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# ELECTRONIC ACCOUNTING AND BANK OPERATIONS: EVIDENCE FROM QUOTED DEPOSIT MONEY BANKS IN NIGERIA

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## ABSTRACT

*The main aim of this study is to empirically examine the effect of electronic accounting on the operation of deposit money banks in Nigeria. Specifically the study sought to determine whether e-accounting has restored customers of the safety of their fund and whether channel delivery system can sustain customer patronage. Survey research designs were adopted for the study. Data were collected through survey in which questionnaire was administered on a sample of 180 was purposively collected from population of selected banks. Data collected were analyzed by use of means and standard deviation and the formulated hypotheses were tested by the use of t-test and Analysis of Variance statistical tools. The findings confirm that emergence of e-accounting has restored confidence of the customers on the safety of their funds and delivery channels systems have helped to sustain customer's patronage in Deposit Money Banks at 5% level of significance. Therefore, the researchers recommend that Central Bank of Nigeria should make it mandatory for all banks to embrace e-accounting.*

**Keywords:** e-accounting, safety, delivery channels system, operations.

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## Introduction

E-Accounting refers to as Electronic Accounting, a term used to describe an accounting system that relies on computer technology for capturing and processing financial data in organizations. In the literature, two more terms have been used to describe E-accounting: computer-based Accounting System and Accounting Information System (AIS) (Siamak, 2013). Stefanou (2006) observed that although accounting information system does not require a computer to function, the computerization of the accounting function, the term AIS is used primarily to denote the computer-based AIS. In this study the terms E-Accounting and financial information system are used to refer to any accounting system that depends on Information and Communication Technology (ICT) for performing its information system functions.

Despite the usefulness of electronic banking to organization and individuals, it has several challenges which cause inconveniences to these groups. These include customer being disappointed sometimes by ATMs- the machine is either faulty or short of money for transaction. Computers in the banking institutions do get faulty, corrupt or unable to operate because of network s leading to customers queue for long hours. Also security-individuals are able to access other people account either when they loss their ATM cards or not, cheque books and other related items. The study by Zakaria, Rahman, and Elsayed (2011) showed that the adoption of E-Accounting within public sector agencies in Malaysia has significantly improved the budgeting, accounting and reporting, and auditing and controlling task performance of the public sector agencies. Siamak (2013) showed that implementation of e-accounting system at these companies caused to effect on financial performance with effects of internal control systems. Results also show that measures of risk are more closely associated with internal controls and will effect on using e-accounting systems in these companies. Amaefule and Iheduru (2014) findings showed that, among other things, the Nigerian public sector has not clearly operationalized e-accounting system and it is a necessity that this system be activated in the sector's operational structures because corruption in the sector has been partly credited to its absence. It is on this note that this study seeks to examine the effects of electronic accounting on the operations of Deposit Money Banks in Nigeria.



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The main objective of this study is to examine the effect of electronic accounting on the operations of Deposit Money Banks in Nigeria.

The specific objectives of this study include:

1. To determine whether e-accounting has restored confidence of the customers on the safety of their funds.
2. To examine delivery channels system so as to determine if it can sustain customer's patronage in Deposit Money Banks.

## Review of Related Literature

### 2.0 Conceptual Review

#### 2.1.1 E-Accounting

E-accounting is the application of online and internet technologies to the business accounting function. Similar to e-mail being an electronic version of traditional mail, e-accounting is "electronic enablement" of lawful accounting and traceable accounting processes which were traditionally manual and paper-based. The new information and communication technologies represent a vector of development and an important component of the formal information system is represented by computerized information (Alves, 2010). Many traditional accounting tasks dealing with recording and processing of accounting transactions can be reliably automated. Thus, accountants add little incremental value to organizations in this regard anymore. Rather, an accountant's worth is now reflected in higher-order critical-thinking skills, such as designing business processes, developing e-business models, providing independent assurance, and integrating strategic knowledge (Hunton, 2002).

E-accounting involves performing regular accounting functions, accounting research and the accounting training and education through various computer based /internet based accounting tools such as digital tool kits, various internet resources, international web-based materials, institute and company databases which are internet based, web links, internet based accounting software and electronic financial spreadsheet tools to provide efficient decision making (Wikipedia, 2016).



