



## The impact of computerized accounting information system on management performance in public sector in Nigeria: Problems and prospects

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### Abstract

Accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events that are, in part at least, of a financial character and interpreting the results thereof for consumptions. Information and Communications Technology (ICT) is an extended term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications, computers and the necessary software, middleware, storage and audio-visual systems, which enable users to access, store, transmit and manipulate information. The impacts of computerized accounting information system (CAIS) on the executives' officers of government's ministries, departments or agencies were considered in terms of accounting framework and operating procedure in the public sectors in Nigeria. The study pinpoints some of the problems associated with the implementation of CAIS such as high costs of implementations of hardware and software, costs of maintaining the system and it require special skills. Others are reduction of employee, inadequate security and having quality of backup and print accessories. The further revealed the prospects of implementing CAIS such as to lower operating costs, improve efficiency, increased functionality, better external reporting, improved accuracy and faster processing of data in the system. The paper concludes that the impacts of computerized accounting information system on the executives' officers of government's ministries, departments or agencies considered only accounting framework and operating procedure in the public sectors in Nigeria. And also the study recommends that Governments should implement substantial security measures such as policies, guidelines, standards, and procedures to protect IT infrastructure through the use of physical, logical, environmental and administrative controls. Management must educate and continue to put employees on strict awareness of their confidentiality duty, as special skills is mostly capable of defeating physical security controls in the working environment.

**Keywords:** accounting, information technology, software, hardware, backup

### 1. Introduction

Accounting is a system in which an organization normally use to measure its financial performance by recording, classifying, interpreting and reporting all the transactions like purchases, sales, assets, and liabilities in compliance to a certain accepted standard formats. It provides an avenue to evaluate a Ministry, Department or Agency's past, present and future in order to ascertained performance, condition and prospects respectively. According to Hanini, E (2012) <sup>[5]</sup>, A more formal definition of accounting is the art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character and interpreting the results thereof. The Advent of information and communication technology (ICT) has transformed many firms in professional service industries, but perhaps few as much as in the public accounting industry. Therefore, in the public accounting underwent tremendous changes at the turn of the millennium, sparked largely by the rapid changes in its environment contributed by Tarmidi, M., Rashid, A., Deris, M., & Roni, R. (2013) <sup>[4]</sup>. It was premised by Polo, J., & Oima, D (2009) <sup>[3]</sup>, that Audit software and knowledge-sharing applications are two crucial components of these changes. Automation of audit tasks and use of specialized audit software has substituted ICT for labor and changed the structure of audit teams and other inputs. Equally

important is the use of advanced systems to share knowledge base across different parts of the Ministry, Department or Agency that has enabled professional services or firms to leverage their human resources more effectively.

### 2. Information and Communication Technology (ICT)

According to Murray, James (2011), Information and Communications Technology (ICT) is an extended term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (Telephone lines and Wireless signals), computers as well as necessary enterprise software, middleware, storage and audio-visual systems, which enable users to access, store, transmit and manipulate information. The duties of ICT can not be over emphasized but a few of the duties that ICT professionals perform may include data management, networking, engineering computer hardware, database and software design, as well as management and administration of entire systems. And ICT is also covers areas such as processes, computer software, information systems, computer hardware, programming languages, and data constructs. Therefore, anything that renders data/information or perceived knowledge in any visual format whatsoever, via any multimedia distribution mechanism, is considered part of the domain space known as Information and communication

Technology (ICT). ICT professionals perform a variety of functions (ICT Disciplines/Competencies) that range from installing applications to designing complex computer networks and information databases.

### 3. Computerized Accounting Information System (CAIS)

An accounting information system is a system of collecting, storing and processing financial and accounting data that are used by decision makers. Malami, A., Zainol, Z., & Nelson, S (2012)<sup>[2]</sup> said that, accounting information system is generally a computer-based method for tracking accounting activity in conjunction with information technology resources. The resulting financial reports can be used internally by management or externally by other interested parties including investors, creditors and tax authorities. Accounting information systems are designed to support all accounting functions and activities including auditing, financial accounting & reporting, managerial/ management accounting and tax.

