The Impact of Artificial Intelligence (AI) on the Accounting System of Saudi Companies

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Abstract: - As a major player in the world market, Saudi Arabia has seen substantial adoption of artificial intelligence AI) technology in its commercial environment. This study intends to thoroughly examine the specific effects of AI on Saudi business accounting systems. This paper offers comprehensive knowledge of the consequences of AI application in the accounting sector through a thorough examination of the body of existing literature. It examines how traditional accounting methods are affected by AI-driven automation, data analysis, and decision-making processes in the Saudi Arabian environment. The viewpoints and experiences of first-hand participants in integrating AI into Saudi enterprises' accounting systems are provided by this study through a survey distributed to important stakeholders, such as accounting professionals, technology specialists, and business leaders. This study also emphasizes how incorporating AI technology into accounting procedures may affect workforce dynamics, skill needs, and organizational structure as a whole. One of the most significant research findings is the ability of AI to process enormous volumes of data quickly and accurately, allowing for improved financial analysis, risk assessment, and forecasting. This facilitates wiser and more strategic business decisions. AI also simplified accounting processes and decreased the need for human labor, saving Saudi enterprises money. As a result, resource allocation was optimized and overall financial performance was enhanced.

Key-Words: - Artificial intelligence (AI), accounting system, accounting, financial data, analysis, forecasting, technology, integration, commercial environment, knowledge, Saudi Arabia.

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1 Introduction

In a time of rapid technological development, the integration of artificial intelligence (AI) has become a game-changer for several companies worldwide, [1]. The fast-growing economy of Saudi Arabia is not immune to the impact of this revolution, [2], [3]. The incorporation of artificial intelligence (AI) has sparked a paradigm change, especially in the field of accounting, changing the traditional boundaries of financial management and reporting for businesses in the Kingdom, [4]. It is critical to examine the complex effects of AI on Saudi Arabian enterprises' accounting procedures, business processes, and decision-making frameworks, as it continues to transform the conventional accounting system, [5]. In addition to addressing the opportunities, challenges, and potential changes reshaping the accounting landscape in the Kingdom of Saudi Arabia through the use of artificial intelligence

technologies, this study explores the profound implications of artificial intelligence integration and its impact on the accounting system, [6].

This study aims to evaluate how artificial intelligence (AI) is currently being used in Saudi companies' accounting systems and to determine the extent of its adoption, [7]. In addition, the advantages of incorporating artificial intelligence (AI) into accounting procedures for Saudi enterprises include cost-effectiveness, accuracy, and efficiency, [8]. In addition, Saudi businesses integrate artificial intelligence (AI) into their accounting systems, considering cultural, legal, and technical constraints, [9]. And analyze how the use of artificial intelligence (AI) affects the duties and responsibilities of accounting workers in Saudi companies, noting any changes in the skills or job tasks required of them, [10]. We examine the financial effects of incorporating artificial intelligence (AI) into the accounting systems of Saudi businesses, considering revenue growth, cost reductions, and return on investment, [11]. In addition, the possible dangers of integrating artificial intelligence (AI) with Saudi companies' accounting systems include data security issues, privacy issues, and moral ramifications, [12]. Further, stakeholders' opinions, such as management, staff, and clients, regarding the use of artificial intelligence (AI) in Saudi companies' accounting systems, [12]. To determine the best techniques and approaches for integrating artificial intelligence (AI) into accounting systems for Saudi companies to address economic events while considering ethical, regulatory, and technological aspects, [13]. Our research offers suggestions for improving the integration and application of artificial intelligence (AI) in Saudi Arabian enterprises' accounting systems, while accounting for infrastructural needs, skill development programs, and regulatory frameworks, [14]. We conclude by projecting future artificial intelligence (AI) trends and advancements that are anticipated to influence Saudi enterprises' accounting systems and offer proactive suggestions for innovation and adaptation, [15].

