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The Impact of Information and Communication Technology on Internal Auditors' Independence: A PEST Analysis of Nigeria

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Author's contribution

This whole work was carried out by the author JOA.

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ABSTRACT

The spread of electronic and mobile business transactions across the globe has transformed e-commerce a great deal as it has impacted the macro environment as well as the human actors. This paper presents an exploratory study of the impact of Information and Communication Technology on Internal Auditors and their immediate external environments. The study adopted a survey method questionnaire to collect data and analysed based on political, economic, social and technological (PEST) analysis. The findings revealed that the spread in the use of Information and Communication Technology (ICT) has brought new opportunities to many professionals including Accountants and internal auditors especially in breaking the old cultural debacle by enhancing their reporting and operational independence.

Keywords: *PEST analysis; reporting and operational independence; e-commerce; internal auditor; internal contro; structuration process.*

1. INTRODUCTION

Many authors have written about the impact of ICT on Accounting and Auditing in the last decade [1,2,3], but only very few can be said to be empirical in nature apart from the fact that their researches focused on developed economy. This paper focuses on developing

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economy using Nigeria as a case study. The choice of developing economy is unique as the impact of ICT on Accounting and Auditing is determined by many factors including external environment and human actors. In the same vein the choice of Internal Auditors as respondents is predicated on their importance as a veritable interface between ICT, management and other stakeholders. The Internal Audit Function (IAF) is regarded as a significant aspect of corporate governance structure in organisational settings in order to complement the oversight activities undertaken by the board of directors and audit committee to ensure the integrity of the financial reporting process [4,5,6,7] identified external auditing, internal auditing, and board of directors as monitoring mechanisms for business organisations while the Institute of Internal Auditors, [8] identified the fourth mechanism as the audit committee.

There is no doubt that the use of ICT has profound impact on professionals such as internal auditors. In response to corporate failure experienced worldwide in the last two decades, the internal audit function has enjoyed considerable focus both in practice and academic research [9,10,11,12,13]. However, the link between IAF and ICT issues, especially within developing economies, has enjoyed very little patronage in the literatures. There is a need to fill the knowledge gap created on the reporting and operational logistics of internal auditors.

ICT tools and procedures are becoming increasingly inseparable in daily running and control of business enterprises' activities worldwide. For instance, in a survey conducted by [2], it was found that internal auditors are increasingly using ICT tools and techniques for control of their functions. This is as a result of increasing use of ICT for conducting and recording transactions in the financial sector which at the same time opening up opportunities for fraud. Hence it is imperative to examine the impact of ICT-based tools and techniques as being used by internal auditors and Accountants. The functions of key stakeholders in internal control are now known to be affected by ICT tools and techniques usage. For instance, ICT tools and techniques usage in internal control has direct impacts on internal auditors (in terms of performance of their function and role), top management (in terms of reports and decision making), audit committee (in terms of reports and decision making), regulatory authorities (in terms of monitoring and ensuring public trust), accountants (in terms of their job functions and performance), and external auditors (in terms of scope, quality and audit fees). In highly automated settings, internal auditors deal more with computers rather than human beings. In order words internal auditors ask less questions as most transactions are passed through the system. This provides the internal auditors with required professional audacity to probe transactions to required level even when most senior officers are affected. The external auditors are also able to rely on the work performed by the internal auditors since they are verifiable and has positive effects on audit fee reduction as a result of audit time saved. In the same vein, the use of ICT tools and techniques by the regulatory authorities engender public trust on the scope of work carried out by them.

The remaining part of the paper is organized as following: In section 2 a review of related literature was undertaken, the methodology and analyses based PEST analysis was carried out in section 3. Section 4 highlighted the Conclusion and Limitations of the study.

2. REVIEW OF LITERATURE

In a predictive study, [3] conducted an impact analysis of adoption of ICT in developing countries. The study is designed to determine the level of ICT diffusion in the Nigeria economy, the impact on organisations as well as the factors responsible for the diffusion. For

the purpose of this paper ICT tools and techniques refer to are IDEA, Gemini Caseware, Audit Command Language, ADM plus, and the like of auto Fraud Fraud Investigator.