The impact of ICT on accounting is the ability of management of Parastals, Ministries, or Government Agencies to develop and make use of computerized systems to track, monitor and record financial transactions in their respective governance. Paper ledgers, manual spreadsheets and hand-written financial statements have all been coded into computer systems that can quickly assess, process and present all transactions into meaningful or financial reports. Most of the popular accounting systems can be tailored to specific Ministries, Departments or Agencies. This allows Ministries, Departments or Agencies to create individual reports quickly and easily for management decision-making.

### 4. Requirements of the Computerized Accounting System

According to Al-ma'aitah, M. and Shatat, A (2011)<sup>[6]</sup>, the requirements of Computerized Accounting System cannot be overemphasize because it is very imperative and wide in terms of framework and operations. Therefore, for the purpose of this study, we only consider accounting framework and operating procedure in the public sectors in Nigeria.

- Accounting Framework: - A good accounting framework in terms of accounting principles, accounting conventions, coding and grouping structure is a pre-determined condition. It is the application environment of the computerized accounting system that is expected to operate in the administration of the Parastals, Ministries, or Government Agencies.
- Operating Procedure: - A well conceived and designed operating procedure blended with suitable accounting framework that is necessary to work with the computerized accounting system. The computerized accounting is one of the database-oriented applications while the transaction data is stored in well-organized database. The user operates on the database using the required interface and he/she takes the required reports by suitable transformations of stored data into information. Hence, it includes all the basic requirements of any database-oriented application in computers.

### 5. Problems of Implementing Computerized Accounting System

Implementations of computerized accounting system in public organizations are couple with various problems depending on the situation on ground. The general problems that related to almost all private and public sectors are as follows:

- Reduction of Manpower: - The introduction of computers in accounting work reduces the number of employees in an organization. Thus, it leads to greater amount of unemployment. The staff that uses computer accounting software needs to understand the concepts of the software in other to avoid termination of appointment from the organization. Hence, he/she should undergo proper training on the modern ICT that are available in the workplace. A computer operator must learn the basics of computer, concepts of software, working with the operating system software and the accounting software for the purposes of achieving the overall objectives.
- High Cost Hardware/Software: - implantations of computer accounting system attract high installation and maintenance cost. To be more economical there should be a large volume of work in the organization but if the system were not used to its full capacity that is the volume work is very small, then it would be highly uneconomical to spend a lot of money for the implementation. A full-fledged computer system with a printer is required to operate the computerized accounting system in organizations but most of small organizations may not afford to have such facility with necessary software.
- Require Special Skills: - Computer system calls for highly specialized operators in both private and public sectors. The availability of such skilled personnel is very scarce and very costly because many of them are resistance to adopt the changes in the new software system. Used of computers provides solution for the users and usually depend fully on the computer system that necessitates the availability of computer at all times. Therefore, if there is any failure in the system or the hardware/software were not available, it would be difficult to verify the accounts at any point in time.
- Costs of Maintenance: - Frequent repair and power failure may affect the entire accounting work and Computers are prone to viruses. Therefore, people normally assume that the computer is doing things correctly at all time and without checking problems for long period of time. When there is a system crash (hard disk crash), there is high risk of losing the data available on the hard disk drive at any point of time. It would be highly painful or dangerous, if the problem occurs at end of the financial year, when the financial statements are expected to be ready. And also accounting software allows easy alteration of data. If a voucher were wrongly placed in a wrong head, it would be very difficult to sort out and bring back the voucher. A good voucher management is very essential.
- Backups and Prints: - Backups of the data should be done regularly so that, when the data is lost, it can be restored

from floppies [backups]. Regular print outs of the system information would be useful as manual records.