Several advantages have resulted from the incorporation of artificial intelligence (AI) into accounting systems, which has completely changed how financial data are handled, processed, and evaluated, [16]. Artificial Intelligence reduces the need for manual intervention by streamlining repetitive operations such as data entry, reconciliation, and reporting, [17]. This automation reduces the possibility of human error while simultaneously increasing efficiency, [18]. Large datasets may be analyzed more accurately and consistently using artificial intelligence (AI) algorithms, reducing the possibility of errors in data analysis and financial reports, [19]. This feature is very important for preserving the accuracy of financial records and guaranteeing adherence to legal requirements, [20]. Artificial intelligence (AI) makes it possible to handle and analyze data in real-time, giving companies quick access to information about their financial performance, [21]. This capacity facilitates prompt decision-making and the detection of possible hazards or opportunities, which helps enhance strategic and well-informed financial planning, [22]. Accounting systems using artificial intelligence (AI) capabilities can find trends and abnormalities in financial data, which can be used to identify possible fraud or other financial irregularities, [23]. Artificial Intelligence (AI) can reduce the likelihood of fraudulent acts and offer early warnings by continuously monitoring transactions and financial activities, [24]. Artificial intelligence (AI) can help firms become more proactive and produce more accurate forecasts using previous data to predict future financial trends and results, [25]. Organizations can plan, allocate resources wisely, and quickly adjust to changes in the market thanks to this predictive skill, [26]. Artificial Intelligence (AI) has the potential to lower operational expenses for firms by increasing overall efficiency and automating jobs related to traditional accounting processes, [27]. Businesses can devote resources to other vital areas of growth and innovation because of their potential for cost savings, [28]. Finally, artificial intelligence (AI) can provide individualized financial insights tailored to the unique requirements of companies, [29]. Artificial Intelligence (AI)-powered accounting systems can provide personalized recommendations and tactics to maximize financial performance, achieve company goals, and maximize value by evaluating individual financial data and patterns, [30].

Our research contributes to the literature in the field of using artificial intelligence in accounting systems and examines how traditional accounting operations such as data entry, reconciliations, and financial reporting are becoming automated by artificial intelligence (AI), [27]. Analyze how this automation affects accounting procedures' overall productivity, accuracy, and efficiency, [31]. Third, we examined the applications of artificial intelligence (AI) in risk management and fraud detection, [32]. To examine how well artificial intelligence (AI) systems detect fraud and reduce financial risk in businesses, [33]. Fourth, we examine how artificial intelligence (AI)

might help with financial analysis and data-driven decision-making, [34]. Examine how artificial intelligence (AI)-driven tools and algorithms improve accounting systems' financial insights, predictions, and strategic planning, [35]. Fifth, consider the moral ramifications of using artificial intelligence (AI) in accounting software, [36]. Examine possible moral dilemmas about security, privacy, and the ethical application of artificial intelligence (AI) to financial decision-making, [37]. Six, examined how artificial intelligence (AI) is changing the tasks and roles of financial professionals, such as accountants, [38]. Examine the talents and skills that are becoming increasingly important in the context of artificial intelligence (AI) integration and consider any possible effects on the accounting industry, [39]. Seven, consider the difficulties in implementing and adopting artificial intelligence (AI) in accounting systems, [40]. Evaluate obstacles, including expenses, intricacy of technology, and reluctance to modify, and suggest approaches for effective incorporation and acceptance, [41]. Eight studies examined how integrating artificial intelligence (AI) into accounting systems may affect compliance and regulations, [36]. Examine how regulatory frameworks change to allow artificial intelligence (AI) to be used in compliance, auditing, and financial reporting, [42]. To assess how artificial intelligence (AI) affects accounting systems' financial forecasting accuracy, [43]. Analyze how well artificial intelligence (AI)--based financial forecasting models perform compared to traditional techniques and determine what influences increased or decreased financial forecasting and planning accuracy, [44]. Ten studies examine how artificial intelligence (AI) improves accounting auditing procedures and methods, [45]. To examine the use of artificial intelligence (AI) to identify financial irregularities during audit procedures and to uncover anomalies and patterns, [46]. Finally, we examine how artificial intelligence (AI) may affect an organization's long-term financial accountability and transparency, [47]. To examine how artificial intelligence (AI) affects stakeholder trust in accounting systems, corporate governance procedures, and financial information disclosure, [48].