[14] used the literature review approach to predict the current trend in ICT usage in Nigeria. The paper further succeeded in shedding light on the areas of challenges. [14] appeared not to have achieved the goals set for themselves as the study lacked empirical and theoretical inclinations to be able to determine the level of diffusion of ICT in the Nigeria economy. The study was purely descriptive in nature and lacked detailed analysis. However the study provided a good framework for further studies as it identifies major challenges facing ICT adoption.

In a more recent study on poor corporate governance and its consequences on the Nigerian banking sector, [15] found that the Central Bank of Nigeria (CBN) regulatory officials lacked integrity and boldness to carry out effective oversight functions. Oghojafor et al. [15] also noted that most examiners lack appropriate technological skills to match the technologically driven banking operations. The study [15] observed that:

“...the explosion in the numbers of banks and information technology has not been matched with CBN supervisory employees’ skills improvement. Thus, there is the need to urgently intensify the training and retraining of these officials”.

The study further blamed the banking crises on poor governance culture on the part of management and the board. The study failed to blame the banking crises on inability of internal control and internal audit to checkmate fraudulent transactions and raise appropriate concerns to shareholders/audit committee. It is doubtful if Internal Auditors can be said to be objective or conduct their assignments without undue interference from management in a situation where the Chief Executive Officer can override board decisions with possible impairment of Internal Auditors’ independence and objectivity.

The [8] emphasised the importance of Internal Auditors’ independence for internal control effectiveness. For instance the following Attribute Standards are of relevance:

Standard 1100: says “the internal audit activity should be independent, and internal auditors should be objective in performing their work”

Standard 1110: “the internal audit activity should report to a level within the organisation that allows the internal audit activity to fulfill its responsibilities”

Standard 1110.A1: “the internal audit activity should be free from interference in determining the scope of internal auditing performing work, and communicating results”

Standard 1120: “internal auditors should have an impartial, unbiased attitude and avoid conflicts of interest”.

[16] explains the concept of independence to mean “that management can place full reliance on audit findings and recommendations”. He further suggests the concept of Internal Auditors’ independence to mean “objectivity, impartiality, unbiased views, valid opinion, no spying for management, no ‘no-go’ areas, sensitive areas audited, senior management audited and no backing-off when confronted by an assertive manager”.

The impact of ICT usage on internal control can be influenced by the 'user' and 'monitor' of the system. This may depend on the users' motivation from management and audit committee. [17] suggested that users' motivation can be explained by three elements: perceived ease of use, perceived usefulness, and attitude toward using the system. [18] concluded in their study on internal auditing practices and internal control that internal auditing practices impact on quality of the internal control system. It is proposed in this study that if ICT usage has a positive impact on internal auditors' independence, it will equally positively impact on perceived usefulness of ICT for internal control in the same direction and vice versa.

An Internal Auditor who has professional and reporting independence is more likely to take advantage of ICT usage in internal control for prevention and detection of fraud. This is in accord with [19] who predicted that ICT will play a positive role in future ICT-driven ethics and transparency of internal auditors. Prior studies have looked at auditors' independence in relation to external auditors [20,21,22]. Very few studies examined IAs' independence in relation to audit committee.

In a study conducted in the United Kingdom, [1] found that ICT has both negative and positive impacts on auditors. The positive impact on audit process lies in audit efficiency and effectiveness. [1] study remained very comprehensive so far in this area and extended the frontiers of the earlier studies on audit and ICT application [23,24].

