follows: 85 (25.8%) had no familiarity with AI applications, 83 (25.2%) had some familiarity, 82 (24.9%) had no familiarity, and 79 (24%), had a high level of familiarity with AI applications.

**Training Needs on AI**: The sample was distributed between those who agreed 183 (55.6%) and those who disagreed 146 (44.4%).

| Variables / Levels              |                              | Count | Column N % |
|---------------------------------|------------------------------|-------|------------|
|                                 | Finance Manager              | 52    | 15.8%      |
|                                 | Finance Manager              | 37    | 11.2%      |
|                                 | Cost Accountant              | 49    | 14.9%      |
| I-1 T:41-                       | AI Specialist                | 57    | 17.3%      |
| Job 11tle                       | IT Manager                   | 54    | 16.4%      |
|                                 | Network Engineer             | 42    | 12.8%      |
|                                 | Technical Support Specialist | 38    | 11.6%      |
|                                 | Total                        | 329   | 100.0%     |
|                                 | 3 years                      | 76    | 23.1%      |
| Years of Experience in          | 4-7 years                    | 77    | 23.4%      |
| Accounting/Finance/Telecommunic | 8-10 years                   | 72    | 21.9%      |
| ations                          | Over 10 years                | 104   | 31.6%      |
|                                 | Total                        | 329   | 100.0%     |
|                                 | Small (1-50 employees)       | 119   | 36.2%      |
| Company Size                    | Medium (51-200 employees)    | 99    | 30.1%      |
|                                 | Large (201+ employees)       | 111   | 33.7%      |

### **Table 1.** Relative distribution of the study sample (n-220)

### (IJTBM) 2025, Vol. No. 15, Issue No. I, Jan-Mar

### e-ISSN: 2231-6868 p-ISSN: 2454-468X

|                      | Total                                   | 329    | 100.0% |
|----------------------|---|--------|--------|
|                      | Male                                    | 160    | 48.6%  |
| Gender               | Female                                  | 169    | 51.4%  |
|                      | Total                                   | 329    | 100.0% |
|                      | Very familiar with AI applications      | 79     | 24.0%  |
|                      | Familiar with AI applications           | 83     | 25.2%  |
| AI Awareness         | Not at all familiar with AI application | ons 85 | 25.8%  |
|                      | Not familiar with AI application        | 82     | 24.9%  |
|                      | Total                                   | 329    | 100.0% |
|                      | Yes                                     | 183    | 55.6%  |
| Training Needs on AI | No                                      | 146    | 44.4%  |
|                      | Total                                   | 329    | 100.0% |

### **Descriptive statistics**

A descriptive analysis was conducted for the study's axes by calculating the mean and standard deviation, determining the level of agreement and rank for each statement. The results were as follows:

### AI Technology

**Table.2** shows the descriptive analysis of AI Technology, with a mean of 4.26±0.63 at the Strong agree level, indicating that most of the sample strongly agrees with the application of AI Technology.

The statement AI\_Q2 achieved the first rank with a mean of  $4.4\pm0.65$  at the Strong agree level, indicating that most of the sample strongly agrees with AI\_Q2. Meanwhile, the statement AI\_Q15 had a mean of  $4.01\pm0.83$  at the Agree level, indicating that most of the sample agrees with AI\_Q15.

