



Impact of Information Communication Technology on Accounting Practice in Nigeria

Okafor, Victor Ikechukwu, PhD.¹; Egiyi, Modesta Amaka, PhD.²

¹Department of Accounting, College of Management
Michael Okpara University of Agriculture, Umudike

²Department of Accounting and Finance
Godfrey Okoye University

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ABSTRACT

This research work explored the impact of accounting practice in Nigeria. All accounting firms in Enugu state was the study population. Frequencies, Percentages, Tables and Charts were used to present obtained data. The Chi-Square test of independence and association was employed in testing the statistical significance of the null hypothesis. After subjecting each hypothesis under test, findings revealed that there is a significant relationship between job proficiency and the use of ICT, and that the adoption of ICT in the practice of accounting has significant benefit. Hence, it was concluded that application of ICT has effect on efficiency of accounting practices in Nigeria and thus preparers of accounting information should adopt ICT in all aspect of accounting practice for effectiveness and transparency.

Keywords: Information Communication Technology (ICT); Accounting; Accounting Practices; Nigeria

1. Introduction

Previous years before the inception of information and communication technology (ICT), accountants in organizations employed socially acceptable behavioral method of reporting accounting transactions and events in order to generate various accounting books such as profit and loss account, balance sheet, income and expenditure account amongst others (Oyebisi, Ayodotun, & Olugbenga, 2015). Technological advancement and globalization are said to have created a new global economy having ICT occupying a complex position in relation to globalization (Agbo, 2012). This globalization has today led to the introduction and application of ICT on accounting practice in most firms in Nigeria and has become of the utmost importance to efficient business operations (Unegbu, 2014; Andrabi, et al., 2015). The application of ICT on accounting practice in Nigeria has become a subject of fundamental concern to all business enterprise and indeed a prerequisite for local and international competitiveness. The way accountants plan and take decision on what and how to provide their service in the accounting profession has been affected immensely by Information and Communication Technology (ICT). This has continued to change the manner in which accounting practice and their corporate relationships are organized worldwide and the variety of innovative device available to improve and facilitate the speed and quality of service delivery in accounting practice and other professional practices. There is virtually know profession that does better in 21st Century without the aid and use of ICT. ICT has revolutionized the world. Accounting is one of the professions ICT has greatly impacted one of which is in the ability of companies to develop and use computerized system to track and record financial transactions properly and accurately. The recording of business transaction manually on ledgers, papers, spread sheets etc. has been translated and computerized for quick and easy presentation of individual financial transaction and give report on it (Granlund & Mouritsen, 2003). Shanker (2008) ascertained that the use of ICT in many organizations has assisted in reducing transactional cost, overcome the constraints of distance and have cut across geographic boundaries thereby assisting to improve coordination of activities within organizational boundaries.

It is very clear that, the computerized accounting system have improved the functionality of accounting departments by increasing the timeliness of accounting information. By improving the timeliness of financial information, accountants can prepare repots and operations analysis that gives management an accurate picture of current operations. The number of financial reports has also been improved by computerized system; cash flow statements, market share reports and departmental profit and loss are now more accessible with computerized system. A Prior observation shows that computerized accounting system have internal check and balance measures to ensure that all transactions and accounts are properly balanced before the financial statements are finally prepared (Unegbu, 2014). It also will not allow journal entries to be out of balance when posting, ensuring that individual transactions are properly recorded. Importantly, since the inception of Information and Communication Technology (ICT), computerized accounting system allow accountants to process large amounts of financial information and process it quickly through the accounting system. Quicker processing time for individual transactions has also lessened the amount of time needed to choose out each accounting period. Transaction that would have taken an accountant months or years to prepare would be done quickly and faster and thereby cutting high cost that would have resulted in preparing these reports. The impact of the application of ICT in accounting practice cannot be overemphasized hence, the necessity of this study.