All the studies discussed so far explained the impact of ICT on auditor and corporate governance. However the empirically biased studies among them were conducted based on European and American techno-economic context. In order to fill the obvious lacuna, this paper reports on study conducted in a developing economy through collection of empirical data leveraging on political, economic, social technical analysis. In order to provide solution to identified research problems, the following research hypotheses are formulated:

2.1 Research Hypotheses

- Hi.** There is a positive relationship between the use of ICT tools and techniques and the independence of internal auditors.
- Hii.** There is a positive relationship between the use of ICT tools and techniques and the expression of professional opinion of internal auditors

3. METHODOLOGY AND ANALYSES

The data used in this write-up were extracted from the original data collected in 2011 for a PhD research work which engaged mixed method approach. Data were collected through 510 semi-structured questionnaires administered on internal control staff of financial institutions in Nigeria. 218 questionnaires were found usable and were combined with 23 face-to-face interviews of top financial institutions' executives. The population chosen were restricted to only financial institutions that substantially make use of computer system in processing and controlling their data operations.

Technology Effectiveness Planning and Evaluation Model (TEPEM) were used to underpin this study. The model was first proposed by Abiola [3]. It states that Technology is a function of Technology Acceptance variables (perceived benefits, organisational readiness, trust, external pressure), contingent factors (size of organisation, cost, staff training and

infrastructural readiness), and optimal mix of human and technological capabilities. The planning process in TEPEM is a unique one to developing economies like Nigeria where electricity generation and stable regulatory regime is still a very serious issue.

PEST analyses were used for the analysis. The political, economic and social aspects were analysed based on existing literature while the technology aspect was based on mixed method approach. The methodology adopted accommodated the reality of Internal Auditors busy profile which essentially limits expected interactions with participating respondents. For this reason, a mixed method is adopted combining questionnaire survey with in-depth semi-structured interview for the technological aspect of PEST analyses alone.

3.1 Political Analysis

Nigeria has an estimated population of 165 million, (National office of statistics Abuja, 2010) 250 ethnic groups and a large landmass of 923,768 square kilometres (356,669 square miles). The country experienced a 3 year long civil war that ended in 1970. In the same vein, incessant military coups d'état, lack of accountability on the part of leadership as observed by [25] "Accountability in all facets of the economy is an essential ingredient to the economic development of any nation. But achieving adequate accountability in Nigeria has become a major problem, which various governments have had to contend with, because of widespread corruption in almost all spheres of public and private endeavours" and huge internal and external debts made the polity unstable and unattractive for direct foreign investment [26]. This is clearly stated by [27] "Nigeria has had its own transformation (political, economic, and sociological) since independence. These changes include experimentation with different styles of government and different economic experiences (from a poor agrarian, cash-crop economy to an oil-based economy) and changing fortunes of the people – from poverty, through civil war, affluence, to crippling depression, and many ethnic tensions. This transformation within the Nigerian economy has significantly influenced the accounting profession in many respects. Nigeria for the first time in her political history had a successful civilian-to-civilian transition in 2008 notwithstanding the magnitude of protests that followed the announcement of results. A number of meaningful developments in the polity, economy and technology have been recorded by the successive democratically elected civilian governments. A number of reforms that targeted improving the economy and the polity in general were also embarked upon. Notable reforms included the setting up of an Economic and Financial Crime Commission (EFCC) to combat fraud and corruption; the bank recapitalisation reform that led to a reduction from 89 weak banks in the country to 24 strong banks, with about 12 being listed among the leading 1000 banks in the world, an achievement that is quite unique [28]. Another important reform for the purpose of this study is the telecoms reform/deregulation among others that has made the country the fastest growing telecommunication nation in Africa and third in the world [29]. Furthermore, Nigeria is the most populous country in Africa with the latest estimated population of 165 million people [30]. The Nigerian economy is growing, and with its abundant human resources has real potential to be a major economic force and beneficiary in the cyber space or e-commerce. For instance, [31] found that:

"...the vast Internet economy potential of Nigeria has not been fully utilised. For instance, in a 2000 export promotion conference in Geneva, Switzerland, it was observed that e-commerce is virtually non-existent. The few businesses that have an idea of what e-commerce is all about are having their hands full trying to cope with one infrastructural deficiency or another".