2 Literature Review and Development of Hypotheses

This study addresses the following main research question: What is the impact of artificial intelligence on companies' accounting systems? This question is divided into the following sub-questions: How does the use of artificial intelligence in data analysis and forecasting support the accounting system in Saudi companies? How does the integration of artificial intelligence in integration with other systems support the accounting system in Saudi companies?
Many studies show that artificial intelligence (AI) technologies have a favorable impact on accounting and finance systems, [16], [23], [49], [50]. Some previous studies have indicated that to manage businesses in the rapidly evolving digital economy and to identify the new skills and abilities that accountants may need to acquire to stay relevant and provide value, there is an urgent need for more research, such as, [38].

The world economy has recently peaked, and to sustain competitive advantages and additional economic growth, businesses must implement the newest artificial intelligence-based technology, [51]. This also holds for accounting systems, which are driven by market forces to implement the newest technology as well as the newest practices, [52]. This study, along with earlier research, examines these prerequisites and seeks to help businesses and sectors in this area, [53]. This is only possible if all important parties, such as businesses, accountants, academic institutions, and the government, are in agreement, which is currently the case in Saudi Arabia, [54].

2.1 Capacities for Forecasting and Data Analysis

In the accounting industry, artificial intelligence (AI) is used for data analysis and forecasting, [55]. Using artificial intelligence (AI), past data can be analyzed to identify patterns and trends that can be utilized to predict future financial performance. This facilitates the creation of more precise forecasts and well-informed business decisions, [56]. By evaluating numerous scenarios and offering insights into the possible effects of various tactics on a company's financial health, artificial intelligence (AI)--powered solutions can help with financial planning, [29]. By examining financial data and market movements, artificial intelligence (AI) systems can evaluate risks, [57]. This allows accountants to create efficient risk-management plans and receive early alerts for possible financial hazards, [58]. By reliably extracting data from invoices, receipts, and other financial documents, artificial intelligence (AI)-powered optical character recognition (OCR) technology can reduce manual data input errors and save time, [59]. Accounting professionals can take proactive steps in real-time

using artificial intelligence (AI) algorithms to discover trends and abnormalities in financial data that may indicate fraud or other unexpected activity, [60]. Accountants can gain important insights from unstructured accounting data including emails, published financial reports, and client conversations using natural language processing (NLP). This makes complicated financial paperwork easier to understand and promotes improved decision-making, [61]. Artificial intelligence (AI) can evaluate past cost data, find places where costs may be cut without sacrificing efficiency, and optimize resource allocation to find cost-saving options, [62]. Artificial Intelligence (AI) has the potential to mitigate non-compliance and related fines by automatically monitoring transactions and financial operations. This helps to ensure compliance with accounting standards and regulations, [63]. Finally, artificial intelligence (AI)-powered decision support tools help accountants make well-informed data-driven judgments by providing real-time insights and recommendations based on complex financial data, [64].

Many previous studies have concluded that artificial intelligence has a positive impact on data analysis and forecasting in the field of accounting [43], [65]. Based on the above discussion, we can assume the following hypothesis:

H1: Artificial intelligence (AI) supports Capacities for forecasting and data analysis.