Statement of the Problem

ICT affects all processes associated with modern day banking. From the daily routines of preparing payroll and order entry, to strategic activities such as the acquisition of a company, ICT surfaces as a key element. Despite the significance of information and communication technologies (ICT) in accounting practice, and its widespread use, there has been relatively little research in the area. Stefanou (2006) noted that a number of authors in various countries share similar views on the lack of research in the area of AIS. It is against this backdrop therefore, that the present study is focused on the impact of ICT on accounting practice in Nigeria

Objectives of the Study

- i. To identify the relationship between accounting job proficiency and the use of ICT tools.
- ii. To identify the benefit of ICT use on the advancement of accounting profession.

Research Questions

- i. Is there any relationship between job proficiency and the utilization of ICT tools??
- ii. What are the benefits of ICT adoption in the practices of accounting in Nigeria?

Research Hypothesis

- i. There is no significant relationship between job proficiency and the use of ICT tools.
- ii. There is no significant benefit of ICT adoption in the practicing of accounting profession in Nigeria.

2. Theoretical Framework

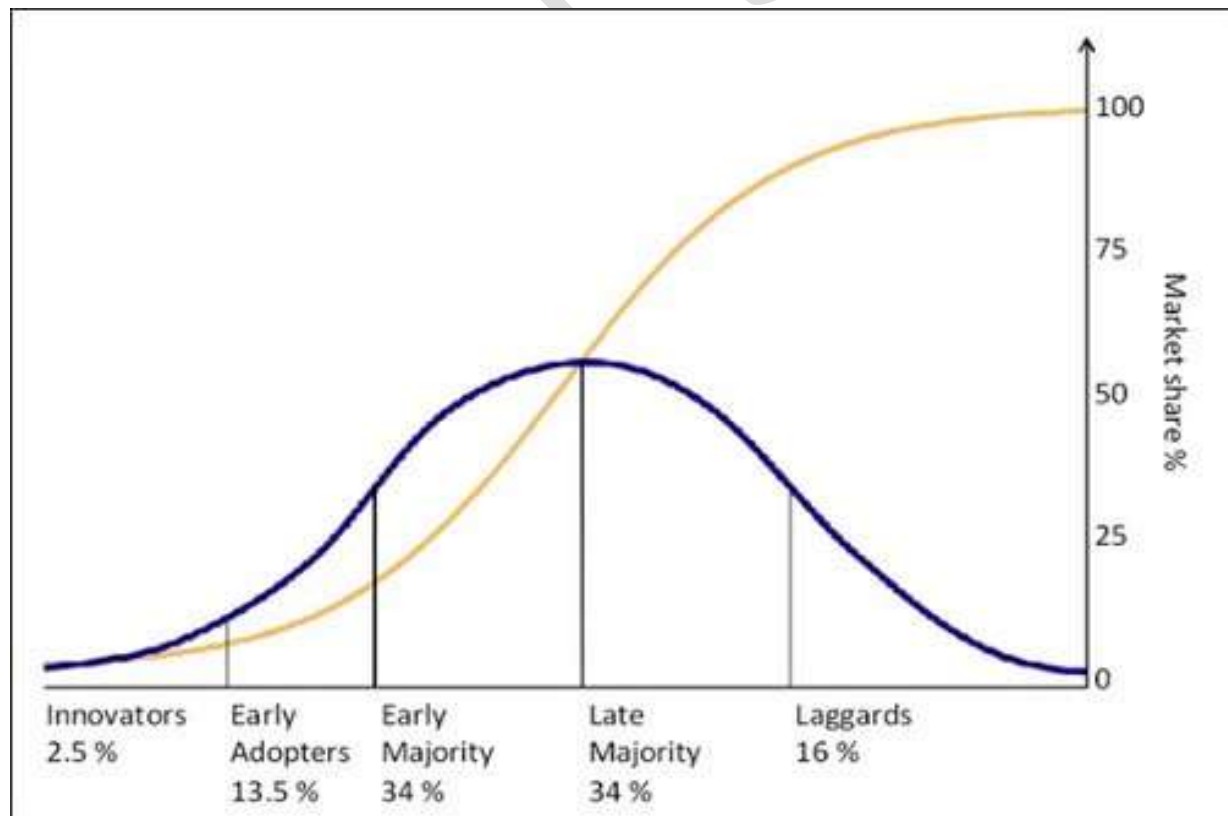
Lai (2016) noted that the rate at which payment systems develop depends largely on a struggle between rapid technological change and natural barriers to new product or service acceptance. A number of theories have proposed to explain consumers' acceptance of new technologies and their intention to use. These includes, but not restricted to, the Theory of Diffusion of Innovations (DIT) (Rogers, 1995) that started in 1960, the Theory of Task-technology fit (TTF) (Goodhue, and Thompson, 1995), the Theory of Reasonable Action (TRA) (Fishbein and Ajzen, 1975), and Technology Acceptance Model 3 (TAM3) by Venkatesh and Bala (2008).