- Security: - Additional security has to be provided because improper handling of the system [hardware/software] could be dangerous. Passwords, locks, etc., have to be set so that no unauthorized person can handle the system.

## 6. Prospect of CAIS

The expectations of CAIS in governance are myriad but the following are some of the prospects:

- Increased Functionality:- Computerized accounting systems have also improved the functionality of accounting departments in Parastals, Ministries, or Government Agencies by increasing the timeliness of accounting information. By improving the timeliness of financial information, accountants can prepare reports from analyses of operations that give management an accurate picture of current state of affairs of the Ministries, or Government Agencies. The number of financial reports has also been improved by computerized systems such as balance sheet, cash flow statements, departmental profit and loss, and market share reports are now more accessible with computerized systems.
- Improved Accuracy: - Most computerized accounting systems have internal check and balance measures to ensure that all transactions and accounts are properly balanced before financial statements are prepared. Computerized systems will not allow journal entries to be out of balance when posting, ensuring that daily transactions are properly recorded. Accuracy is also improved by limiting the number of users that have access to financial information. Computerized accounting ensures accuracy in accounting records, financial statements and prevents clerical errors and omissions. And also while doing mathematics with computers, errors are virtually eliminated unless the data is entered improperly in the first instance.
- Faster Processing: - Computerized accounting systems allow accountants to process large amounts of financial information and process it quickly through the accounting system. Quicker processing times for daily transactions from individual have also lessened the amount of time required closing out each accounting period. Monthly, quarterly or year-end closing periods can be especially taxing on accounting departments, resulting in longer hours and higher workload. Shortening this time period aids ministries or agencies in cost control, which increases overall organizational efficiency.
- Better External Reporting: - Reports issued to outsiders that is stakeholders and investors both local and foreign have been improved by the implementation of computerized accounting systems. As it improved the reporting systems, it allows investors to determine if the organization has good investment opportunities for growth and has the potential to be a high-value organization. From the management point of view, greater control is possible and more information may be available with the use of computer in accounting.
- Lower Operating Costs: - Computer is a labor and time saving device. Hence, the volume of job handled with the

help of computers results in economy and lower operating costs. The accounts prepared with the use of computers are usually uniform, neat, accurate, and more legible than manual job.

- Improved Efficiency: - Computer brings speed and accuracy in preparing the records and accounts and thus, increases the efficiency of employees. From the management point of view, greater control is possible and more information may be available with the use of computer in accounting. It ensures efficient performance in accounting work. Computerized accounting reduces the monotony of doing repetitive accounting jobs, which are tiresome and time consuming. And also computerized accounting facilitates standardization of accounting routines and procedures. Therefore, standardization in accounting is ensured. It ensures efficient performance in accounting work.

## 7. Conclusion

The study concludes that the impacts of computerized accounting information system on the executives' officers of government's ministries, departments or agencies consider accounting framework and operating procedure in the public sectors in Nigeria. The information and communication technology (ICT) has transformed many firms in professional service industries, but only few in the public accounting industry. Therefore, in the governments public accounting underwent tremendous changes at the turn of the millennium, sparked largely by the rapid changes in its environment. The study found that problems such as high costs of implementations of hardware and software, costs of maintaining the system and it require special skills. The expectations of CAIS in governance are to lower operating costs, improve efficiency and faster processing of data in the system.

## 8. Recommendations

The study recommend that Governments should implement substantial security measures such as policies, guidelines, standards, and procedures to protect IT infrastructure through the use of physical, logical, environmental and administrative controls. Management must educate and continue to put employees on strict awareness of their confidentiality duty, as special skills is mostly capable of defeating physical security controls. Although the maintenance of logical security seems more complex to implement and maintained, government should put in place authorization procedures on a "need to know basis" only. Governments should put in place effective security programs and associated controls. To ensure continuity, regular penetration tests must be conducted. Finally, there should be regular reviewing, monitoring and testing of physical, logical and environmental security controls to protect information assets.

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