



## EFFECT OF INFORMATION TECHNOLOGY COMPETENCE ON ACCOUNTING INFORMATION SYSTEMS IN THE NIGERIAN BUSINESS ECOSYSTEM

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### Abstract

The Nigerian business ecosystem is one of the important industries that supports the expansion and improvement of the national economy. Indeed, one of the significant concerns of business entities is maximizing profit and competing efficiently in the market. However, there is growing intimation about many firms' poor performance in accounting information systems. Thus, the current study aimed to investigate the effect of ICT competence and effective AIS in the business ecosystem in Nigeria. One hundred nine accountants from various firms responded to the research instrument to measure ICT competence and effective AIS. The result of a simple linear regression analysis was conducted to test the relationship between accountants' ICT competence and AIS in the business environment. The result showed a significant regression equation  $F(1, 107) = 221.83, P < .05$ , with an  $R^2$  of .412, indicating that ICT competence contributed 41.2% of the variation in the AIS effectiveness in the business ecosystem. Thus, the study's outcome confirms the hypothesis that ICT competence predicts effective AIS in business. The findings, implications, and conclusions are discussed.

**Keywords:** ICT, competence, AIS, business, accountant.

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### Introduction

The demand for accounting information systems is increasing due to their high influence on organizational performance and emerging areas to be investigated (Al-Delawi & Ramo, 2020). Accounting information systems add value to the company, such as accurate and timely information to perform critical activities in the value chain effectively and efficiently, improving quality and efficiency (Al-Delawi & Ramo, 2020). In an accounting information system (AIS), financial and accounting data are gathered, stored, and processed so that internal users can report information to creditors, investors, and tax authorities (Gruda, 2014; Liu, 2018; Plaskova et al., 2020; Salehi et al., 2015). In most cases, it takes the shape of a computer-based system for monitoring accounting activity in conjunction with resources provided by information technology. An AIS also uses other contemporary information technology (IT) resources and comprises several components, each of which plays a vital role in the accounting cycle. A typical administrative information system (AIS) stores data relating to a company's revenue, expenses, customers, employees, and taxes. The specific types of data stored in a system might vary depending on the type of business and the size of the organization that uses the system. Details include information on sales orders and analysis reports, purchase requisitions, invoices, check registers, inventories, payroll, ledger, trial balances, and information on financial statements.

A database is essential to any accounting information system that manages and organizes data. This type of database structure is generally developed with query language, which enables users to manipulate tables and data. An AIS features many fields where users can enter new data as well as change the data that has already been saved. In addition, accounting information systems are frequently highly secure platforms, with preventative steps taken against viruses, hackers, and other external sources attempting to obtain information. As more and more businesses move their data storage operations online, maintaining adequate cybersecurity measures is becoming increasingly vital. The adaptability of a data manipulation system is demonstrated by the myriad of outputs that are produced by an accounting information system. A trial balance accounts receivable aging reports and depreciation schedules for fixed assets are some of the reports that an AIS can generate. These reports are used to provide financial information. It is also possible to duplicate things like customer lists, tax calculations, and inventory levels.

### Accounting Information System in the Nigerian Business Ecosystem

A socially acceptable behavioral approach to reporting accounting information was used by accountants in the Nigerian business environment before the advent of information and communications technology (ICT). This method was carried out during the accounting year's end. The statement of accounts, the statement of financial



condition, the cash book, and the statement of cash flow are all included in the prepared accounts. ICT in accounting practice in Nigeria has become a subject of essential importance and concern to all business enterprises and is gradually becoming a prerequisite for local and international competitiveness. ICT has become a subject of fundamental importance and concern to all business enterprises. It is abundantly clear that information and communication technology have enormously impacted how accountants plan and make decisions on what and how to provide their services in the accounting profession. This is the case regardless of whether one works in public or private practice. This has continued to modify how accounting practices and their corporate ties are arranged worldwide.

The contemporary business ecosystem in Nigeria is increasingly witnessing the critical role of ICT in many areas. The proliferation of different inventive devices has instigated the integration of many distinct departments to share required accounting information. For instance, the sales department can enter the sales budget into the system and upload it. In order to conduct inventory counts and make purchases of necessary materials, others responsible for inventory management use this information. An AIS can also facilitate the sharing of information regarding a new transaction between the critical components of any given business enterprise. It is essential to recognize the importance of internal controls inside accounting information systems since they are vital. It is possible to build policies and practices into the system so that a company may maintain the confidentiality of sensitive information regarding its customers, vendors, and other businesses. This would allow the company to avoid potentially damaging disclosures. Users' access can be restricted to only the pertinent information essential to conducting their business, thanks to the utilization of physical access approvals, login requirements, access logs, authorizations, and segregation of duties.