| Descriptive statistics of AI Technology |      |         |              |      |  |  |
|---|------|---------|--------------|------|--|--|
| Items                                   | Mean | St. Dev | Level        | Rank |  |  |
| AI_Q1                                   | 4.38 | 0.62    | Strong agree | 3    |  |  |
| AI_Q2                                   | 4.40 | 0.65    | Strong agree | 1    |  |  |
| AI_Q3                                   | 4.39 | 0.60    | Strong agree | 2    |  |  |
| AI_Q4                                   | 4.22 | 0.74    | Strong agree | 8    |  |  |
| AI_Q5                                   | 4.35 | 0.70    | Strong agree | 4    |  |  |
| AI_Q6                                   | 4.30 | 0.76    | Strong agree | 6    |  |  |
| AI_Q7                                   | 4.14 | 0.84    | Agree        | 12   |  |  |
| AI_Q8                                   | 4.20 | 0.80    | Agree        | 10   |  |  |
| AI_Q9                                   | 4.20 | 0.78    | Strong agree | 9    |  |  |
| AI_Q10                                  | 4.12 | 0.81    | Agree        | 15   |  |  |
| AI_Q11                                  | 4.18 | 0.82    | Agree        | 11   |  |  |
| AI_Q12                                  | 4.13 | 0.86    | Agree        | 14   |  |  |
| AI_Q13                                  | 4.13 | 0.82    | Agree        | 13   |  |  |
| AI_Q14                                  | 4.09 | 0.93    | Agree 17     |      |  |  |
| AI_Q15                                  | 4.01 | 0.83    | Agree        | 18   |  |  |
| AI_Q16                                  | 4.12 | 0.88    | Agree        | 16   |  |  |
| AI_Q17                                  | 4.26 | 0.66    | Strong agree | 7    |  |  |
| AI_Q18                                  | 4.31 | 0.66    | Strong agree | 5    |  |  |
| AI Technology                           | 4.26 | 0.63    | Strong agree |      |  |  |

### Table 2.

e-ISSN: 2231-6868 p-ISSN: 2454-468X

### Future cost predictions

**Table.3** shows the descriptive analysis of future cost predictions, with a mean of  $4.13\pm0.65$  at the Agree level, indicating that most of the sample agrees with the application of future cost predictions.

The statement F\_Q1 achieved the first rank with a mean of  $4.31\pm0.7$  at the Strong agree level, indicating that most of the sample strongly agrees with F\_Q1. Meanwhile, the statement F\_Q13 had a mean of  $3.8\pm0.96$  at the Agree level, indicating that most of the sample agrees with F\_Q13.

Table 3

| Descriptive statistics of Future cost predictions. |      |         |              |      |  |
|--|------|---------|--------------|------|--|
| Items  | Mean | St. Dev | Level        | Rank |  |
| PFC_Q1   | 4.31 | 0.70    | Strong agree | 1    |  |
| PFC_Q2   | 4.31 | 0.62    | Strong agree | 2    |  |
| PFC_Q3   | 4.21 | 0.56    | Strong agree | 4    |  |
| PFC_Q4   | 4.11 | 0.55    | Agree        | 11   |  |
| PFC_Q5   | 4.28 | 0.59    | Strong agree | 3    |  |
| PFC_Q6   | 3.93 | 0.99    | Agree        | 17   |  |
| PFC_Q7   | 4.15 | 0.91    | Agree        | 8    |  |
| PFC_Q8   | 4.08 | 0.89    | Agree        | 14   |  |
| PFC_Q9   | 4.11 | 0.92    | Agree        | 10   |  |
| PFC_Q10  | 4.00 | 0.96    | Agree        | 16   |  |
| PFC_Q11  | 4.12 | 0.94    | Agree        | 9    |  |
| PFC_Q12  | 4.10 | 0.89    | Agree        | 12   |  |
| PFC_Q13  | 3.80 | 0.96    | Agree        | 18   |  |
| PFC_Q14  | 4.16 | 0.93    | Agree        | 6    |  |
| PFC_Q15  | 4.16 | 0.74    | Agree        | 7    |  |
| PFC_Q16  | 4.01 | 0.93    | Agree        | 15   |  |
| PFC_Q17  | 4.21 | 0.70    | Strong agree | 5    |  |
| PFC_Q18  | 4.10 | 0.87    | Agree        | 13   |  |
| Future cost predictions                            | 4.13 | 0.65    | Agree        |      |  |

### Accounting practices

Table .4 presents the descriptive analysis of accounting practices, with a mean of  $4\pm0.63$  at the Agree level, indicating that most participants agree with the implementation of accounting practices.