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E-accounting does not have a standard definition but merely refers to the changes in accounting due to computing and networking technologies. Most e-accounting services are offered as SaaS (Software-as-a-service). E-accounting involves performing regular accounting functions, accounting research and the accounting training and education through various computer based /internet based accounting tools such as: digital tool kits, various internet resources, international web-based materials, institute and company databases which are internet based, web links, internet based accounting software and electronic financial spreadsheet tools to provide efficient decision making (Yadav, 2015). The advancements in information technology have eventually led to the introduction of computerized accounting systems in corporate reporting to help produce relevant and faithful representative financial reports for both management and external users for decision making (Greuning, 2006).

The computerized accounting is designed to automate and integrate all the business operations and helps the company handle all the business processes easily and cost-effectively. With computerized accounting the company will have greater visibility into the day-to-day business operations and greater access to vital information automatically (David & Quang, 2012). It has the ability to handle huge volumes of transactions with speed or efficiency. The many advantages from the use of these systems have led many to conclude that computerized accounting systems in corporate reporting are the "engine of growth" in business organizations (Frenzel, 1996).

Financial reporting can be defined as the process of presenting financial data about a company's financial position, the company's operating performance, and its flow of funds (Rose & Hudgins, 2008). Financial reports are essential sources of information for decision-making by economic agents. It allows for decisions judging the performance of a business in objective monetary terms. Financial performance evaluation will process data through financial statement that will provide from accounting system (Matt, 2005) to assessing the profitability, operational efficiency and liquidity for a company by financial ratios.



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E-accounting involves performing regular accounting functions, accounting research and the accounting training and education through various computer based /internet based accounting tools such as digital tool kits, various internet resources, international web-based materials, institute and company databases which are internet based, web links, internet based accounting software and electronic financial spreadsheet tools to provide efficient decision making.

### 2.1.2 E-Accounting Entries

When entries are considered within the traditional accounting approach, the issue is entering financial transactions in ledgers. When entries are considered within the electronic accounting, the issue is entering financial transactions on magnetic environments called electronic ledgers. The entries made on those magnetic environments are called e-entry. It is possible to perform the entry function of accounting easily by the “barcode” technology. In the establishments that prepare the accounting plan in detail, it is possible to enter the information read by "barcodes" automatically to the accounts. Because the codes on a barcode are identified to the computer previously, the data of stock ins and outs are directly entered into the related accounts. For example, when a good requested by a customer is passed through the barcode reader, the amount of the good and the sale price are automatically multiplied, the debt is entered into the current account of the customer while the receivable is entered into the sales account and the accounting entries are arranged (Dinç & Varici, 2008).

The reliability of the entry function in electronic accounting depends on the structure of the accounting package software. On the other hand, within electronic accounting, the account codes, the document related detailed information, entry date and change date in case of essential cases have to be entered. In addition to the security precautions, identifying a separate input password for each computer and software will also increase the reliability of information within electronic accounting (Dinç & Varici, 2008). Great facilities are provided both for tax management and tax payer with electronic accounting system by keeping the ledgers and documents in electronic environment.



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The tax payer who avails from that system is saved from protection of ledgers, documents kept on paper and their transfers and paperwork, can reach any information at any time easily and the error possibility on papers is minimized. For e-accounting, the same software needs to be running simultaneously in the customer's computer and in the accounting office. The customer would log in to the accounting programme running on the server of the accounting service provider. The programme allows you to submit queries about the financial status of your company, print reports, view and change any data, prepare, change, view and enter invoices into the system 24 hours a day. The customer can work side by side with the accountant, discussing any issues or asking for explanations. Well implemented accounting supports the collection and processing of management information. A proper information management system enables you to add and process data that are not included in the accounts, ensuring the availability of all necessary information.