The situation is however rapidly changing for the better. For instance, in another study [32] found that only 6 percent of the study population in Nigeria used the Internet to conduct electronic businesses. Extrapolating this to the whole adult population will give about 8 million users. This is consistent with the observation of [31] that:

“.....despite this grim picture and the seeming monumental challenges.....as they attempt to engage in the Internet economy, an optimistic wave of improvement is blowing across the entire business community in Nigeria”.

Banking and allied services are the most prominent sectors to benefit from this vast emerging Internet economy market. The rapid transformation in traditional banking services is quite noticeable. Electronic banking services in the form of e-transfer and withdrawal of large sum of money are encouraged. This facilitates the use of Automated Teller Machines on a wider scale. Other electronic banking products such as Credit Cards; Smart Cards and Internet lending e-banking are also becoming popular [33].

The Information and Telecommunication sector has proved to be an important driver of the Nigerian economy in a bid to transform into Internet economy. The widespread adoption of sophisticated Internet-ready mobile telephone handsets within the last few years played an important role in facilitating the Internet economy in Nigeria. For instance, [31] observed that Global System of Mobile (GSM) technology is designed to function well with existing infrastructural facilities, especially the World Wide Web. To facilitate business transactions over 60% of the population (about 84 million) have adopted the use of GSM technology. [31] further identified another factor that propelled the digital economy in Nigeria as the commitments of most tertiary academic institutions into the Internet economy in the form of competitive online degrees and Internet advertisements. Consequently, most students and prospective students are encouraged to make use of Internet facilities.

To further encourage the use of electronic banking, the Central Bank of Nigeria [28] issued a circular to direct all banks in Nigeria from January 2009 to adhere to N10 million as the maximum amount for payment by cheque through the bank clearing system beginning from January 1, 2010, while higher values are required to be effected only via the electronic payment system. According to the report, the rule appears to have been encouraged by the seeming success of the adoption of e-payment systems by Federal Ministries, Departments and Agencies (MDAs). The limit placed on amounts payable to bank customers has markedly changed the volume and value of transactions in favour of the electronic system. The UK has also recently given a nine-year-long notice to commercial banks to phase out the use of cheques in favour of electronic payments.

With the increased use of electronic payments, one may expect a jump in electronic fraud without a corresponding effort to strengthen internal control mechanisms. For instance, the [28] notes that:

“....the case of compliance with payment of large sums in an all-MDA test run of the electronic payment mode was quite expected. However, the implicit suggestion that the operation of the e-payment system so far has been graft-free is unproven just as the apex bank’s apparent expectation that spreading the e-payment net to cover an expanded segment of all bank users would reduce risks if the payment system overlooks the exposure of affected (public and private sector) financial transactions to the high risk of financial information interception and abuse”.

It is in realisation of the potential risk that the CBN came up with another measure to put extra security on all ATM machines to secure the user and his/her money while he is using ATM cards for withdrawals. The measure included an email/SMS verification code which shall be sent to users' mobile number or email addresses anytime the ATM card is slotted in to any ATM machine.

The totality of political decisions towards joining the rest of global communities in provision of ICT infrastructures have positively impacted the internal auditors in using ICT tools and techniques in discharge of their duties. This in turn has led to a number of socio-technical and structuration issues.

3.2 Economic Analysis

The Nigerian economy is currently experiencing positive growth due to increased activities in the capital market. According to [34] "The fundamentals of the Nigerian economy are strong. This is evidenced by the fact that as of October 1, 2008, the quantum of Nigerian foreign reserve stood at about 63 billion US Dollars while the foreign direct investments (FDI) remained strong at 8.5 billion. These statistics prove that Nigerians' vulnerability to the credit induced crisis through currency depreciation is reduced"

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The banking system, which formally started in 1892 [35] pre-dated Nigeria independence and has remained a central pillar of the Nigerian economy. According to [36], the financial system has undergone noticeable transformations in character, organisation and structure since 1892.