The statement A\_Q17 ranked first with a mean of  $4.4\pm0.77$  at the Strong agree level, showing that most participants strongly agree with A\_Q17. On the other hand, the statement A\_Q15 had a mean of  $3.15\pm1.07$  at the Neutral level, indicating that most participants are neutral towards A\_Q15.

| Descriptive statistics of accounting practices. |      |         |              |      |  |  |
|---|------|---------|--------------|------|--|--|
| Items   | Mean | St. Dev | Level        | Rank |  |  |
| AP_Q1   | 4.40 | 0.77    | Strong agree | 4    |  |  |
| AP_Q2   | 4.22 | 0.78    | Strong agree | 5    |  |  |
| AP_Q3   | 4.43 | 0.68    | Strong agree | 3    |  |  |
| AP_Q4   | 3.82 | 1.03    | Agree        | 15   |  |  |
| AP_Q5   | 3.99 | 1.01    | Agree        | 12   |  |  |
| AP_Q6   | 4.15 | 0.66    | Agree        | 6    |  |  |
| AP_Q7   | 3.88 | 1.02    | Agree        | 14   |  |  |
| AP_Q8   | 4.15 | 0.99    | Agree        | 7    |  |  |
| AP _Q9  | 4.00 | 0.94    | Agree        | 11   |  |  |
| AP_Q10  | 4.06 | 1.01    | Agree        | 9    |  |  |
| AP_Q11  | 3.91 | 1.02    | Agree        | 13   |  |  |

#### Table 4.

| AP _Q12              | 4.12 | 0.98 | Agree        | 8  |
|----------------------|------|------|--------------|----|
| AP _Q13              | 4.05 | 0.94 | Agree        | 10 |
| AP _Q14              | 3.19 | 1.07 | Neutral      | 17 |
| AP _Q15              | 3.15 | 1.07 | Neutral      | 18 |
| AP _Q16              | 3.20 | 1.08 | Neutral      | 16 |
| AP _Q17              | 4.47 | 0.50 | Strong agree | 1  |
| AP_Q18               | 4.44 | 0.50 | Strong agree | 2  |
| Accounting practices | 4.00 | 0.63 | Agree        |    |

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### MEASUREMENT MODEL ANALYSIS

### **Convergent validity**

Two kinds of validity—convergent and discriminant—were examined in the measurement model analysis. Convergent validity is a measure of highly connected items inside a construct, therefore showing their shared underlying concept. Here we investigated composite reliability, average variance extracted (AVE), and loadings. Loadings show how each item relates to its corresponding construct. AVE calculates the proportion of variance in a construct for which its indicators can reasonably explain. An approximation of internal consistency of the construct is composite dependability.

Convergent and discriminant validity of the measurement model was investigated. We computed convergent validity using loadings, average variance extracted (AVE), and composite reliability. Loadings were above 0.6, composite reliabilities were above 0.7, and AVE values were above 0.5—all constructs surpassed advised levels (Table 5, Fig. 1). These findings line up with accepted wisdom from the literature (Gholami et al., 2013).

| Constructs | Item   | Loading | Cronbach's<br>Alpha | rho_A | Composite<br>Reliability | (AVE) |
|------------|--------|---------|---------------------|-------|--------------------------|-------|
|            | AI_Q1  | Delet   | 0.944               | 0.952 | 0.915                    | 0.938 |
|            | AI_Q2  | Delet   |                     |       |                          |       |
|            | AI_Q3  | Delet   |                     |       |                          |       |
|            | AI_Q4  | 0.696   |                     |       |                          |       |
|            | AI_Q5  | 0.780   |                     |       |                          |       |
|            | AI_Q6  | 0.812   |                     |       |                          |       |
|            | AI_Q7  | 0.843   |                     |       |                          |       |
|            | AI_Q8  | 0.867   |                     |       |                          |       |
| AI         | AI_Q9  | 0.842   |                     |       |                          |       |
|            | AI_Q10 | 0.838   |                     |       |                          |       |
|            | AI_Q11 | 0.896   |                     |       |                          |       |
|            | AI_Q12 | 0.843   |                     |       |                          |       |
|            | AI_Q13 | 0.727   |                     |       |                          |       |
|            | AI_Q14 | Delet   |                     |       |                          |       |
|            | AI_Q15 | Delet   |                     |       |                          |       |
|            | AI_Q16 | Delet   |                     |       |                          |       |
|            | AI_Q17 | Delet   |                     |       |                          |       |

Table 5.