### 2.1.3 Merits of E-Accounting

i. Flexible – quickly customizable, according to the needs of companies operating in different sectors and with different requirements.
ii. Functional – software modules for general financial accounting, inventory, payroll or personnel administration can be used together or independently.
iii. User Friendly – simple and efficient to use.
iv. Current – provides direct access to accounting data 24 hours a day.
v. Automatic – repetitive processes have been streamlined and automated.
vi. Trustworthy – simple to avoid and find any faults caused by human errors.
vii. Secure – the database is located in a reliable and secure server.
viii. Convenient – clear and easy to divide various tasks among several people, both within the company and between the customer company and the accounting office.

## 2.2 Review of Empirical Literature

Qatawneh (2012) determined the effect of electronic commerce (e-commerce) on Accounting Information System (AIS) in Jordanian banks. To achieve the objectives of the study a questionnaire was designed and distributed to the Jordanian bank sector.



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The data analysis found out that the banks in Jordan have positive impact towards information technology they agree on the benefit of e-commerce and what customer can get from it. The statistical analysis showed that e-commerce had a positive impact on the AIS and that e-commerce has a significantly statistical relationship with AIS itself, AIS development, cost reduction aspect in the AIS of the bank, the aspect of improving the operational performance of the bank's AIS and finally with the customer service.

Siamak (2013) examined the impact of implementation of e-accounting system on financial performance with effects of internal control systems in services industry. The population of the study consisted of all listed companies have been operating in United Arab Emirate. Questionnaires were distributed among them through email; the researcher designed the questionnaire to target financial managers, accountants and internal auditors who worked at these companies. The hypotheses of the study were tested using One Sample T-test. The results of this study indicate that implementation of e-accounting system at these companies caused to effect on financial performance with effects of internal control systems. Results also show that measures of risk are more closely associated with internal controls and will effect on using e-accounting systems in these companies.

In a related study, Amaefule and Iheduru (2014) focused on underscoring the significance of electronic accounting information system in the operations of the Nigerian public sector, and highlight the inevitability of e-accounting system in checkmating corruption in the sector. It views e-accounting approach as a catalyst to the nation's economic development. An empirical survey was conducted on the government ministries. Data collected were analyzed using 5-point Likert Scale tool. Findings show, among other things, that the Nigerian public sector has not clearly operationalized e-accounting system and that it is of necessity that this system be activated in the sector's operational structures because corruption in the sector has been partly credited to its absence. The paper thus recommends the activation of the ideals of electronic accounting system in the structure of the nation's public sector.



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Shehu (2013) studied the electronic banking products and performance of Nigerian listed deposit money banks. The study showed that e banking serves several advantages to Nigeria banking sector; provides convenience and flexible advantages. It also provides transaction related benefits like easy transfer, speedy transaction, less cost and time saving.

Sullivan (2000) in his study took sample of banks that are located in tenth Federal Reserve District that have adopted internet bank and those that have not. Comparing their financial performances and risk positions, he observed that the profitability and risks of these grouped banks were similar.

Hernando and Nieto (2006) found that the impact of adopting internet on the performance of banks as a delivery channel of e-banking takes time to appear. They hold the view that the adoption of a transactional website has a positive impact on profitability which becomes significant in terms of ROA and ROE three years after adoption. This finding actually conveys that there is a lag period for positive profitability impact to manifest on adoption of electronic banking. However, their study revealed some weaker evidence of an earlier positive impact on adoption of e-banking particularly in terms of ROA.

Siam (2006) citing the works of Shuqair (2003) on "practical electronic banking services by the Jordanian banks", pointed out that one of the most important findings in that study is the high cost of electronic banking services on the short run due to the training of employees, and the cost of the infrastructure. The implication of this finding is that electronic banking services will have a negative effect on the bank's profitability in the short run.

In another study, Al-kasswna (2012) evaluated the effectiveness of electronic accounting information systems in energy sector under conditions of uncertainty in the electricity companies in Jordan, and the ability of accounting information system to provide appropriate information for planning, control and decision-making under conditions of uncertainty. The researcher used the descriptive analytical method and



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the questionnaires were distributed to the electricity companies in the energy sector. The questionnaires are distributed to financial and control managers in those companies. The study found that the characteristics of electronic accounting information systems highly influence the performance of electricity companies of Jordan under conditions of uncertainty. The electronic accounting information system in electricity companies in Jordan is effective in providing information for the purposes of planning under conditions of uncertainty, and in providing information for decision-making under conditions of uncertainty and for the purposes of control under conditions of uncertainty.