An array of scholars agreed that a country's financial system, as represented by the banking system, is a direct mirror of her economic [37,38,39]. It is because of this important role that the financial sector of the Nigerian economy is being repositioned at constant intervals particularly under the various reform agenda. Nigeria has experienced various financial reforms since 1929. The most significant reforms took place between 2004 and the present day. This period experienced a phenomenal increase in the share capital of banks and also led to mergers and acquisitions among those that survived the reforms. The reform made more funds available to banks to invest in modern ICT tools and equipment in order to upgrade their services to meet international requirements.

3.2.1 The growth of information technology in Nigeria

The National Information Communication Technology policy (NICTP) draft (2012) put together by the ministerial committee on ICT policy harmonisation noted:

".....these policy and regulatory developments along with other government and private sector initiatives have resulted in significant improvement of the ICT sector. For

instance, Nigeria has moved from approximately 400,000 available fixed telephone lines pre-1999 to over 90.5 million available mobile telephone lines by the first quarter of 2011, thereby making Nigeria's telecommunications market the fastest growing in Africa. There are now modest ICT deployments in the functioning of government organisations, as well as in the private sector. In addition, ICT now drives some activities in the financial and oil and gas sectors while various e-government initiatives are ongoing in various departments at the three tiers of government" [29].

[29] further gave a breakdown of mobile and internet penetration as follows:

Table 1. Penetration of information technology in Nigeria

S/no	Type	Volume
<i>i.</i>	Mobile Penetration (per 100 people)	55.76
<i>ii.</i>	Fixed Telephone Penetration (per 100 people)	0.48
<i>iii.</i>	Internet Penetration (per 100 people)	23.48 (2010)
<i>iv</i>	Internet Users (000)	43,270 (2010)
<i>V</i>	Broadband Penetration	6.1% (2010)
<i>Vi</i>	PC Penetration (Number of PCs per 100)	4.7 (2010)
<i>Vii</i>	Computers Assembled in Nigeria	<500,000
<i>Viii</i>	Number of Registered ICT Companies	350
<i>ix</i>	Broadcasting Stations Nationwide	308
<i>X</i>	Post Offices (inc. Postal agencies and shops)	3000 +

Source: [29]

Table 1 above shows that the numbers of those who have access to internet in Nigeria as at 2010 are 43,270,000 people. This is about 24 percent of the Nigerian population. This is expected to increase as the broadband penetration increases from the 6.1% level.

3.3 Social Analysis

Most of the regulatory authorities (Central Bank of Nigeria (CBN), Nigeria Deposit Insurance Corporation (NDIC); Nigeria Security and Exchange Commission (SEC) and The National Insurance Commission (NICOM)) strongly recommend a strong internal control system and well trained Internal Auditors for all financial institutions because of perceived vulnerability to computer fraud.

The importance of internal audit practice in relation to accountability cannot be overemphasised. According to [25] *"The success of the government's anti-corruption campaign hinges on effective cooperation with various corporate governance mechanisms, prime amongst which is the role of accountants and auditors in financial reporting"*. The Institute of Chartered Accountants of Nigeria (ICAN) is the first professional institute regulating and controlling accountancy and auditing practice in Nigeria. The Institute became chartered by Act of parliament in 1965 (ICAN Act, 1965). Prior to 1990, there was no regulation for the market of audit services in Nigeria and no professional code and standard of auditing practice. Most audit firms had to (and still) depend on the generally accepted auditing practices contained in various manuals of the international auditing firms to which they are affiliated, including guidelines of the International Federation of Accountants (IFAC), of which ICAN is a member" [25]. With all the founding members drawn from ICMA, ACCA and ICAEW, the Institute of Chartered Accountants of Nigeria is an important regional member with about 35000 members and 120,000 students of the International Federation of

Accountants (IFAC) having pioneered the development of accountancy profession in West Africa sub-region. The majority of Internal Auditors in big companies in Nigeria are members of ICAN and have to abide by professional ethics and rules of the institute. The second accounting body in Nigeria recognised by Act of parliament is the Association of National Accountants of Nigeria (ANAN) whose members operate mainly in the civil service as public auditors and accountants. ANAN and the Chartered Institute of Taxation of Nigeria (CITN) obtained Nigeria government recognition and compete with ICAN members to do both auditing and taxation practice respectively. Recently, the Institute of Certified Public Accountants of Nigeria (ICPAN) also became recognised as a 'new entrant into the accounting professional bodies in Nigeria in spite of strong representation from ICAN the House of Representative unanimously passed the ICPAN Bill in October 2005' [40]. All the members of these professional bodies can be employed as IAs in Nigeria. The majority of banks and insurance companies visited employed only ICAN members.

