Migration Letters

Volume: 20, No: S13 (2023), pp. 680-693

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)

www.migrationletters.com

Evaluating Artificial Intelligence's Effect On Accounting Information Systems For Small And Medium-Sized Enterprises

Dr. Vani Haridasan[1] , Dr.Kavitha Muthukumaran[2] , Dr. K. Usha[3] , Dr. S. Bharathi Vasu[4] , Ms. V. Jhansi[5]

ABSTRACT

The purpose of the study is to determine how artificial intelligence affects small and medium-sized businesses' use of accounting information systems. Regression analysis was employed to verify the suggested model and test the hypothesis. Thus, it was determined that AI offers small enterprises new opportunities. With the aid of this study, the use of AI in accounting systems will increase in the future. Small and medium-sized firms (SMEs) are using artificial intelligence (AI) to improve many aspects of their operations and gain a competitive advantage.

Keywords*: Artificial Intelligence, Accounting Information Systems, Automation of Accounting Systems, Enhanced Audit Processes, Decision Making Capacit.*

1. INTRODUCTION

Most companies use a range of strategies and tactics targeted at enhancing their overall performance in order to achieve their primary objective of growing their market share in comparison to their rivals (Vincent and Zakkariya, 2021). Accounting and finance infrastructure of any One of its most crucial aspects is organization. components. It shows how far it can go and how well it functions. Systems typically employ all available means to guarantee that They have access to trustworthy financial and accounting results that can reveal The position and level of market domination of the company (Albuhisi and Abdallah, 2018). These days, one of the most crucial components for maximizing performance with the use of software and technological tools is artificial intelligence (AI). It can provide the company with an abundance of cutting-edge software and applications that can replace human labor and propel the business to previously unheard-of degrees of financial achievement (Mjongwana and Kamala, 2018).

Businesses need a trustworthy accou[1]nting system in order to adjust to the constantly changing market. (Kim & Hong, 2019). In the information era, accounting systems have to give users precise, correct, dependable, and timely information, which emphasizes the necessity of using communicative AI. The development of standardized financial reporting and statements is

[1]Associate Professor, SSN School of Management, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Tamil Nadu, India.
[2]Associate Professor, SSN School of Management Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai, India.
[3]Associate Professor, Department of Electrical and Electronics Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai, India.
[4]Professor, MBA Department, Anand Institute of Higher Technology, Kalasalingam Nagar, Kazhipattur, OMR, Rajiv Gandhi Salai, Chengalpattu District, Pin code: 603103, Tamil Nadu, India.
[5]Assistant Professor, Sri Sai Ram Institute of Technology, West Tambaram, Chennai – 600044, India.

made possible by computerized accounting communication systems, which benefits managers and business owners of all sizes (Xu et al., 2019). With the speed at which technology is developing today, accounting systems need to provide quick, accurate, and helpful information. (Wu et al., 2018).

The present hypothesises that there is a strong relationship between the accounting information system and its ability to integrate artificial intelligence systems. The use of automated accounting systems, enhanced auditing practices, greater ability for decision-making, and accounting information systems are a few instances of how this might happen (Buinevich, M.V., 2021).

2. LITERATURE REVIEW

2.1 Artificial Intelligence (ATIT)

The originator of the term artificial intelligence was John McCarthy. This is the case, according to research (Yadav et.al. 2017). AI stands for artificial intelligence. a computer science field that focuses on designing machines to carry its duties more precisely and effectively than people (Elaine, 2000). Artificial intelligence can also be thought of as the capability of a programmed structure to perform duties that are normally completed by humans brain. These include, among other things, the pursuit of understanding and the ability to obtain it, discernment, original thought, and relationship appreciation.

The main objective of AI development and research is to create intelligent computers that have traits and behaviors similar to those of humans. Four basic categories—intelligence, business, research, and programming can be used to group artificial intelligence (AI), according to Carol and O'Leary (2003). Here, The process of educating machines to behave like people is referred to as artificial intelligence. Dimensions of research and business are a powerful tool that frequently outperform human solutions for both human and business challenges. The last programming dimension focuses on symbolic programming. He et al. (2019) claim that One scientific field is artificial intelligence. endeavor to enhance human life quality by teaching machines to imitate human mental capacities and cognitive processes. Artificial intelligence is the capacity of machines to execute mental functions like learning, problem-solving, and critical thinking that are normally performed by humans. (AI), according to Haenlein and Kaplan (2019).

2.2 Accounting Information Systems (AINS)

The field of computer science known as artificial intelligence creates intelligent systems that display characteristics of human intellect, like the ability to understand language, learn to think, solve problems, and so forth. It is thought that understanding how such systems function can provide insights into the nature of the mind. Numerous programming techniques have been developed by artificial intelligence researchers to enable intelligent behavior. By the late 20th century, human resourcefulness in the field of Information technology advanced to a point where it could being required for administrative life in order to carry out the duties and responsibilities assigned to it (Pal, 2008). In order to expedite and facilitate the services offered, Businesses have made an effort to computerize their divisions. The ultimate objective is to create a public knowledge base that will enable decision-makers to get information in a timely, accurate, and least amount of effort. They were able to perform better than they had previously thanks to the technology's addition of a new management formula, which encouraged them to capitalize on scientific advancements in contemporary technology in an effort to continuously enhance their performance (Huesemann, 2006). This results in faster transaction completion times, higher transaction accuracy, and better customer service.