2.2 Using AI to Integrate Accounting Systems with Other Systems

To facilitate more precise and efficient financial operations, artificial intelligence (AI) is increasingly being utilized to combine accounting systems with other systems, [66]. Artificial intelligence (AI) can be used to automatically consolidate and integrate data from many sources, including customer relationship management (CRM), enterprise resource planning (ERP), and other operational systems, [67]. Artificial Intelligence (AI) can map and normalize data from several formats using machine learning techniques, [68]. This ensures smooth system interoperability and integration. Optical character recognition (OCR) and natural language processing (NLP) technologies powered by artificial intelligence (AI) can automate data entry processes, thereby reducing the need for human data input, [59]. This simplifies the integration of accounting data with other systems, [69]. The AI's ability to continuously process and analyze financial data makes real-time reporting and analysis possible, [70]. Organizations can obtain real-time insights into financial patterns, anomalies, and key performance indicators (KPIs) by combining accounting systems with artificial intelligence (AI)-powered analytics tools. This allows for more informed decision-making and strategy formulation, [71]. By examining and recognizing patterns and trends in past financial data, artificial intelligence (AI) can increase forecasting accuracy, [72]. Organizations can forecast future financial results more accurately by integrating accounting systems with artificial intelligence (AI)--powered predictive analytics tools. This allows them to plan and make well-informed financial decisions, [73]. Artificial intelligence (AI) can assist in the early detection of any fraudulent activity by detecting anomalies and suspicious activities in financial transactions, [74]. Through the integration of artificial intelligence (AI)-driven fraud-detection systems with accounting systems, entities can optimize their risk-mitigation strategies and guarantee the accuracy and safety of fiscal information, [63]. Finally, artificial intelligence (AI) can automate regular accounting workflows and operations, including financial closing procedures, invoice processing, and reconciliation, [75]. Organizations can increase operational efficiency, decrease errors, and free critical personnel for more strategic and value-added work by integrating artificial intelligence (AI)-driven automation technologies with accounting systems, [64].

The results of previous studies have shown that artificial intelligence is used in integration with other systems, such as, [55], [66], [76]. In light of the above discussion, writers can make the following assumption:

H1: Artificial intelligence (AI) supports accounting data analysis and forecasting.

3 Methodology

This study used a survey design with a sample of the study population to evaluate the hypotheses. The sample members provided data on accountants, auditors, and employees of the Saudi companies. A useful research technique for gathering information and suggestions from subject matter experts is a survey, [77]. We employed online forms to administer structured questionnaires. The questionnaire was meticulously crafted to ensure that it efficiently gathered the required data when performing the survey. To make it easier to evaluate, a set of closed-ended questions was used in this process. There were closed-ended, five-point questions.

3.1 Measure

There were two sections in the research questionnaire: information on demographics was included in the first part, and the second section included the dependent variable, which is the accounting system in Saudi Arabian companies, as well as the first and second axes of the study, which are the use of artificial intelligence in forecasting and data analysis in accounting and in integrating the accounting system with other systems, respectively. It was ensured that the questions in the questionnaire were precise, short, and pertinent to the variables under investigation. We also considered potential replies and ensured that they accurately collected the data required for analysis. Furthermore, the questionnaire was logically arranged to make it easier for respondents to complete.

3.2 Procedures for Data Gathering and Sampling Design

A total of 213 accountants, auditors, and employees of Saudi businesses comprised our sample, and data were gathered and distributed via Google Forms. Given that the study was conducted in English, the questionnaire was translated into language following the recommendations of earlier research, [78], [79]. The questionnaire was initially created in Arabic to evaluate the instrument's validity and reliability among respondents who were originally from the Arab world. To allow for the generality of the study's findings, a simple random sampling procedure was used to select a sample of desired respondents. Specifically, after random selection, 213 out of 375 issued questionnaires— 56.8% of the total) were returned. The completed surveys were discarded, and those that remained were utilized for the data analysis phase.