Researchers have underscored the various underlying variables in utilizing AIS in the business entity. For example, Nguyen and Nguyen. (2020) investigated the factors affecting accounting information systems' quality. The findings showed that various factors significantly impacted the quality of accounting information systems, including organization culture, manager participation, information technology, information technology knowledge of managers, accounting knowledge of managers, and accounting information applications.

Fitrios (2019) determined the effect of top management commitment and user training on implementing accounting information systems. The findings demonstrated that the commitment of top management and user training influence the deployment of an accounting information system. Accordingly, Binh et al. (2022) investigated the effect of innovative organizational culture on the quality of accounting information systems using the Structural Equation Model. According to the study's findings, the organizational culture of businesses is a critical component in improving the quality of their accounting information systems. Also, Tumbo's (2020) findings revealed that factors perceived as impeding the adoption of information management systems in the provision of healthcare services included a lack of ICT personnel, reluctance on the part of some employees to adopt the electronic information system, and a negative attitude on the part of system users. Other factors included system slowness at times, a lack of adequate ICT infrastructure, the possibility of information hacking, the complexity of the system, and unreliable hardware or software platforms. However, rapid technology advancements cause changes and innovations in AIS (Susanto & Meiryani, 2019)

### **Information Technology Competence and AIS**

Information communication technologies have become a universal trend in the business environment. The use of information and communications technology offers the potential for massive cost savings and productivity increases (Sorce & Issa, 2021). It is critical to effective knowledge management (Lecerf & Omrani, 2020). The advances in the ICT industry have significantly impacted business dynamics in the twenty-first century (Shaukat & Zafarullah, 2009). The growing technological innovations have transformed how business is done, and the trend is well observed in manufacturing industries. Indeed, extensive literature exists that highlights the role of ICT in the world of work (Abdullahi et al., 2021; Adila & Ahmad, 2020; Anab, 2017; Catinat, 2013; Chege et al., 2020; Demestichas & Daskalakis, 2020; Ibrahim & Jebur, 2019; Jameel, 2017; Saleem et al., 2019; Solomon & van Klyton, 2020). There is a common conception that ICT remains the key to business development and sustainability across the globe.

The accounting information system is an absolute tool for managers striving to remain in a competitive advantage amidst rapid technological advancement (Ganyam & Ivungu, 2019). The quality of accounting information systems is a measure combining system quality and information quality. Determining what aspects of this measure are critical for businesses to enhance firm performance (Binha et al., 2020). Accordingly,



numerous studies abound that support ICT integration and firm performance (see., Amoako et al., 2021; Forth & Mason, 2006; Gërguri-Rashiti et al., 2017; Houqe et al., 2019; Huang et al., 2021; Iacovone et al., 2017; Noor et al., 2017; Seth & Xiaofang, 2021; Siahaan & Tan, 2020; Sundram et al., 2020). The growing competition in the business ecosystem has prompted firms in Nigeria to adapt to the dynamics of contemporary society through investment in ICT infrastructures. However, the employee's ICT competence is the major constraint in the ICT-performance relationship.

Due to the significant role of ICT in the firm's production process, most studies have dealt with ICT competencies as a critical factor in AIS. ICT competencies relate to the knowledge and application of various computer programs, software, and other applications, including word processing, spreadsheets, databases, power points, search engines, and data manipulations. Competencies in the use of ICT infrastructures are the key to effective AIS. Practical ICT competencies in accounting would contribute significantly to utilizing AIS in the business ecosystem. Thus, there is a growing need to incorporate ICT-competent accountants in business entities. For instance, accountants who perform various ICT functions are assumed to perform better than their counterparts with little or no ICT knowledge. Thus, the presence of ICT-competent accountants in any business in Nigeria could serve as a vehicle to increase business performance. Thus, the principal objective of the present paper is to explore ICT competency as a scarcely investigated variable that could influence effective AIS in the business ecosystem in Nigeria.

**Hypothesis:** ICT competence will predict effective AIS in the business ecosystem.

## Method

The current research adopted a cross-sectional design. Certified accountants, including males and females from different organizational departments in Edo state, Nigeria, were randomly selected for the study. The participants were approached between June and August 2023 and were asked to participate in the study. They were briefed on the study's aim and were equally informed that participation is voluntary and that they could pull out at their convenience. Those who consented were given the study instrument to fill and return on the spot. One hundred and eighteen (118) employees filled out the questionnaire. However, nine copies were discarded due to improper filling. Hence, the correctly filled questionnaires (109) were analyzed statistically.