AI is used in the accounting industry in a number of ways, including computerized records, audits, tax procedures, and different methods for identifying and preventing fraud (Kokina and Davenport, 2017). AI handles the time-consuming, Automating repetitive operations that would otherwise consume important human time, such as data input, analysis, and organizing, allows decision-makers to concentrate on their areas of expertise. Damerji and Salimi (2021) assert that the ability of accountants to handle complex data and statistics, quickly become accustomed to new systems. They are now able to dedicate more time making strategic decisions consequently. According to Luo et al. (2018), accounting AI will manage enormous workloads that people might find difficult to manage.

2.3 Automated Accounting Systems (AAS)

In the accounting industry, expert system development and use represent the most sophisticated form of artificial intelligence. On a variety of subjects, the accountant can consult the expert system. The development of analytics and cognitive technologies for auditing has made the eye-shaded It is likely that accountants who cross-check and meticulously check credit and debit entries will eventually go extinct. On the other hand, the accountant (or auditor) who keeps an eye on, comprehends, and enhances cognitive and analytical systems and processes is going to be successful (Davenport, 2016). Consequently, the implementation expert systems have the potential to be more advantageous for accountants than a total technological makeover (Alex, Fogel, Wilbank, Benard, and Serge, 2014). Financial accounting also uses AI with regard to cash flow. Expert systems are used in financial accounting for a variety of purposes, including the examination of financial reports submitted to the SEC, calculating financial status through ratio analysis. The extensive use of automation technologies like AI and RPA is expected to bring about significant transformations in the accounting sector. According to Gotthardt et al. (2019), machines will replace lower-level employees' routine and boring work, allowing more time to be spent on judgment- and strategy-based tasks that requires human expertise.

H1: Artificial Intelligence (ATIT) has a foremost impact on Accounting Information Systems (AINS) in relation to the Automation of Accounting Systems

2.4 Enhanced Audit Processes (EAP)

The study conducted by Munoko, I., et al. (2020) set out to look into the moral and legal ramifications of auditing with AI. accounting companies list a number of advantages for implementing AI in auditing and consulting, including Time savings, faster data processing, and higher precision, improved customer service, and insight into business processes.

Singh, K.S.D. (2021) found that Competence, impartiality, and independence are the main components of a successful internal audit and that these attributes are also linked to the internal audit's quality. The way businesses and organizations operate has drastically changed due to the use of artificial intelligence. An audit is required of a company, entailing the review and validation of multiple monetary exchanges. An auditing procedure carried out manually cannot thoroughly review and confirm all corporate transactions. By utilizing AI and ML, auditors can save time while conducting a more thorough analysis of a company's financial transactions. Studies indicate that the auditors' level of professional judgment and skepticism influences the effectiveness of their audits (Puthukulam, G., et al, 2021).

AI has the ability to take the place of human auditors and boost productivity while cutting expenses, claim Fedyk, A., et al. (2022). Al-Nuaimat (2013) aimed to demonstrate How computer use has changed the way accounting system software are used and, in turn, how internal auditors function highlighting problems specific to the computerized accounting

system. According to the study, the internal auditor's daily activities vary based on the system of accounts that is being used.

H2: Artificial Intelligence (ATIT) has a foremost impact on Accounting Information Systems (AINS) through the Enhanced Audit Processes.

2. 5 Decision Making Capacity (DMC)

Making decisions is one of the most difficult aspects of managing a business. Regardless of the skills, knowledge, or experience of the leader or decision-analytical maker, there is always a chance that they will make a poor choice. Unquestionably, AI has made significant strides in recent years, leading to revolutionary advancements in many different academic disciplines. Consequently, it has helped many different kinds of businesses streamline and improve a wide range of back-office operations. Eletter, Yaseen, and Elrefae (2019) have demonstrated through their study of a financial institution that pertinent data would be supplied to decision-makers by the intelligent information system. Because there is less uncertainty in their decisions and the quality of their financial services is higher, they are more competitive and have a performance advantage. According to recent research by Bosco (2020), artificial intelligence (AI) can help executives make smarter decisions. In the same way, the human brain retains information from experiences and learnings.

H3: Artificial Intelligence (ATIT) has a foremost impact on Accounting Information Systems (AINS) through improved Decision Making Capacity.

2. 6 Reduced Possibility of Financial Fraud

Traditional accounting methods burden accounting staff with bookkeeping and cash flow. Therefore, there may be financial deception and opulence in financial accounting. Internal management is primarily in the managerial capacity. Accounting personnel reviews the laborious accounting and other duties produced by computers. AI automatically negotiates the invoice and actualizes at the conclusion of the term, the trial balance. Financial fraud can occasionally be caused by accounting staff personnel who have their own related permissions, accounts, and passwords in the network. Nevertheless, fraud cannot be fully understood by the accounting system; changes need to be made, and people need to implement them.