a. Theory of Diffusion of Innovation

Rogers (1995) proposed that the theory of 'diffusion of innovation' was to establish the foundation for conducting research on innovation acceptance and adoption. Rogers synthesized research from over 508 diffusion studies and came out with the 'diffusion of innovation' theory or the adoption of innovations among individuals and organization. The theory explicates "the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 1995).

Basically, it is the process of the members of a social system communicated an innovation through certain channels over time known as diffusion. The Rogers' (1995) diffusion of innovation theory explained that the innovation and adoption happened after going through several stages including understanding, persuasion, decision, implementation, and confirmation that led to the development of Rogers (1995) S-shaped adoption curve of innovators, early adopters, early majority, late majority and laggards as shown in Figure 1

Figure 1 Diffusion of Innovation



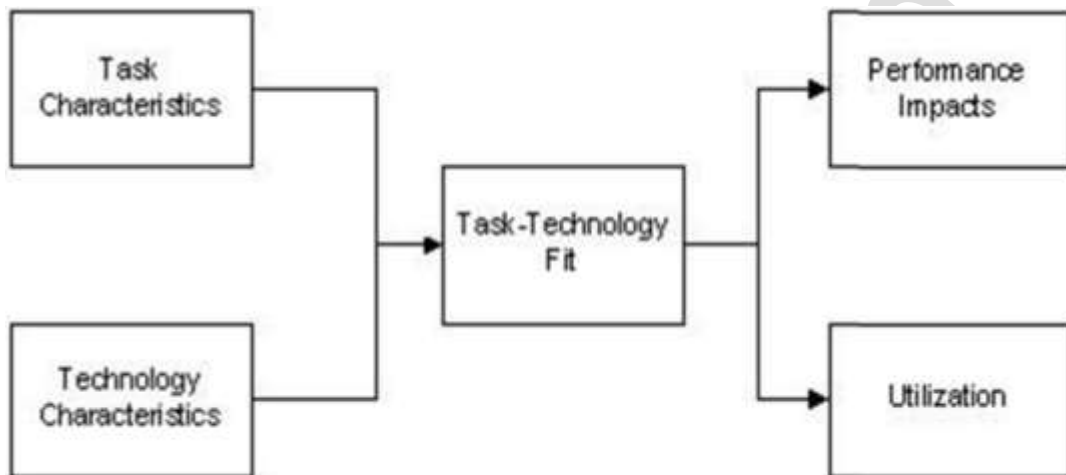
Source: (Steemit, 2018)

b. Theory of Task-technology fit (TTF) (Goodhue, and Thompson, 1995)

Technology readiness (TR) refers to people's propensity to embrace and use of new technologies for accomplishing goals in home life and at work (Parasuraman and Colby, 2001). Based on individual's technology readiness score and the technology readiness, they further classified technology consumers into five technology readiness segments of explorers, pioneers, skeptics, paranoids, and laggards. This is similar to Rogers (1995) S-shaped adoption curve of innovators, early adopters, early majority, late majority and laggards. The Diffusion of innovation or Technology readiness is vital for organization implementation success because it is market focused.

According to Goodhue et al. (1995), Task-technology Fit (TTF) emphasizes individual impact. Individual impact refers to improved efficiency, effectiveness, and/or higher quality. Goodhue et al. (1995) assumed that the good fit between task and technology is to increase the likelihood of utilization and also to increase the performance impact since the technology meets the task needs and wants of users more closely. As shown in Figure 2., this model is suitable for investigating the actual usage of the technology especially testing of new technology to get feedback. The task-technology fit is good for measuring the technology applications already release in the marketplace like in the google play store or apple store app (iTunes) etc.