The Companies and Allied Matters Act of 1990 is also an important legislation for Internal Auditors. It imposes responsibility on audit committee to report on internal control effectiveness during the year (CAMA, 1990 section 359 (6)). The audit committee relies on the Internal Auditors to help them in this important task.

The SEC, CBN, NDIC, and NICOM exert institutional pressure on businesses especially financial institutions in the course of their oversight function through regular issuance of circular letters and off- and on-site inspections.

Commenting on the challenges to accounting and auditing practices in Nigeria, [41] quoting R.S.O. Wallace, 1992 emphasised the cultural dimensions thus:

“Additionally, cultural factors often influence auditors’ relationships. Cultural demands – such as displaying respect for elders and loyalty to family, village or tribe – have and will continue to have telling effects on auditors’ independence and professionalism. The obligation to respect elders probably makes it difficult for a young Nigerian accountant to seek an explanation from an elderly person for a statement that the younger person knows is questionable”

The effects of the cultural influence is even more pronounced with internal auditors since most of their internal clients are more often than not various line managers within their organisations who are mostly elderly persons who probably have spent more years in the same organisation than the internal auditor.

The use of ICT to generate and distribute reports has positively impacted on internal audit to overcome the cultural obligation to respect elders that may make it difficult for him or her to seek necessary audit explanation from an elderly line manager. This in a way has impacted the structuration process of the organisation. The human expert attributes which combine to form the socio-system include knowledge, skills, attitudes, values and needs while the technical system is represented by the ICT tools and techniques. There is a need to ensure a balanced mix between human expertise and machine capability.

3.4 Technology Analysis

3.4.1 Proposition 1: The use of ICT-based tools and techniques impacts on internal auditor's independence

Data collection was carried out in Nigeria in 2011. Table 2 below summarises the breakdown of the financial organisations contacted and participated in the survey and Interview.

Table 2. Analysis of participating organisation

	Description of organisation	Organisation contacted	Number of organisation that participated in questionnaire	Number of organisation that participated in interview	Total
1	Commercial banks	24	12	7	19
2	Insurance Companies	31	14	4	18
3	Mortgage banks	8	3	2	5
4	Stock broking firms	10	6	1	7
Total		73	35	14	49

Source: Field work 2011

218 questionnaires were returned while 21 interviews of top executives were conducted from the organisations contacted.

This research proposition tests if the use of ICT tools and techniques impacts on independence of internal auditors. Questionnaire question B30 and B 31 are analysed in order to shed light on this proposition.

Based on 5 Likert scale, a similar WAS of 4.16 and 4.13 (Table 3 below) were generated from the response to question B30 and B31. This shows that most respondents (86 percent) support the view that the use of ICT tools and techniques impacts positively on auditors' reporting and professional independence. Only 12.4% of the respondents did not support the view while 15.7% of respondents neither support nor disagree. Furthermore a similar WAS of 4.16 and 4.13 means that opinion of the internal auditors is similar about positive effects ICT has on their reporting and professional independence.

3.4.2 Interview analysis on internal auditors' independence

The result obtained under the questionnaire is further supported by the view of Assistant Head of internal control in a mortgage institution that ICT tools and techniques provide good environment where internal auditors can express an opinion based on the output of the system without being unjustifiably reprimanded.

"It is quite easier to put audit reports forward to management and audit committee no matter how indicting the report might be to them since the report is a direct output from the machine and not manually generated. The manual reports that are indicting are often looked at as witch hunting. Thus there is leverage on professional freedom for internal auditors".