H4: Artificial Intelligence (ATIT) has a foremost impact on Accounting Information Systems (AINS) by reducing the Possibility of Financial Fraud

2. 7 Saving Time

"Saving time" is the practice of transferring time between different tasks in order to increase efficiency, as time is widely acknowledged to be a limited and scarce resource (Hanwananont, 2005). This implies that people' perceptions of the amount of time they can save can be enhanced by intelligent technology. Research has shown that technology adoption is impacted by having greater leisure time and workload (Bergschöld, 2018), and putting in less effort (Gazori et al., 2020). Time savings are another factor that is anticipated to propel the use of AI technologies. For instance, SMEs will embrace new technology if the advantages of AI-based accounting automation, such as time savings, exceed the potential drawbacks of manual processes. Because implementing accounting automation requires a great deal of work and modification. Small and medium-sized enterprises (SMEs) will not adopt artificial intelligence if they feel that it does not result in time savings. This study suggested that the impact of time savings on the adoption of artificial intelligence might be explained by accounting automation. based on the findings of earlier research on the connection between automation and time savings (Olson & Levy, 2018). Therefore, the following hypothesis is developed by this research:

H5: Artificial Intelligence (ATIT) has a foremost impact on Accounting Information Systems (AINS) by Saving Time in completing the task.

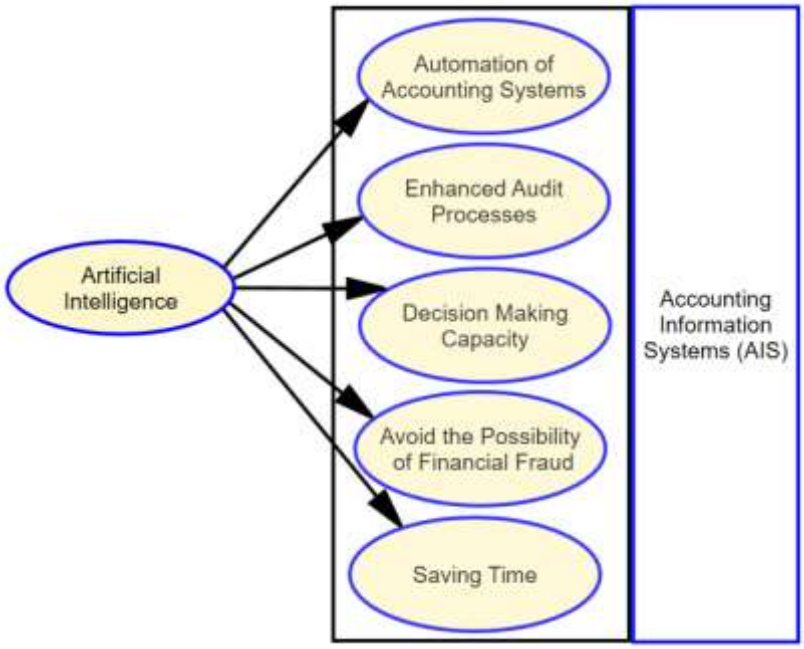

Figure1: Conceptual Model showing the relationship with AI and factors of Accounting Information System

3. RESEARCH METHODOLOGY

Between April 2023 and October 2023, primary data was collected using a questionnaire and analyzed using SPSS-20. 550 small- and medium-sized business (SMEs) owners or representatives from manufacturing organizations who had dealt with artificial intelligence (AI) at least once were chosen at random to complete the online survey. Of those, 479 were discovered to be flawlessly completed and error-free.

A five-point Likert scale was used to score the statements, with one point denoting strong agreement and five denoting severe disagreement. We conducted a factor analysis and a chronbach's alpha to make sure the constructions were reliable and valid. Regression analysis was used to assess the hypothesis.

4. RESULTS AND ANALYSIS

4. 1 Demographic Profile

Descriptive demographic statistics represented as a percentage, proportion and frequency of occurrence were used to evaluate the respondent's demographic features (Table 1). After careful examination, 87.09% of the responses are considered to be of high quality. Out of the 479 respondents, there were far more men (400, 83.5%) than women (79, 16.5%); most of them (123, 25.7%) were between the ages of 30 and 39; 205 (42.8%) had a professional degree; and 226 (47.2%) had between 11 and 20 years of work experience.

Table 1. Descriptive Statistics of Demographic Profile

		Frequency	Valid %			Frequency	Valid %
Age profile	20-29 years	68	14.2	**Gender profile**	Male	400	83.5
	30-39 years	123	25.7		Female	79	16.5
	40-49 years	86	18	**Working experience (in total years)**	Less than 10	125	26.1
	50-59 years	121	25.3		11 to 20	226	47.2
	60 years and above	81	16.9		21 to 30	95	19.8
Highest education level	Bachelor Degree	64	13.4		31 to 40	18	3.8
	Masters Degree	114	23.8		More than 40	15	3.1
	Prof. Education	205	42.8				
	Other	96	20.0				

4. 2 Exploratory Factor and Reliability Analysis

Using the EFA, the relevance of conforming components was assessed. The threshold used in this investigation is a factor loading of 0.50. These results suggest that factor analysis is a suitable technique for this set of data. Thirty of the thirty elements with loadings larger than 0.5 that made up the final analysis were removed. An internally consistent scale is generally considered to meet a minimum requirement of 0.70 for Chronbach's Alpha. In this investigation, the Cronbach's alpha level of 0.7 has been employed.