Figure 2. Task-technology fit

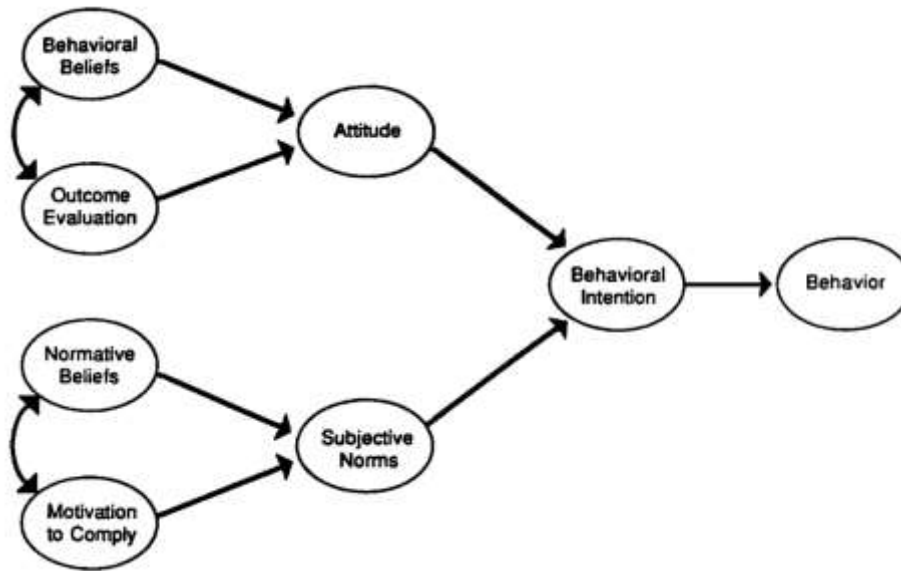


Source: Lai (2017)

c. The Theory of Reasonable Action (Fishbein and Ajzen, 1975)

This is one of the most popular theories used and is about one factor that determines behavioural intention of the person's attitudes toward that behaviour as shown in Figure 3. Fishbein and Ajzen (1975) defined "attitude" as the individual's evaluation of an object and defined "belief" as a link between an object and some attribute, and defined "behaviour" as a result or intention. Attitudes are affective and based upon a set of beliefs about the object of behaviour (e.g: Credit card is convenient). A second factor is the person's subjective norms of what they perceive their immediate community's attitude to certain behaviour (e.g: my peers are using credit card and it's a status to have one).

Figure 3. Theory of Reasonable Action

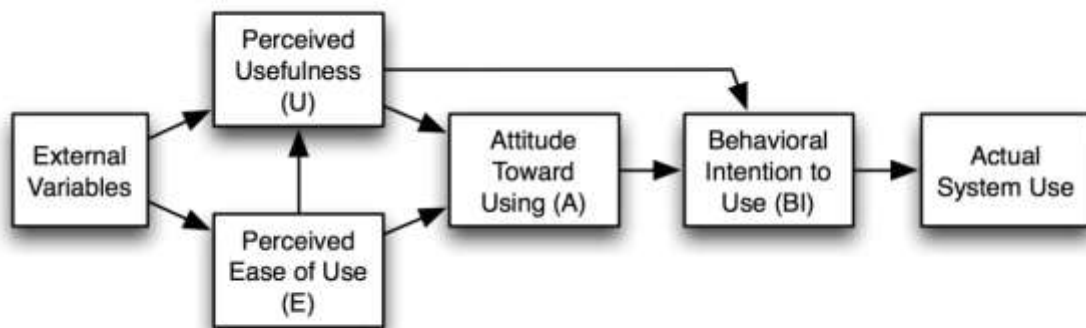


Source: Lai (2017)

d. Technology Acceptance Model (TAM) Ajzen and Fishbein's (1980)

The origins of the TAM came from Ajzen and Fishbein's (1980) theory of Reasoned Actions (TRA). It posits that beliefs and attitudes are related to individual's intentions to perform. According to TRA, attitude toward behaviour is determined by behavioural beliefs about the consequences of the behaviour (based on the information available or presented to the individual) and the effective evaluation of those consequences on the part of the individual. Introduced and developed by Davis (1989) the TAM is a model that addresses the issue of how users come to accept and use a technology. There are two specific variables, perceived usefulness and perceived ease of use, which are hypothesized to be fundamental determinants of user acceptance. The TAM posits that user's behavioural intentions determine actual technology acceptance. Behavioural intentions will be influenced by the user's attitude towards technology. Davis (1989) stated that perceived usefulness and perceived ease of use are beliefs that lead to favourable attitudes and intentions to accept and use technology.