4 Data Analysis and Findings

Using an SPSS version 22 program and a basic linear regression model, the applied portion of this study aims to investigate and quantify the effects of a well-balanced interaction between artificial intelligence and the accounting system in Saudi Arabian enterprises, [3], [80]. Statistical program SPSS version for the Social Sciences version 22 was used to analyze the data. Descriptive and inferential statistics were used to examine the questionnaire data. Analysis of Descriptive Data. Alludes to information explaining pertinent phenomena. Quantitative information obtained from the respondents was coded and assessed using "the Statistical Package for Social Sciences" (SPSS version 22). Descriptive and inferential statistics were used to analyze the data. Several marks were awarded for closed-answer questions. The descriptive statistics included means, frequencies, percentages, and inferential statistics. Pearson's advantage correlation and regression analyses were performed to ascertain the effect of artificial intelligence on the accounting system of Saudi businesses.

Data Collection: Relevant information was acquired regarding the questions or problems under investigation. they are making use of a survey. The data were cleansed to guarantee dependability and accuracy. As a vital tool in research and decision-making, statistical analysis provides an impartial, methodical way to examine and understand data. They are crucial in many fields such as scientific research, corporate data analytics, and policymaking.

4.1 Frequencies and Descriptive Statistics

The findings of a survey with 213 participants are shown in Table 1 in the study sample, which was classified into seven groups based on the demographic information of the sample, which included gender, experience, age, qualification, job level, specialty, and professional qualification. Panel A shows the gender distribution of the sample. From the data analyzed, it is clear that out of a total of 213 individuals, 184 were male (86.4% of the total) and 29 were female (13.6% of the total). Panel B displays the age distribution of the people in Panel B. The age group with the greatest number of participants (105, 49.3%) was between 36 and 45 years. Those who are 46 to 60 years old come next, making up 54 people (25.4% of the total). Then came the group of people aged 25 to 35, which comprised 48 people (22.5% of the total). After those four persons, or 1.9% of the total, were older than 60. Two people, or 0.9% of the total, were under 25 years old, coming in last.

Panel C shows the distribution of qualifications within each research group. There were 125 bachelors, or 58.7% of the total, making up the largest group. A master's degree was obtained from 50 people (23.5% of the total). Doctorate doctors came next, accounting for 33 people (15.5% of the total). Higher diplomas were held by 4 people, or 1.9% of the total). Diplomas came next: one person (0.5% of the total). And nobody else exists. The frequency and percentage distribution of various professional certifications in this panel are shown in Panel D. A substantial portion of the sample (178,

83.6% of the total) did not have fellowships. Then came the others, where 13 people, or 6.1% of the total were present. The American Fellowship came next, with eight members (3.8% of the total) in that group. The seven recipients of the British Fellowship and the Arab Fellowship together accounted for 3.3% of the total for each.

Data on the distribution of sample members by specialization are shown in Panel E. There were 117 people (54.9%) with accounting specializations, making up the majority. Banking sciences came next, with 41 people (19.2%) in this field. In the field of business administration, there were 28 participants (13.1%). Others came next and numbered 16 people (7.5%). Finally, information technology was found in 11 participants (5.2%). The information displays the frequency and percentage breakdown of workers in Panel F's job positions. Of the sampled members, 142 worked as accountants, accounting for 58.2% of the workforce. The cashier department, which employed 47 people and represented 19.3% of the sample, followed. The next in line was the department head, with 31 workers (12.7% of the sample) working there. There was another with 15 workers, or 6.1% of the sample, in that one. Lastly, the general manager/above employed nine people and thus made up 3.7% of the sample. Data are broken down by years of experience in Panel G. 29.6 Of the participants, 29.6 %, or 63 people, had five–ten years of experience. A total of 23.9% of the participants (51 individuals) with 11–15 years of experience came next. Then came 48 participants, or 22.5% of the total, who had fewer than five years of experience. 16.4% of the participants (35 individuals) with 16–20 years of experience came next. Finally, 16.5% of participants had more than 20 years of experience.