Table 2. Results of Exploratory Factor Analysis

Variable	Cronbach alpha	Statement	Factor loadings	KMO Measure of Sample Adequacy (>0.5)	Bartlett's Test of Sphericity		Items confirmed	Items dropped	Cum % of loading
					Chi Square	Sig. (<.10)			
Automation of Accounting Systems (AUAS)	0.970	AUAS-1	0.195	0.856	2643.417	0.000	4	1	74.010
		AUAS-2	0.954						
		AUAS-3	0.957						
		AUAS-4	0.971						
		AUAS-5	0.945						
Enhanced Audit Processes (ENAP)	0.738	ENAP-1	0.826	0.741	429.892	0.000	4	1	45.435
		ENAP-2	0.803						
		ENAP-3	0.199						
		ENAP-4	0.681						
		ENAP-5	0.665						
Decision Making Capacity (DMCA)	0.928	DMCA-1	0.915	0.870	2032.067	0.000	5	0	77.679
		DMCA-2	0.928						
		DMCA-3	0.919						
		DMCA-	0.932						

		4							
		DMCA-5	0.805						
Avoid the Possibility of Financial Fraud (APFF)	0.872	APFF-1	0.600	0.714	1475.927	0.000	4	0	72.482
		APFF-2	0.912						
		APFF-3	0.956						
		APFF-4	0.890						
Saving Time (SATI)	0.884	SATI-1	0.643	0.730	1535.093	0.000	4	0	74.283
		SATI-2	0.918						
		SATI-3	0.959						
		SATI-4	0.892						
Artificial Intelligence (ATIT)	0.937	ATIT-1	0.930	0.883	2232.279	0.000	5	0	79.878
		ATIT-2	0.937						
		ATIT-3	0.929						
		ATIT-4	0.845						
		ATIT-5	0.822						
Accounting Information Systems (AINS)	0.969	AINS-1	0.245	0.844	2613.092	0.000	4	1	74.128
		AINS-2	0.959						
		AINS-3	0.956						
		AINS-4	0.962						
		AINS-5	0.941						

5. CORRELATION ANALYSIS

Every variable that was taken into consideration has a substantial association with every other variable (Table 4). The highest degree of connection (0.981) was found between Accounting Information Systems (AINS) and Automation of Accounting Systems (AUAS), while the least significant correlations (0.756) were found between Enhanced Audit Processes (ENAP) and Avoid the Possibility of Financial Fraud (APFF).

Table 4: Correlations

	AUAS	**ENAP**	**DMCA**	**APFF**	**SATI**	**ATIT**	**AINS**
AUAS	1						
ENAP	.816**	1					
DMCA	.957**	.808**	1				
APFF	.935**	.756**	.912**	1			
SATI	.915**	.761**	.890**	.967**	1		
ATIT	.932**	.818**	.963**	.883**	.923**	1	
AINS	.981**	.822**	.943**	.916**	.941**	.962**	1

**. Correlation is significant at the 0.01 level (2-tailed).

6 . REGRESSION ANALYSIS

Regression analysis in Table 5 reveals that AI significantly predicts the use of accounting information systems by small businesses. Artificial Intelligence (ATIT) can explain Decision Making Capacity (DMCA) and Automation of Accounting Systems (AUAS) to the degree of 92.8% and 86.8%, respectively, according to the R square values of 0.928 and 0.868. With a R square value of 0.851, Artificial Intelligence (ATIT) can account for 85.1% of the variation in Saving Time (SATI). Similarly, Artificial Intelligence (ATIT) can explain Avoid the

Possibility of Financial Fraud (APFF) and Enhanced Audit Processes (ENAP) to the degree of 77.9% and 66.9%, respectively, according to the R square values of 0.779 and 0.669.

The regression model's ANOVA values (table 6) show that the validation is valid with a 95% confidence level. The influence of Artificial Intelligence (ATIT) on Accounting Information Systems (AINS) is properly represented by the beta values of 0.963 for ATIT to DMCA, 0.932 for AUAS, 0.923 for SATI, 0.883 for APFF, and 0.818 for ENAP, according to the coefficient summary displayed in Table 7.

Table 5 : Regression analysis

Model	Predictors	Dependent variable	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	ATIT	AUAS	0.932	0.868	0.868	0.35048
2	ATIT	ENAP	0.818	0.669	0.668	0.42707
3	ATIT	DMCA	0.963	0.928	0.927	0.23713
4	ATIT	APFF	0.883	0.779	0.778	0.39378
5	ATIT	SATI	0.923	0.851	0.851	0.33125

Table 6 : ANOVA analysis

Model	Predictors	Dependent variable		Sum of Squares	df	Mean Square	F	Sig.
1	ATIT	AUAS	Regression Residual Total	385.229 58.592 443.821	1 477 478	385.229 0.123	3136.188	0.000
2	ATIT	ENAP	Regression Residual Total	175.735 86.999 262.734	1 477 478	175.735 0.182	963.522	0.000
3	ATIT	DMCA	Regression Residual Total	343.330 26.821 370.151	1 477 478	343.330 0.056	6105.980	0.000
4	ATIT	APFF	Regression Residual Total	260.639 73.965 334.604	1 477 478	260.639 0.155	1680.846	0.000
5	ATIT	SATI	Regression Residual Total	299.872 52.340 352.212	1 477 478	299.872 0.110	2732.892	0.000