Figure 4 Theory of Technology Acceptance Model (TAM)



Source: (Davis, Bagozzi, & Warshaw, 2010).

2.2 Empirical Review

Quite number of studies has been carried out on the application of information and communication technology in accounting education in a developing nation, Nigeria. In a paper on the prospects and challenges in accounting education" a case study of Nigerian tertiary institutions, Ezeani, and Chukwunwendu (2014) ascertained the role of ICT in the teaching and learning of accounting education courses in the universities offering accounting in Ekiti State. Thirty fulltime accounting educators from Ekiti State University and Afe Babalola University in Ado-Ekiti, Ekiti State responded to the questionnaire items. Data collected were analyzed using mean and standard deviation estimates, while t-test was used in testing the only hypothesis raised for the study. The findings of the study revealed that the universities offering accounting education courses in Ekiti State greatly valued the roles of ICT facilities in discharging their academic duties hence ICT facilities usage assist in the development of life and work place skills of an individual in the work environment.

Terry (2014) explores the usage and impacts of Information Communication Technology (ICT) on the accounting profession in Barbados, a Small Island Developing State (SIDS). The study found that local accounting professionals have been slow in adopting advance ICT techniques with the top six usage of ICT being; writing letters, emailing and communicating, data entry, assisting in the reconciliation of bank statements, and production of financial statements and preparing working papers. Furthermore, the findings from the content analysis of the study indicated that respondents perceived both positive and negative impacts of ICT.

Okolie and Arowoshegbe (2014) critically examined the state of the profession and the dynamics that will help to build implicit confidence in the Accountant, mould his character and develop analytical mindset which will assist him to provide high standard of professional services. The objective of the paper is to identify the factors that have hindered the adequate and rapid development of accounting profession in Nigeria. These factors were highlighted under the section of challenges facing accounting education in Nigeria. It concluded that there is urgent need for effective training and retraining of practicing Accountants, for adequate provision of funds for the education sector and regular review of accounting curriculum to capture modern trends in Accountancy.

Maria (2010) focus on the effects of IT related organizational changes on the management accounting function and to contribute to the body of knowledge about to what extent IT affects the ability to solve accounting tasks. The relationship between IT and accounting practices was investigated qualitatively using six case studies and we will measure the impact of IT on accountants' tasks. The findings suggest a tendency for change and the decentralization of accounting tasks. Sanusi (2011) investigated the issues of information and communication technology (ICT) in the management of educational system. The researcher observed that no meaningful progress will be made in educational sector without adjusting to technological (scientific) innovations and discoveries.

Banker, Chang and Kao (2002) in a study of productivity of the Public accounting firms, looked that the usage of ICTs by auditing professionals starting with the junior auditor whose primary function is to perform assigned audit procedures and prepare working papers. The tasks entailed are mostly repetitive and involve substantial calculations and referencing across different accounts. In their study, the senior auditors and audit managers were use ICTs in the development of audit plans, organization of audit activities, and supervision and review of the work of junior auditors.

Babalola (2012) examined the prospects and challenges in accounting education with the influence it requires to impact on the accounting profession. However, empirical was survey employed to investigate the educational system at the higher institutions and professional levels in Nigeria. The paper concludes that the level of economic, social and political development of any country usually determines the accounting needs of that country. And the weaknesses in Nigerian accounting education can be explained by the quite low education level of teaching staff, if bachelor graduates can carry out teaching tasks due to the absence of enough postgraduate training.