Table 1. Frequencies and percentage

Panel: A		
Gender	Frequency	Percentage
Male	184	86.4
Female	29	13.6
Total	213	100.0
Panel: B		
Age	Frequency	Percentage
Less than 25 years old	2	0.9
From 25 – 35 years old	48	22.5
From 36 – 45 years old	105	49.3
From 46 – 60 years old	54	25.4
Above 60 years old	4	1.9
Total	213	100.0
Panel: C		
Qualification	Frequency	Percentage
Diploma	1	0.5
Bachelor	125	58.7
Postgraduate Diploma	4	1.9
Master	50	23.5
PhD	33	15.5
Other	0	0.0
Total	213	100.0
Panel: D		
Professional Qualification	Frequency	Percentage
Other	13	6.1
Nothing	178	83.6
American Fellowship	8	3.8
British Fellowship	7	3.3
Arab Fellowship	7	3.3
Total	213	100.0
Panel: E		
Major	Frequency	Percentage
Other	16	7.5
Business Administration	28	13.1
Information Technology	11	5.2
Banking Sciences	41	19.2
Accounting	117	54.9
Total	213	100.0
Panel: F		
Job level	Frequency	Percentage
Other	33	15.5
Department Manager	14	6.6
General Manager/ or above	130	61.0
Accountant	36	16.9
Total	213	100.0
Panel: G		
Experience	Frequency	Percentage
Above 20 years	16	7.5
From 16-20 years	35	16.4
From 11-15 years	51	23.9
From 5-10 years	63	29.6
Less than 5 years	48	22.5
Total	213	100.0

As shown in Table 2, all the means of the variables obtained a high degree of agreement greater than 3.900 and low standard deviations of 0.869, 0.853, and 1.191.

Table 2. Descriptive statistics of the variable's indicators

Indicators		
Capacities for forecasting and data analysis		
Indicators	Mean	Std. Deviation
FDA1	3.967	1.034
FDA2	3.991	0.942
FDA3	4.127	0.936
FDA4	4.019	1.000
FDA5	3.986	1.012
Weighted Mean		4.019
Weighted Std. Deviation		0.869
Using AI to integrate accounting systems with other systems		
Indicators	Mean	Std. Deviation
IWOS1	4.033	1.052
IWOS2	4.202	0.896
IWOS3	3.911	1.188
IWOS4	3.972	1.055
IWOS5	4.056	1.164
Weighted Mean		4.061
Weighted Std. Deviation		0.853
Accounting system		
Indicators	Mean	Std. Deviation
AIS1	3.995	1.180
AIS2	3.925	1.219
AIS3	3.808	1.265
AIS4	3.939	1.198
AIS5	3.920	1.232
Weighted Mean		3.901
Weighted Std. Deviation		1.191

4.2 Reliability Indicator and Internal Consistency Reliability

Two terms frequently used in the field of research, particularly in the social sciences, to evaluate the stability and consistency of measurements or instruments used in data gathering are internal consistency reliability and reliability indicators. These ideas assist researchers in assessing the trustworthiness and dependability of study outcomes. The reliability study's findings show that the research instrument is a reliable predictor of the attitudes and views Saudi enterprises have about artificial intelligence and the accounting system. The factor loadings for several items show that each one is a strong indicator of the underlying construct it was intended to evaluate, with high factor loadings and statistically significant F values. The impact of artificial intelligence on Saudi enterprises, as indicated by Cronbach's alpha, has similarly high internal consistency reliability, indicating a high degree of consistency among the various parts in evaluating these constructions. Saudi companies' accounting system artificial intelligence has strong composite reliability values, bolstering the tool's trustworthiness.

Factor loadings less than 0.6 are frequently employed as thresholds for items that can be eliminated because they do not significantly contribute to the measurement of the underlying construct, [81]. Eliminating indicators with low factor loadings can enhance the construct validity of the measurement tool and dependability of the factor solution's dependability, [82]. Otherwise, if the validity and reliability rates of these variables are less than 0.6, it is possible that they will not be able to effectively direct the researcher to the core of the relationship that you are trying to evaluate.