Table 7: Regression coefficients table for dependent variables

Model		Dependent variable	Unstandardized Coefficients		Standardized Coefficients		
			B	Std. Error	Beta	t	Sig.
1	ATIT	AUAS	0.987	0.018	0.932	56.002	0.000
2	ATIT	ENAP	0.667	0.021	0.818	31.041	0.000
3	ATIT	DMCA	0.932	0.012	0.963	78.141	0.000
4	ATIT	APFF	0.812	0.020	0.883	40.998	0.000
5	ATIT	SATI	0.871	0.017	0.923	52.277	0.000

7 . RESULTS OF HYPOTHESES TESTING

Five hypotheses were put forth in the conceptual research framework (table 8) and all of them have been acknowledged.

Table 8: Summary of Hypotheses Testing

Hy. No.	Independent Variables	Dependent Variables	R-Square	Beta Coefficient	t-value	Sig Value	Status of Hypotheses
H1	Artificial Intelligence (ATIT)	Automation of Accounting Systems (AUAS)	0.868	0.932	56.002	0.000	Accepted
H2	Artificial Intelligence (ATIT)	Enhanced Audit Processes (ENAP)	0.669	0.818	31.041	0.000	Accepted
H3	Artificial Intelligence (ATIT)	Decision Making Capacity (DMCA)	0.928	0.963	78.141	0.000	Accepted
H4	Artificial Intelligence (ATIT)	Avoid the Possibility of Financial Fraud (APFF)	0.779	0.883	40.998	0.000	Accepted
H5	Artificial Intelligence (ATIT)	Saving Time (SATI)	0.851	0.923	52.277	0.000	Accepted

8. DISCUSSION

The results of research on the association between Artificial Intelligence (ATIT) and Accounting Information Systems (AINS) in relation to Automation of Accounting Systems (AUAS) (H1; R-square = 0.868; Beta coefficient = 0.932; t-value = 56.002) verified the presence of a significant positive relationship. In the age of artificial intelligence, accounting software handles complex tasks from human accountants, greatly reducing human mistake and enhancing corporate determination. AI progressively takes on human decision-making duties. Accountants have developed technology to improve their work.AI imitates human thought processes and information gathering (Xing et al., 2017). Modern technology mimics

information processing and intellect. The accounting industry is in a good position to formally acknowledge its transformation (Dongre et al., 2020). Artificial intelligence produces incredibly accurate results, surpassing human labour in many situations.

Based on the empirical study of hypotheses 2, it was discovered that there is a considerable positive link between Artificial Intelligence (ATIT) and Accounting Information Systems (AINS) in relation to Enhanced Audit Processes (ENAP) (R-square = 0.669; Beta coefficient = 0.818; t-value = 31.041). Singh et. al. (2021) found that objectivity, independence and competence are the cornerstones of an internal audit and that these attributes are also linked to the internal audit's quality. The way businesses and organizations operate has drastically changed as a result of the relevance of AI. An audit is required of a corporation, entailing the review and validation of several monetary transactions. A manual auditing procedure is not able to completely review and confirm all corporate transactions. AI can help auditors save time while conducting a more thorough analysis of a company's financial activities. Studies indicate that the degree of professional skep ticism and judgment exhibited by auditors influences the effectiveness of their audits (Puthukulam et al, 2021). Artificial intelligence has the potential to replace human auditors and boost efficiency while lowering expenses, claim Fedyk et al. (2022).

A significant positive affiliation between the two constructs was found by independently examining Artificial Intelligence (ATIT) and Accounting Information Systems (AINS) in relation to Decision Making Capacity (DMCA). This finding supports Hypotheses 3 (R-square = 0.928; Beta coefficient = 0.963; t-value = 78.141). It is evident from Eletter et. al. (2020) that the intellectual information system would provide decision-makers with relevant data. Because there is less uncertainty in their decisions and the quality of their financial services is higher, they are more competitive and have a performance advantage. According to recent research by Bosco (2020), artificial intelligence (AI) can help prominent people use the technology to make better decisions that get the firm closer to its goals. In the same way that the human brain retains information from experiences and learnings, computers store number of facts internally to create a vital database. After then, specialized algorithms are created to provide computers with a rational means of processing this data, enabling them to solve issues and reach conclusions (Jabbari, 2016).

The empirical study of hypotheses 4 revealed a significant positive correlation between Artificial Intelligence (ATIT) and Accounting Information Systems (AINS) in relation to Avoid the Possibility of Financial Fraud (APFF) (R-square = 0.779; beta coefficient = 0.883; t-value = 40.998). Ernst & Young (2010) states that traditional accounting methods burden accounting personnel with bookkeeping and cash flow. Therefore, there may be financial deception and opulence in financial accounting. Managers are primarily in charge of internal control and only the computer-generated heavy accounting and other duties are reviewed by accounting staff. According to Dyck et al. (2020), artificial intelligence automatically negotiates the bill and actualizes the trial balance at the end of the period. Financial fraud can occasionally be the outcome of accounting staff workers having their own relevant permissions, accounts and passwords in the network. The accounting system still can't fully understand fraud; changes need to be made, and those changes need to be implemented by people.