|                | AI_Q18             | Delet |       |       |      |       |       |
|----------------|--------------------|-------|-------|-------|------|-------|-------|
|                | AP_Q1              | Delet | 0.947 | 0.667 |      | 0.916 | 0.752 |
| Accounting     | AP_Q2              | Delet |       |       |      |       |       |
| Practices      | AP_Q3              | Delet |       |       |      |       |       |
|                | AP _Q4             | 0.911 |       |       |      |       |       |
|                | AP_Q5              | Delet |       |       |      |       |       |
|                | AP_Q6              | 0.735 |       |       |      |       |       |
|                | AP_Q7              | 0.872 |       |       |      |       |       |
|                | AP_Q8              | Delet |       |       |      |       |       |
| -              | AP_Q9              | 0.929 |       |       |      |       |       |
|                | AP _Q10            | 0.875 |       |       |      |       |       |
|                | AP _Q11            | Delet |       |       |      |       |       |
|                | AP _Q12            | Delet |       |       |      |       |       |
|                | AP_Q13             | Delet |       |       |      |       |       |
|                | AP _Q14            | Delet |       |       |      |       |       |
|                | AP _Q15            | Delet |       |       |      |       |       |
|                | AP _Q16            | Delet |       |       |      |       |       |
|                | AP _Q17            | Delet | -     |       |      |       |       |
|                | AP _Q18            | Delet |       |       |      |       |       |
|                | PFC_Q1             | 0.706 | 0.929 | 0.935 | 0.93 | 8     | 0.537 |
|                | PFC _Q2            | 0.680 |       |       |      |       |       |
|                | PFC _Q3            | Delet |       |       |      |       |       |
|                | PFC _Q4            | Delet |       |       |      |       |       |
|                | PFC _Q5            | 0.698 | _     |       |      |       |       |
|                | PFC _Q6            | 0.779 | _     |       |      |       |       |
|                | PFC_Q7             | 0.801 | _     |       |      |       |       |
|                | PFC_Q8             | 0.802 | _     |       |      |       |       |
| Predict Future | PFC_Q9             | 0.763 | _     |       |      |       |       |
| CUSIS          | PFC_QI0            | 0.818 | -     |       |      |       |       |
|                | PFC_Q11<br>PFC_012 | Delet | _     |       |      |       |       |
|                | PFC 013            | Delet | -     |       |      |       |       |
|                | PFC 014            | 0.677 | 1     |       |      |       |       |
|                | PFC_015            | 0.691 | 1     |       |      |       |       |
|                | PFC_Q16            | 0.690 | 1     |       |      |       |       |
|                | PFC_Q17            | Delet | 1     |       |      |       |       |
|                | PFC 018            | 0.683 |       |       |      |       |       |

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### **Discriminant validity**

The Fornell-Larcker criterion for evaluating discriminant validity has come under fire fornell and Larcker (1981). This work used an other approach, the heterotrait-monotrait ratio of correlations. This approach is validated by a Monte Carlo simulation research (Fornell and Larcker, 1981), which determines whether a construct has a stronger association with its own indicators than with those of other constructions. Confirming discriminant validity, all values in Table 1 above the advised criterion of 0.6 (Kline, 2023). Table 6 This suggests that every construct in the model differs from every other construct.

| Discriminant-validity     |           |                      |                      |  |  |  |
|---------------------------|-----------|----------------------|----------------------|--|--|--|
| Fornell-Larcker Criterion |           |                      |                      |  |  |  |
|                           | AI        | Accounting Practices | Predict Future Costs |  |  |  |
| AI                        | 0.817     |                      |                      |  |  |  |
| Accounting Practices      | 0.762     | 0.897                |                      |  |  |  |
| Predict Future Costs      | 0.775     | 0.889                | 0.733                |  |  |  |
| Heterotrait-Monotrait Ra  | tio (HTMT | )                    |                      |  |  |  |
|                           | AI        | Accounting Practices | Predict Future Costs |  |  |  |
| AI                        |           |                      |                      |  |  |  |
| Accounting Practices      | 0.818     |                      |                      |  |  |  |
| Predict Future Costs      | 0.820     | 0.939                |                      |  |  |  |