An indicator was excluded from the study if the factor loadings were less than 0.6. By doing this, we can raise the general quality of the measuring tool and guarantee that the remaining indicators provide a more accurate and consistent assessment of the underlying concept.

Generally accepted reliability thresholds state that internal consistency reliability is considered acceptable if Cronbach's alpha value is at least 0.7, [83]. The results of the analysis showed in Table 3 that with a value of 0.892 and 0.781, respectively, both for using artificial intelligence in data analysis and forecasting, and the use of artificial intelligence in integration with other systems possess Cronbach's alpha values far higher than this threshold. Likewise, composite reliability values of 0.9 or greater are thought to indicate a trustworthy measure of the construct, [84]. With a value of 0.966 for the accounting system, composite reliability values were displayed within this cutoff.

In summary, these findings offer strong evidence in favor of the validity of the research tool employed to gauge participants' attitudes and opinions regarding the advancement of artificial intelligence and its potential effects on the system. High composite reliability values, good factor loadings, statistically significant p-values, and good internal consistency reliability show that the instrument can assess these constructs in a legitimate and trustworthy way.

Table 3. Reliability indicator and Internal consistency reliability

	N of Items	Cronbach's Alpha	Hotelling's T-Squared	F	Sig
Capacities for forecasting and data analysis	5	.892	12.278	3.026	.000
Using IA to integrate accounting systems with other systems	5	.781	31.332	7.722	.000
Accounting system	5	.966	18.915	4.662	.001

4.3 Discriminant Validity

This analysis is considered to represent the second type of construct validity. Discriminant validity is usually used to determine the extent to which the research variables are related by analyzing all possible correlations between the variables, [85].

Table 4 displays the average variance extracted (AVE) for the two variables. Artificial intelligence has an impact on Saudi business accounting systems. The percentage of variance in a given construct that can be explained by the metrics used to evaluate it is represented by the commonly used AVE index of construct-dependability. For a single construct, an AVE of 0.5 or higher, is deemed appropriate based on accepted threshold values [86], proving that the indicators measure the construct accurately.

Table 4. Average Variance Extracted

	(AVE)
Capacities for forecasting and data analysis	.754
Using IA to integrate accounting systems with other systems	.727
Accounting system	.1.419

4.4 Correlation Coefficient

The correlation coefficient was used to measure the linear relationship between the strength and direction of the two variables. A correlation value of 1 indicates a completely positive correlation, which means that if one measure increases, the other measure increases proportionately. It typically ranges from -1 to +1. A correlation coefficient of -1 denotes a perfect negative link, meaning that when one measure increases, the other decreases accordingly. Furthermore, a nearly zero correlation score indicates little to no linear relationship between the variables.

Correlation coefficient interpretation also requires careful consideration of the study objectives and the data context. To obtain significant conclusions, a correlation analysis should be performed in conjunction with other statistical methods and research methodologies. Correlation analysis is a useful tool for understanding relationships between variables. Table 5 presents the correlation coefficients.

Table 5. Correlation coefficient

Correlations

		CP	HCD	OC
Capacities for forecasting and data analysis	Pearson Correlation	1	.622**	.116
	Sig.		.000	.001
Using IA to integrate accounting systems with other systems	Pearson Correlation		1	.424**
	Sig.			.000
Accounting system	Pearson Correlation			1
	Sig.			

***. Correlation is significant at the 0.01 level*

4.5 Hypotheses Testing Result

H1: Artificial intelligence (AI) supports Capacities for forecasting and data analysis.

The hypothesis "Capacities for forecasting and data analysis -> Accounting system" was endorsed by the regression analysis findings. A beta coefficient (β) of -0.331 indicates that there is a strong positive relationship between the use of artificial intelligence in data analysis and forecasting and the accounting system in Saudi companies. The standard deviation (STDEV) of 0.107 indicates that the variance in the use of artificial intelligence in data analysis and forecasting is low, while the T-statistics of -3.094 and the Sig values of 0.000 indicate that the relationship between the use of artificial intelligence in data analysis and forecasting and the accounting system in Saudi companies is significant.