In a related study by Apulu and Latham, (2011) on the Evaluation of the Impact of Information and Communication Technologies. The paper emphasized that the implementation and effective use of ICT in organizations brings about competitive advantage. The use of ICT has a great impact on organizational performance as it helps to provide a platform for growth in many companies. In order words, ICT is known to improve organizational operations, growth and competitiveness. From the literature review and the case studies, it is certain that there are a number of advantages associated with the use of ICT.

Lamberton, Fedorowicz and Roohani (2005) found that accountants with high Tolerance for Ambiguity (TOA) tended to accept the change towards computers more readily than accountants with low TOA levels; however, the recruiting practices in the profession have favored individuals with more conservative attitude towards risk for certain accounting and auditing positions and with good reason. Hence, the profession is dominated by individuals who are resistant to change toward more ICT usage. Chang and Hwang (2003) showed that among 123 majors in Accounting and AIS degrees, that AIS majors showed higher tolerance for ambiguity and were more positive towards computers.

3. Research Methodology

In this study the descriptive survey design was used. This is because the method helps the researcher to describe, examine, record, analyze and interpret the variables that exist in the study. The researcher also considered it necessary to employ oral interview because of its factual implication on the study.

The data used in the research work was obtained from two sources, namely: primary and secondary sources.

The primary data used was collected by the researcher through a structured questionnaire. The Lickert-Summated Rating scale was used in the questionnaire to elicit information from the respondents. The Licker-Summated Rating scale is given below:

Strongly Agree (S A)

Agree (A)

Disagree (D)

Strongly Disagree (S D) (Samie, 2006)

The secondary data used in the research work were obtained from books, internet, academic articles and journals.

The population size for this study is made up of All Accounting firms in Enugu. For this study stratified purposive sampling method was used. Population was stratified into three strata's: Upper management; Middle level management Lower level employees. The questionnaire was designed to suit the test of the respondents as they said they would prefer a short questionnaire.

Table 1 Sample Size

RESPONDENT	POPULATION	SAMPLE SIZE
UPPER MANAGEMENT	7	5
MIDDLE LEVEL MANAGEMENT	15	8
LOWER LEVEL EMPLOYEES	24	15
TOTAL	651	46

Statistical analysis is a vital aspect of research. The choice of an appropriate statistical method depends on factors such as sample size and characteristics, hypothesis being tested, and research design. In this research work, the responses of the respondents were analyzed with SPSS (Statistical Package for Social Sciences) Version 25. Also, the hypotheses were tested using the Chi-Square test of independence and association.

Table 2 I use ICT for daily execution of my daily accounting duties

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	18	39.1	39.1	39.1
	A	13	28.3	28.3	67.4
	SD	5	10.9	10.9	78.3
	D	10	21.7	21.7	100.0
	Total	46	100.0	100.0	

SA: Strongly Agree; A: Agree; SD: Strongly Disagreed; Disagreed

The table above shows that 18 (39.1%) of respondents strongly agreed that they use ICT for daily execution of their daily accounting duties, 13 (28.3%) agreed, 5 (10.9%) strongly disagreed while 10 (21.7%) disagreed.

Table 3 ICT is an enhancement tool for my job delivery

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	24	52.2	52.2	52.2
	A	22	47.8	47.8	100.0
	Total	46	100.0	100.0	

SA: Strongly Agree; A: Agree; SD: Strongly Disagreed; Disagreed

Table 3 above shows that 24 (52.2%) of the respondents strongly agreed that ICT is an enhancement tool for their job delivery while 22 (47.8%) agreed

Table 4 I seek out new Ideas about the accounting profession through the use of ICT tools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	31	67.4	67.4	67.4
	A	5	10.9	10.9	78.3
	D	10	21.7	21.7	100.0
	Total	46	100.0	100.0	

Table 4 above shows that 31 (67.4%) of the respondents strongly agreed that they seek out new Ideas about the accounting profession through the use of ICT tools, 5 (10.9%) agreed, while 10 (21.7%) strongly disagreed.