## Measures

ICT skill was measured with the ICT Skills Scale initially developed by (Wilkinson et al., 2010). The original 28-item Linkert-type scale comprising three sub-dimensions, namely "Information technologies," "Communication technologies," and "Mobile technologies," was modified to fit the present research context. Thus, the 15 items modified version measures employee's information and communication technology skills on a 5-point Likert type scale scored as "strongly disagree"(1), "disagree"(2), "undecided" (3), "agree" (4) and "strongly agree" (5). A high score suggests a higher ICT skill. The Cronbach's  $\alpha$  reliability coefficient for the scale was 0.79 in the current study.

The effect of ICT competence on AIS was examined using a structured questionnaire designed to ascertain the role of ICT competence on the effectiveness of AIS in the business environment in Nigeria. As a result, the instrument assesses proficiency in the acquisition, processing, and storage of financial and accounting data. Also, it assesses information-gathering capabilities. The questionnaire was completed by relevant individuals in the firms apart from the participants. The questionnaire recorded a Cronbach's  $\alpha$  reliability coefficient of 0.67.

## Result

The table below shows the result of a simple linear regression analysis conducted to test the relationship between employees' ICT competence and AIS in the business environment. The result showed a significant regression equation  $F(1, 107) = 221.83, P < .05$ , with an  $R^2$  of .412, indicating that ICT competence contributed 41.2% of the variation in the AIS effectiveness in the business ecosystem. Thus, the study's outcome confirms the hypothesis that ICT competence predicts effective AIS in business.



Table 1 shows regression results.

	B	Std. Error	$\beta$	t	Sig.
(Constant)	1.82	.089		20.52	.000
ICT competence	.87	.059	.877	14.89	.000
$R^2$	.412				
F	221.83				

### Discussion

The current study investigated the effect of ICT competence on AIS's effectiveness in Nigeria's business ecosystem. The result of the study revealed that ICT competence significantly predicted AIS's effectiveness in Nigeria's business ecosystem. This means business entities with many ICT-competent accountants would perform better in accounting information systems than their counterparts without ICT-skilled accountants. The outcome of the present finding could be described in two dimensions: firstly, the result describes individual input based on ICT competence, which means that the IT competence accountant commits to utilizing the various accounting software and IT infrastructure to carry out their accounting duties effectively. The probable explanation for this outcome could be attributed to the relationship between ICT competence and job performance (Oyovwe-Tinuoye et al., 2021) and job commitment (Martin, 2011). Accordingly, Kucharska and Erickson (2020) noted that IT competency predicts information sharing and job satisfaction. Perhaps the study's result reflects the relevance of competence in the use of computer technologies and improvement in job roles.

The present finding is aligned with (Wambui & Njuguna, 2017), which suggests that IT usage led to efficient management of processes of budget accounting. The findings imply that information technology has a significant positive effect on financial management systems. Under the contemporary information-based data model, the continuous development of Internet information popularizes the accounting information system among enterprises, which derives the process of accounting information system different from the traditional manual process. However, due to the inability to effectively apply innovative mechanisms, many accountants find it easy to fail to identify the risks of accounting data, internal control, and audit environment in the accounting information system promptly when implementing the accounting information system, which results in audit misstatement. Also, the result implicates accountants' IT competence in organizational performance outcomes. Accordingly, accounting firms are characterized by data analysis. Thus, advancements in science and technology have led to the digitization of various accounting tools.

### Implication of the study

The result of the present study is implicated in the role of ICT competence accountants in the accounting information system in the business ecosystem in Nigeria. Also, the study reveals a lack of ICT-skilled accountants as a determinant of decreased analytical procedures in data management and information processing performance in business entities. Indeed, the ubiquity of information communication technology in work has blurred the boundaries between skilled and unskilled ICT employees. Similarly, using accountants with competence in information technology in any business entity may lead to integration and increasing interface of various accounting processes.

### Limitations of the study

However, the present study revealed the relevance of ICT competence to the effectiveness of AIS in the business ecosystem. It is essential to state the challenges associated with the investigation. For example, data relating to effective AIS and ICT competence was based on subjective information from selected accountants. Indeed, this method is fraught with challenges as the respondents may overstate or understate the performance of their organizations. Despite this limitation, subjective assessments have been a popular method for assessing performance among researchers (Camps & Luna-Arocas, 2012; Ndofor & Priem, 2011). Also, the sampling method may limit the generalization of the study findings. However, the present research provides the basis for further investigating IT competence and AIS.



## Conclusion

The present study was conducted to determine the predictive role of ICT skills on the effectiveness of AIS in the business world. The findings indicated a statistically significant relationship between ICT skills and the effectiveness of AIS in the business world. Thus, the requisite ICT skills of accountants relating to information communication technologies in the business ecosystem are a significant variable in the accounting performance outcome. Therefore, it is concluded that the ICT skills of accountants contribute positively to the variation in the performance indicators (data collection, reporting, and management) of businesses in Nigeria. Accordingly, the study recommends robust training of accountants in ICT and the adoption of modern IT infrastructures.

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