The empirical study of hypotheses 5 revealed a strong positive correlation between Artificial Intelligence (ATIT) and Accounting Information Systems (AINS) in relation to Saving Time (SATI) (R-square = 0.851; Beta coefficient = 0.923; t-value = 52.277). Saving time is the process of redistributing time from one activity to another in order to increase efficiency, as time is commonly acknowledged to be a limited and scarce resource (Hanwananont, 2005).

This implies that people' perceptions of the amount of time they can save can be enhanced by intelligent technology. Research has shown that technology adoption is impacted by having extra free time, having more tasks and putting in less effort (Gazori et al., 2020). Time savings are also anticipated to be a major factor in the adoption of AI technologies by SMEs, provided that the advantages of automating accounting with AI outweigh any potential drawbacks from manual processes.

The integration of artificial intelligence (AI) with accounting information systems (AINS) holds great promise to revolutionize the financial processes of small and medium-sized organizations (SMEs). AI-powered AINS has several benefits, including as increased precision and enhanced ability to make decisions. Business intelligence, data mining, and expert systems are essential components in SMEs' implementation of AI. While data mining and business intelligence technologies help with trend analysis and data-driven decision making, expert systems mimic human expertise (Jia et al., 2021). SMEs can create AI-powered chatbots for customer service and voice-activated virtual assistants thanks to the advancements in natural language processing and speech recognition technology (Olujimi & Ade-Ibijola, 2023). SMEs can access AI capabilities without making large infrastructure expenditures by implementing machine learning and prognostic analytics, which are made possible by AI as a service platforms (Zhao et al., 2022; Kaymakciet al., 2022).

Artificial intelligence (AI) is present in the accounting sector in a number of ways, including computerized records, audits, tax procedures, and other methods for identifying and avoiding fraud (Kokina and Davenport, 2017). Since AI enables accountants to enhance their work, the field of accounting has seen a surge in interest (Chukwudi et al., 2018). Why is AI in accounting so crucial? AI frees up decision-makers to concentrate on their areas of expertise by handling repetitive, time-consuming tasks like data input, analysis, and organizing that would otherwise require significant human effort. While sophisticated algorithms maintain them up to date, accountants can focus on tasks that require human intervention, such reviewing and assessing outputs, contrasting them with reality, and rendering decisions based on them (Ionescu, 2019).

Artificial intelligence (AI), according to Damerji and Salimi (2021), has helped accountants by allowing them to handle complex data and figures, take up new systems quickly, and spend less time on administrative activities. This has allowed them to spend more time formulating strategic judgments. Accounting AI will handle massive workloads that humans could find challenging to handle, claim Luo et al. (2018). If the inputs are mostly precise and perfect, these jobs yield very accurate and error-free results. By identifying mistakes and eliminating pointless requests, artificial intelligence (AI) greatly enhances the audit process, claim Faccia et al. (2019). The audit is based on the actual policies and goals of the organization and is authentic.

9. CONCLUSION

This study tries to determine how SME owners' and managers' perceptions of recent advancements in computer technology affect their adoption of AI-based accounting information systems. Though AI has many advantages, there are several drawbacks to using it in accounting communications, including privacy issues, data security, and the possible elimination of some accounting positions. But AI may benefit the accounting industry greatly with the right deployment and training, which will eventually result in increased productivity, accuracy, and value-added services for both individuals and companies.

Small and medium-sized firms (SMEs) are using artificial intelligence (AI) to improve many aspects of their operations and gain a competitive advantage. The possible ramifications, advantages, and difficulties of incorporating AI into accounting information systems for SMEs

have been the subject of numerous research. Because AI can automate repetitive operations like data input and reconciliation, SMEs may save time and money while increasing operational efficiency and minimizing human error. Through increasing productivity, offering digital settings, facilitating better access to financing, expanding skill sets, and lowering the expenses associated with research and innovation, it significantly influences the business climate of SMEs (OECD).

10. LIMITATIONS AND FUTURE PROSPECTS

The absence of validation for the framework, the paucity of research on AI in SMEs in developing nations, and the dearth of real AI implementations in the study area are among the paper's flaws, which also restrict the framework's applicability. To promote the systematic deployment of AI agents, small firms and governments are urged to interact with technical breakthroughs that have the potential to improve the functionality of current information systems.

More investigation is needed to test the framework in an actual environment, ensuring the model's comprehensiveness and serving as a basis for future modifications with more implementations. The idea of giving weights to various framework components to aid in decision-making when assessing the framework's suitability for adoption is another area that needs review and research. Establishing a legal framework and an error management approach that covers instruction, decisions, actions, and repercussions is necessary for responsible AI usage.

REFERENCE

Al-Nuaimat (2013). Explaining the impact of using computerized accounting information systems in the internal audit process on the Jordanian commercial banking sector. Scientific Journal of Economics and Trade, 1, 977- 1019

Albuhisi, A.M., & Abdallah, A.B. (2018). The impact of soft TQM on financial performance: The mediating roles of non-financial balanced scorecard perspectives. International Journal of Quality & Reliability Management, 35(7), 1360-1379.