Table 5 ICT in accounting helps to trace easily the level of malpractices in accounting works.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	22	47.8	47.8	47.8
	A	18	39.1	39.1	87.0
	SD	2	4.3	4.3	91.3
	D	4	8.7	8.7	100.0
	Total	46	100.0	100.0	

SA: Strongly Agree; A: Agree; SD: Strongly Disagreed; Disagreed

Table 5 above shows that 22 (47.8%) of the respondents strongly agreed that ICT in accounting helps to trace easily the level of malpractices in accounting works, 18 (39.1%) agreed, 2 (4.3%) strongly disagreed, while 4 (8.7%) disagreed.

Decision Rule: Reject H_0 if P -value $\leq .05$, Otherwise Do Not Reject H_0

H_0 1: There is no significant relationship between job proficiency and the use of ICT tools

Table 6 Crosstabulation of Table 2 and Table 3

		ICT is an enhancement tool for my job delivery		Total
		SA	A	
I use ICT for daily execution of SA my daily accounting duties	Count	10	8	18
	Expected Count	9.4	8.6	18.0

	A	Count	13	0	13
		Expected Count	6.8	6.2	13.0
	SD	Count	1	4	5
		Expected Count	2.6	2.4	5.0
	D	Count	0	10	10
		Expected Count	5.2	4.8	10.0
Total		Count	24	22	46
		Expected Count	24.0	22.0	46.0

Table 7 Chi-Square Test of Association

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.982 ^a	3	.000
Likelihood Ratio	33.948	3	.000
Linear-by-Linear Association	10.133	1	.001
N of Valid Cases	46		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 2.39.

Decision

H₀ 1: There is no significant relationship between job proficiency and the use of ICT tools

The P-value on which bases to reject the null hypothesis is [P-value < .001]. since the P-value is less than .05, the null hypothesis is rejected and we conclude alternatively that there is significant relationship between job proficiency and the use of ICT tools.

H₀ 2: There is no significant benefit of ICT adoption in the practicing of accounting profession in Nigeria

Table 8 Crosstabulation of Table 4 and Table 5

			ICT in accounting helps to trace easily the level of malpractices in accounting works.				
			SA	A	SD	D	Total
I seek out new Ideas about the accounting profession through the use of ICT tools	SA	Count	12	15	0	4	31
		Expected Count	14.8	12.1	1.3	2.7	31.0
	A	Count	2	3	0	0	5
		Expected Count	2.4	2.0	.2	.4	5.0
	D	Count	8	0	2	0	10
		Expected Count	4.8	3.9	.4	.9	10.0
Total		Count	22	18	2	4	46
		Expected Count	22.0	18.0	2.0	4.0	46.0

Table 9 Chi-Square Test of Association

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.051 ^a	6	.009
Likelihood Ratio	20.637	6	.002

Linear-by-Linear Association	2.109	1	.146
N of Valid Cases	46		

a. 10 cells (83.3%) have expected count less than 5. The minimum expected count is .22.

Decision

H₀2: *There is no significant benefit of ICT adoption in the practicing of accounting profession in Nigeria.*

The P-value on which bases to reject the null hypothesis is .009. since the P-value is less than .05, the null hypothesis is rejected and we conclude vehemently that there is significant benefit of ICT adoption in the practice of accounting.

Research Findings

1. There is significant relationship between job proficiency and the use of ICT tools.
2. There is significant benefit of ICT adoption in the practice of accounting.

Conclusion

Information technology is in modern business, especially regarding the accounting function. IT is essential in the field of accounting profession. This study however investigates the effect of ICT on accounting profession. The study found that the application of ICT has effect on efficiency of accounting practices in Nigeria and that the applications of ICT ensure timely and on time delivery of accounting work in Nigeria. Nowadays, accounting professionals sees IT as a comprehensible tool that is inseparable with accounting practice. The study thereby recommends that preparers of accounting information should adopt ICT in all aspect of accounting practice for effectiveness and transparency.

Recommendation

1. It has been proven that there is a significant impact of ICT on accounting systems and organizational performance; so therefore, organizations are encouraged to invest more in such technologies.
2. Managers when implementing ICT should consider the external factors and how they affect adoption procedures.
3. Staff training should always be provided in firm's that wish to evolve with ICT, so as to increase staff participation and not to make them redundant and unproductive

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