| Table 6. |
|----------|
|----------|

### **RESULTS AND DISSOCIATION**

Based on guidelines of Henseler et al., 2016, the results of hypothesis testing for the structural model were evaluated. Using 500 samples, the evaluation consisted in bootstrapping R2, beta ( $\beta$ ) and the related t-values. For quantitative research, which spans replication studies, effect size estimates, confidence intervals, Bayesian approaches, Bayes factors, and decision-theoretic modeling, we also followed the explicit reporting guidelines advanced by (Hahn & Ang, 2017). Thus, as shown in Table 7 and Fig. 2, our analysis included assessments of effect sizes together with their corresponding confidence intervals.

Table 7

| Hypothesis testing |   |       |                       |                     |          |                                  |  |
|--------------------|---|-------|-----------------------|---------------------|----------|----------------------------------|--|
| Нур                | otheses   | β     | Standard<br>Deviation | <b>T</b> Statistics | P Values | Decision                         |  |
|                    | Direct  |       |                       |                     |          |                                  |  |
| H1                 | AI -> Accounting Practices                      | 0.182 | 0.050                 | 3.681               | 0.000    | Supposed                         |  |
| H2                 | AI -> Predict Future Costs                      | 0.775 | 0.027                 | 28.464              | 0.000    | Supposed                         |  |
|                    | Predict Future Costs -><br>Accounting Practices | 0.748 | 0.043                 | 17.298              | 0.000    | Supposed                         |  |
|                    | Indirect  |       |                       |                     |          |                                  |  |
| H3                 | AI -> Accounting Practices                      | 0.580 | 0.038                 | 15.382              | 0.000    | Supposed<br>Partial<br>mediation |  |



# **Figure 2**. Bootstrapping results

The study investigated the impact of AI on accounting practices and future cost predictions. Hypotheses H1, H2, and H3 were tested. H1 predicted a positive impact of AI on accounting practices. H2 predicted a positive impact of AI on future cost predictions increases with higher levels of accounting practice compliance.

### (IJTBM) 2025, Vol. No. 15, Issue No. I, Jan-Mar

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The study concentrated on direct and indirect interactions among artificial intelligence, financial policies, and future cost projections. For direct linkages, important results surfaced.

With a coefficient of 0.182, standard deviation of 0.05, t-statistic of 3.681, and p-value of 0.000, H1 was highly supported and the mean artificial intelligence has a positive substantial influence on the accounting procedures. With a coefficient of 0.775, standard deviation of 0.0027, t-statistic of 28.464, and p-value of 0.000, H2 was likewise highly supported and indicates that mean artificial intelligence has a positive substantial impact on the future cost projections. With a coefficient of 0.58, standard deviation of 0.038, t-statistic of 15.382, and p-value of 0.000, H3 was obviously very important.

### CONCLUSION

Improving accounting standards and cost prediction within the Iraqi telecoms sector was the focus of this article, which also investigated the revolutionary potential of AI as a mediator. Businesses in this dynamic field can automate mundane operations, cut down on human mistake, and improve the timeliness and accuracy of their financial reports by utilizing AI-driven technologies. AI's superior data analysis and predictive modeling skills help businesses optimize resource allocation and make better strategic decisions by improving their cost forecasting capabilities. Incorporating AI into accounting and financial management has a favorable effect on organizational performance, according to this study's empirical findings.

Regarding improving openness, efficiency, and decision-making power especially, this is true. AI helps telecommunications companies respond faster to changes in the market and legal regulations, so enhancing their accounting accuracy as well.

These benefits are not without disadvantages, either; issues still exist, particularly with regard to small and mediumsized companies (SMEs) adopting artificial intelligence in developing countries. Future research should focus on the long-term consequences of artificial intelligence integration across sectors; more empirical studies are needed to assess the extensibility and viability of AI solutions in many kinds of organizational environments.

Artificial intelligence (AI) is a powerful tool for transforming accounting processes and cost control, hence financial performance and competitiveness in the Iraqi telecoms sector and beyond could be much improved.

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(IJTBM) 2025, Vol. No. 15, Issue No. I, Jan-Mar

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