H1: Artificial intelligence (AI) supports accounting data analysis and forecasting.

The hypothesis "Using IA to integrate accounting systems with other systems -> Accounting system" was affirmed in light of the regression analysis findings. A beta coefficient (β) of 0.802 indicates that the application of artificial intelligence to data analysis and forecasting is strongly positively correlated with the accounting system of Saudi companies. A standard deviation (STDEV) of 0.109 indicates that the variance in the use of artificial intelligence in data analysis and forecasting is low,

whereas the P value of 0.000 and the T statistic of 38.683 show that there is a statistically significant relationship between the use of AI in data analysis and forecasting.

In addition, in Table 6, the R2 value of 0.715 indicates that 71.5% of the variance in the accounting system in Saudi companies can be explained through the use of artificial intelligence in data analysis and forecasting, and the use of artificial intelligence in integration with other systems, which indicates the suitability of the model. The f values represent 28.814 confidence intervals for the beta coefficient and offer a rough approximation of the range of the conceivable beta coefficient values.

Table 6. Hypotheses Testing

Hypothesis	β	STDEV	T	R	R2	F	Sig.
Capacities for forecasting and data analysis -> Accounting system	-.331	.107	-3.094				
Using IA to integrate accounting systems with other systems -> Accounting system	.802	.109	7.351	.464[a]	.715	28.814	.000[b]

5 Discussion, Conclusion, Implication of Study

The primary goal of this study is to investigate how artificial intelligence affects Saudi Arabian enterprises' accounting systems. After data collection from Saudi enterprises, a model was constructed and analyzed using SPSS-22 software. These two hypotheses were supported by the statistical results, which showed that the development of artificial intelligence in data analysis and forecasting, as well as its integration with other systems, as assumed in the first and second hypotheses, has a significant positive impact on the accounting system of Saudi companies (B -0.331 0.802, t -3.094 – 7.351), at a significance level of 0.000. This outcome was consistent with the findings of other studies. Our research indicates that AI can automate monotonous processes, such as data input, reconciliation, and report preparation, freeing up accountants to work on more intricate and analytical roles. This may result in increased productivity and decreased human error.

This study and other studies have numerous contributions that can be considered. One of the contributions that did not receive appropriate scholarly attention was the analysis of how artificial intelligence (AI) affected Saudi Arabian enterprises' accounting systems. This study could be interpreted as a request for additional research on this impact, which has been endorsed. However, the impact of Artificial intelligence's (AI) impact on corporate accounting systems has received little attention in the conceptual and descriptive literature. This is one of the few empirical studies that explicitly address the effect of artificial intelligence (AI) on Saudi enterprises' accounting systems. Using techniques such as cost-benefit analysis, moderating factors, causation and correlation, measurement and metrics, and case studies, this study contributes in this way. Ascertain how Artificial intelligence (AI) and affects Saudi corporations' accounting systems.

6 Limitation of Study and Future Suggestions

Although this study provides a wealth of insightful information and important discoveries, further research is required in several areas. The benefit of this research is that using artificial intelligence can have a major and favorable impact on a company's accounting system. Large volumes of data can be processed quickly and reliably, thereby improving forecasting, risk assessment, and financial analysis. Making more thoughtful and calculated business decisions can thus benefit from this. Artificial intelligence-based corporate accounting solutions are also effective. Since this study concentrated on the direct connection, future research should concentrate on other variables that can improve and clarify the artificial intelligence and accounting system relationship of Saudi enterprises as moderators and mediators. Other academics may choose to conduct equivalent research in developing nations and examine similarities and differences. Finally, to detect dynamic shifts in the relationships between variables over time, future research may validate the findings of this study by employing a longitudinal research approach.

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