Alex, H., Fogel, K., Wilbank, C., Benard, G., & Serge, M. (2014). AI, robotics and the future of jobs. Pew Research Centre. Association of Business Educators of Nigeria Book of Readings, 2(1), 156-61.

Bergschöld, J. M. (2018). When Saving Time becomes Labor: Time, Work, and Technology in Homecare. Nordic Journal of Working Life Studies, 8(1). https://doi.org/10.18291/njwls.v8i1.104850

Buinevich, M.V., Izrailov, K.E., Kotenko, I.V., & Kurta, P.A. (2021). Method and algorithms of visual audit of program interaction. Journal of Internet Services and Information Security (JISIS), 11(1), 16-43.

Bosco, M.V. (2020). A Study on Artificial Intelligence Interaction with Organizational Performance. International Journal of Research in Engineering, Science and Management, 3(2), 483-486.

Chukwudi, O., Echefu, S., Boniface, U., & Victoria, C. (2018). Effect of artificial intelligence on the performance of accounting operations among accounting firms in South East Nigeria. Asian Journal of Economics, Business and Accounting, 7(2), 1-11.

Damerji, H., & Salimi, A. (2021). Mediating effect of use perceptions on technology readiness and adoption of artificial intelligence in accounting. Accounting Education, 30(2), 107-130.

Davenport, T. (2016). Innovation in Audit Takes the Analytics, AI Routes. Audit Analytics, Cognitive Technologies, to set Accountants Free from Grunt Work.

Dongre, N., Pandey, A. and Gupta, O. P. (2020). Artificial intelligence in accounting: Opportunities and challenges. Journal of Xi'an University of Architecture and Technology, 12(5): 1858-64.

Dyck, A., A. Morse and L. Zingales. (2020). How pervasive is corporate fraud. University of Toronto working paper.

Elaine, R. (2000). Overview of AI and its application area.

Eletter, S., El Refae, G. A., & Kaba, A. (2020). The impact of knowledge sharing enablers on knowledge sharing behavior: An empirical study. VINE Journal of Information and Knowledge Management Systems, 52(1), 102–119. https://doi.org/10.1108/VJIKMS-04-2020-0065

Ernst & Young. (2010). Driving ethical growth—New markets, new challenges. 11th Global Fraud Survey.https://linomartins.files.wordpress.com/2011/12/2011th_global_fraud_survey.pdf.

Faccia, A., Al Naqbi, M.Y.K., & Lootah, S.A. (2019). Integrated cloud financial accounting cycle: how artificial intelligence, block chain, and XBRL will change the accounting, fiscal and auditing practices. In Proceedings of the 3rd International Conference on Cloud and Big Data Computing, 31-37.

Fedyk, A., Hodson, J., Khimich, N., & Fedyk, T. (2022). Is artificial intelligence improving the audit process? Review of Accounting Studies, 27(3), 938-985.

Gazori, P., Rahbari, D., & Nickray, M. (2020). Saving time and cost on the scheduling of fog-based IoT applications using deep reinforcement learning approach. Future Generation Computer Systems, 110, 1098-1115.

Gotthardt D, Trifinopoulos J, Sexl V, (2019). Putz EM. JAK/STAT Cytokine Signaling at the Crossroad of NK Cell Development and Maturation. Front Immunol. 2019 Nov 12;10:2590. doi: 10.3389/fimmu.2019.02590. PMID: 31781102; PMCID: PMC6861185.

Hanwananont, S. (2005). A study of selected factors related to consumers' intentions to redeem mobile coupons in Bangkok

He, J., Baxter, S.L., Xu, J., Xu, J., Zhou, X., & Zhang, K. (2019). The practical implementation of artificial intelligence technologies in medicine. Nature medicine, 25(1), 30-36.

Huesemann, M. H. (2006). Can advances in science and technology prevent global warming? A critical review of limitations and challenges. Mitigation and Adaptation for Global Change, 11, 539–577.

Ionescu, L. (2019). Big data, blockchain, and artificial intelligence in cloud-based accounting information systems. Analysis and Metaphysics, (18), 44-49.

Jabbari, Latifa., (2016). Methods of Decision Making Using Artificial Intelligence: A Comparative Study of Predicting the Electric Power of Tlemcen Province Using Artificial Neural Networks. Published PhD thesis, Faculty of Economics, Facilitation and Business Sciences, Abi Bakr Belkaid University, Algeria.

Jia, S., Pan, M., Sun, W., Joyce, H.N., Wang, Y. and Zheng, W. (2021). Data Mining and Business Intelligence in SME Customer Relationship Value Analysis, 3rd International Conference on Artificial Intelligence and Advanced Manufacture (AIAM), Manchester, United Kingdom, 518-524.

K. Muthukumaran and K. Hariharanath, "Deep learning enabled financial crisis prediction model for small-medium sized industries," Intelligent Automation & Soft Computing, vol. 35, no.1, pp. 521–536, 2023. DOI: https://doi.org/10.32604/iasc.2023.025968

K. Muthukumaran, K. Hariharanath and V. Haridasan, "Feature selection with optimal variational auto encoder for financial crisis prediction," Computer Systems Science and Engineering, vol. 45, no.1, pp. 887–901, 2023. DOI: https://doi.org/10.32604/csse.2023.030627

Kaymakci, C., Wenninger, S., Pelger, P., & Sauer, A. (2022). A Systematic Selection Process of Machine Learning Cloud Services for Manufacturing SMEs. Computers, 11(1), 1-19.