Khalid (2004) evaluates the performance of computer-based accounting systems suitable to meet the department needs. The questionnaire was designed to explore the opinions of officials of industrial companies in Jordan on the performance of those systems. The study results shows that the majority of Jordanian Industrial Companies rely on computer-based accounting information systems and applicable regulations achieve the objectives of users of financial and administrative statements as well as ease and speed of such systems to meet the needs of such data users.

The study by Naash and Khamis (2009) aims to determine the impact of accountants in developing accounting information systems on those systems efficiency and application on financial performance of industrial companies in Jordan, as well as to investigate the effect of the application of those systems on the financial performance of companies. This study has applied a sample of 53 industrial companies listed in the financial market in Jordan. The most important results of the study are that there is a direct correlation of statistical significance between participating accountants at all stages of the development of accounting information systems and the performance of those systems. It also indicates that there are statistically significant differences between performance indicators before and after the application of system except for sales operating income while it also shows that there are statistically significant differences between the financial performance indicators of companies that apply the computer-based accounting information systems and those companies' financial indicators that do not apply such systems.



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Akesinro and Adetoso (2016) examined the effects of computerized accounting systems on bank performance in Nigerian banking sector. Convenience sampling method was adopted to arrive at sample size of 50 covering Guaranty Trust Bank Plc., Wema Bank Plc. and First Bank Plc. Data collected were analyzed using correlation analysis. Results show that computerized accounting system has a positive effect on bank's profitability and as well customer patronage. The study recommends that computerized accounting systems should be adopted by all banks in Nigeria because it has a lot of advantages and benefits and government power supply should be replaced with inverters for the purpose of powering the computers used in their operations so as to prevent power outage which may result in data loss on the computer.

Amahalu, Abiahu, and Obi (2017) assess the comparative analysis of computerized accounting system and manual accounting system of quoted Microfinance Banks in Nigeria from 2006-2015. Three hypotheses were formulated in line with objectives of the study. Ex-post facto research design was adopted and the data for the study were obtained from fact books, annual reports and account of the quoted Microfinance banks under study. Paired sample T- test was used to test the Hypotheses, at 5% significant level with aid of SPSS version 22 statistical software. Findings showed that computerized accounting system has a positive effect on the reported profitability of banks more than manual system of accounting. Based on these findings, the study recommends among others that Microfinance banks should implement computerized accounting system than the manual accounting system because it has more positive effect on the profitability level of the banks.

Akande (2016) assessed whether implementation of Computerized Accounting System has positive influence on the performance of entrepreneurs in South western Nigeria. The population of the study comprises of list of 7474 registered Small and Medium businesses in South West Nigeria (Bureau of Statistic 2012) random sampling technique will be adopted for the study. The sample size of 380 were mathematically derived using the Taro Yamene's formula, 301 questionnaires were received and useful for the study representing 79% of the total sample size. Data collected were coded and analyzed using frequency table and percentage while



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inferential statistic such as chi-square and regression analysis was used to test the formulated hypotheses. Finding from the study indicate that advancement in technology has become a driver to business success. Evidence from findings revealed that Computerized Accounting Systems are used by entrepreneurs in order to generate timely and accurate reports through a fast and efficient processing of accounting data. It was observed that adoption of Computerized Accounting Systems by entrepreneurs is based on the efficient and effectiveness of the system toward entrepreneur operations. It was also observed that, there are numerous benefits both financial and non-financial which are derived from the use of a Computerized Accounting System. The result of tested hypotheses showed that computerized accounting system significantly related to entrepreneur performance and positively influence Entrepreneur performance.

**Design and Methodology**

This study used the survey method. The reason for this is that it involves investigation of opinion of large number of people and it involves inferences drawn from such investigation. The population size of the study is made up of all deposit money banks in Anambra State. The elements of the population were the staff of three selected banks (First bank, UBA and Zenith bank) and their customers who patronize and transact other banking business with the banks. These banks were selected for convenience purposes. The analytical technique used in this research was the t-test statistical tool with aid of SPSS version 20.0 at 5% level of significance. The basis for the acceptance or rejection of the hypothesis is the f-ratio. The decision rule is to reject the null hypothesis and accept the alternate hypothesis where P value is less than 0.05 or to accept the null hypothesis (Ho) and reject the alternate hypothesis (Hi) where P value is equals to or greater than 0.05.