Table 3. Questionnaires' response on internal auditors' independence

		5 strongly agree	4 agree	3 neither agree nor disagree	2 disagree	1 strongly disagree	Weighted average statistic (WAS)
B 30	ICT-based tools and techniques positively affects internal auditors' reporting independence	78 37.1%	102 48.6%	15 7.5%	15 7.5%	0 0%	873/ 210=4.16
B 31	ICT-based tools and techniques positively affects internal auditors' expression of professional opinion	68 32.4%	113 53.8%	18 8.6%	11 5.2%	0 0%	868/ 210=4.13

Source: Field work 2011

3.4.2.1 Assistant head, internal control C3

Assistant Head, Internal Control C3 pointed to the fact that ICT provides necessary “...leverage on professional freedom for internal auditors” The use of the word ‘leverage’ and ‘professional freedom’ suggest ICT usage has positive association with auditors’ reporting independence. A report generated manually may have to be approved by an immediate boss who may decide to ‘redecorate’ it or completely step it down. A system-generated report may not need such approval and might be copied to several managers at the same time.

An officer in one of the three old banks has this to say:

“ICT tools and techniques allow me to take a lot of official routine and non-routine decisions without referring them further to my boss”

3.4.2.2 Officer A7

The tone at which Officer A7 expressed his view and the facial expression at the moment suggest that he was very ‘motivated’ to take a decision on his own with the help of ICT tools and technique and without undue intervention from the boss.

Transferring control to ICT tools and techniques can also lead to a sense of independence. Most controls are now machine dependent and so subordinates do not need to seek approval and authorisation from their supervisors before a transaction is concluded. This is further confirmed by a deputy manager in one of the new generation banks.

“ICT tools and techniques provide a lot of motivations and job satisfaction for me. At the moment my job requires a lot of authorisations and transactions approvals which are machine dependent. Jobs can be done with minimal human interference and control.”

3.4.2.3 Deputy manager A2

The quote ‘ICT tools and techniques provide a lot of motivations and job satisfaction for me.’ suggests that the use of ICT tools and techniques motivates staffs and stimulates positive attitude towards effective usage. There is expression of ‘satisfaction’ on the face of Deputy Manager A2 throughout the interview period apart from deliberate emphasis placed on “...a lot of” to place the response in a definitive perspective. Also “authorisations and transactions approvals which are machine dependent” suggests reporting independence.

4. CONCLUSION

Prior research looked at the independence of external auditors in relation to their clients. Literature is scanty on the impact of ICT tools and techniques on the independence of internal auditors in relation to line managers. Most authors prefer to look into internal auditors’ objectivity instead. Professional objectivity is closely linked with individual independence. Internal auditors operate under Management and audit committees. It is expected that without freedom from the control and influence of line managers it will be difficult for internal auditors to maintain necessary objectivity needed to perform their functions creditably well.

As a structuration process, the findings support the view that ICT tools and technique impacts positively on internal auditors' roles and responsibilities. In order words devolution of more ICT tools and techniques resources has a positive impact on internal auditors' ability to carry out their duties with independence and an objective attitude. This finding is similar to [42], who found that reliability may not be placed on Saudis' internal auditors when they lack professionalism and independence and that devolution of more resources for the internal auditor will establish independence. The result so far is also comparable with [19] who predicted that ICT will play a positive role in future ICT-driven ethics and transparency of internal auditors. [1] found that "ICT could enhance auditor independence as a result of various factors: the auditors' ability to access more data; the ability to generate their own audit trail in the client system; less contact with clients' staff because of remote access to information..." [1] relates more to external auditors. The present study relates solely to internal auditors and supports the view that the use of ICT by internal auditors impacts positively on their reporting and operational independence. It provides motivation and increased job satisfaction for internal auditors. The present study appears to be a pioneer work in this area and is expected to generate more reactions and comments in future. It has direct implications for policy makers and corporate governance process.

One major limitation of this study is that the Internal Auditors who are respondents in this study can be described as interested party. Since they supervise the use of ICT for internal control their responses may be tinted with bias.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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