Kokina, J., and T. H. Davenport. (2017). “The Emergence of Artificial Intelligence: How Automation is Changing Auditing.” Journal of Emerging Technologies in Accounting 14(1): 115–22. DOI: https://doi.org/10.2308/jeta-51730

Kim, J., Kim, H. K., Kim, S., & Lin, S.-F. (2019). Cultural trait vs. personality trait: Predicting the appeal of Korean entertainment among Asian viewers in Singapore, Taiwan, and Hong Kong. Journal of Broadcasting & Electronic Media, 63(2), 285–303. https://doi.org/10.1080/08838151.2019.1622114

Luo, J., Meng, Q., & Cai, Y. (2018). Analysis of the impact of artificial intelligence application on the development of accounting industry. Open Journal of Business and Management, 6(4), 850-856.

Mjongwana, A., & Kamala, P.N. (2018). Non-financial performance measurement by small and medium sized enterprises operating in the hotel industry in the city of Cape Town. African Journal of Hospitality, Tourism and Leisure, 7(1), 1-26.

Munoko, I., Brown-Liburd, H.L., & Vasarhelyi, M. (2020). The ethical implications of using artificial intelligence in auditing. Journal of Business Ethics, 167, 209-234.

McKinsey Global Institute. (2017). "Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation." https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Future%20of%20Organizations/What%20the%20future%20of%20work%20will%20mean%20for%20jobs%20skills%20and%20wages/MGI-Jobs-Lost-Jobs-Gained-Report-December-6-2017.ashx

O'Leary, D. (2003). Expert systems in accounting.

Olson, C., & Levy, J. (2018). Transforming marketing with artificial intelligence. Applied Marketing Analytics, 3(4), 291- 297.

Olujimi, P.A., & Ade-Ibijola, A. (2023). NLP techniques for automating responses to customer queries: a systematic review. Discover Artificial Intelligence, 3(1).

Pal S, Lim S, Egger G.(2008). The effect of a low glycaemic index breakfast on blood glucose, insulin, lipid profiles, blood pressure, body weight, body composition and satiety in obese and overweight individuals: a pilot study. J Am Coll Nutr. 2008 Jun;27(3):387-93. doi: 10.1080/07315724.2008.10719715. PMID: 18838526.

Puthukulam, G., Ravikumar, A., Sharma, R.V.K., & Meesaala, K.M. (2021). Auditors' perception on the impact of artificial intelligence on professional skepticism and judgment in oman. Universal Journal of Accounting and Finance, 9(5), 1184-1190.

Singh, K.S.D., Ravindran, S., Ganesan, Y., Abbasi, G.A., & Haron, H. (2021). Antecedents and internal audit quality implications of internal audit effectiveness. International Journal of Business Science & Applied Management (IJBSAM), 16(2), 1-21.

Vincent, V.Z., & Zakkariya, K.A. (2021). Role of Business Incubation on The Financial and Non-Financial Performance of Technology Startups: A Multivariate Multiple Regression Analysis. Journal of Entrepreneurship Education, 24(5), 1-16.

WEF. (2018). "The Future of Jobs Report 2018." World Eco- nomic Forum. Available at: http://www3.weforum.org/docs/ WEF_Future_of_Jobs_2018.pdf

Wu, X., H. Yang, D.W. Waugh, C. Orbe, S. Tilmes, and J.-F. Lamarque, (2018): Spatial and temporal variability of inter hemispheric transport times. Atmos. Chem. Phys., 18, 7439-7452, doi:10.5194/acp-18-7439-2018.

Xing, Afeng, Tao, Xuemei, Peng and Ruifeng (2017). Reflections on the accounting industry in the era of artificial intelligence. Accounting and Accounting Studies, 10: 112-12.

Xu, C., N.G. McDowell, R.A. Fisher, L. Wei, S. Sevanto, B.O. Christoffersen, E. Weng, and R.S. Middleton, (2019): Increasing impacts of extreme droughts on vegetation productivity under climate change. Nat. Clim. Change, 9, no. 12, 948-953, doi:10.1038/s41558-019-0630-6.

Yadav, A., Gupta, V., Sahu, H., & Shrimal, S. (2017). Artificial Intelligence-New Era. International Journal of New Technology and Research, 3(3), 30-33.

Yaseen Saad Ghaleb Ghaleb A Elrefae (2019). Islamic work ethics for Arab managers: the missing paradigm between espoused Islam and Islam-in-use. January 2019International Journal of Economics and Business Research 17(1):18-33. DOI: http://dx.doi.org/10.1504/IJEBR.2019.10016870

Zhao, J., Zhang, L., & Zhao, Y. (2022). Informatization of Accounting Systems in Small-and Medium-Sized Enterprises Based on Artificial Intelligence-Enabled Cloud Computing. Computational Intelligence and Neuroscience, 2022.