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**Data Analysis**

This study employs the t-test statistical tool with aid of SPSS version 20.0 at 5% level of significance was utilised.

Ho[1]: Emergence of e-accounting has not restored confidence of the customers on the safety of their funds.

**Table 1: Mean Score for testing Hypothesis One**

| Questions | X | Y |
|---|---|---|
| 1 | 3 | 3.78 |
| 2 | 3 | 3.44 |
| 3 | 3 | 3.92 |
| 4 | 3 | 3.80 |
| 5 | 3 | 3.78 |

Source: *Researcher's Computation using SPSS version 20.0*

**Table 2: Paired Samples Statistics**

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | x | 3.0000 | 5 | .00000 | .00000 |
| | y | 3.9000 | 5 | .10536 | .04712 |

Source: *Researcher's Computation using SPSS version 20.0*

**Table 3: Paired Samples Test**

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | x - y | -.90000 | .10536 | .04712 | -1.03082 | -.76918 | -19.101 | 4 | .000 |

Source: *Researcher's Computation using SPSS version 20.0*

From the above table, the mean of y is 3.900 as against x which is 3.00. In this case the mean of y is higher than that of x (the mean score). Looking at the mean score table.1, the mean scores of y are not by chance hence scored above the bench mark and indicate positive response. Based on this, the study rejects null hypothesis and accept the alternative hypothesis which state that emergence of e-accounting has restored confidence of the customers on the safety of their funds.



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Ho[2]: Delivery channels systems do not significantly help to sustain customer's patronage in Deposit Money Banks.

**Table 4: Mean Score for testing Hypothesis Two**

| Questions | X | Y |
|---|---|---|
| 1 | 3 | 3.95 |
| 2 | 3 | 3.78 |
| 3 | 3 | 3.83 |
| 4 | 3 | 3.89 |
| 5 | 3 | 4.05 |

Source: *Researcher's Computation using SPSS version 20.0*

**Table 5: Paired Samples Statistics**

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | x | 3.0000 | 5 | .00000 | .00000 |
| | y | 3.9000 | 5 | .10536 | .04712 |

Source: *Researcher's Computation using SPSS version 20.0*

**Table 6: Paired Samples Test**

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 x - y | -.90000 | .10536 | .04712 | -1.03082 | -.76918 | -19.101 | 4 | .000 |

Source: *Researcher's Computation using SPSS version 20.0*

From the above table, the mean of y is 3.900 as against x which is 3.00. In this case the mean of y is higher than that of x (the mean score). Looking at the mean score table.4, the mean scores of y are not by chance hence score above the bench mark indicate positive response. By implication, delivery channels systems helped to sustain customer's patronage in commercial banks. Based on this, the study rejects null hypothesis and accept the alternative hypothesis which state that delivery channels systems significantly helped to sustain customer's patronage in commercial banks.

**Discussion of Findings**

From the analysis above, results showed that, the emergence of e-accounting has restored confidence of the customers on the safety of their funds, hypothesis two indicate that delivery channels systems significantly helped to sustain customer's patronage in deposit money banks. This result is in line with Amaefule, and Iheduru (2014) who shows that the Nigerian public sector has not clearly operationalized e-accounting system and that it is of necessity



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that this system be activated in the sector's operational structures because corruption in the sector has been partly credited to its absence. Also the study of Rahman and Elsayed (2011) whose results of the study show that the adoption of E-Accounting within public sector agencies in Malaysia has significantly improved the budgeting, accounting and reporting, and auditing and controlling task performance of the public sector agencies. Others like; Amidu, Effah and Abor, (2011); Khalid, (2004); Al-kasswna (2012) were all in affirmation that e-accounting enhance efficiency and improve performance of an organization.

**Summary of Findings**

The study revealed that:

1. The study revealed that emergence of e-accounting has restored confidence of the customers on the safety of their funds.
2. It also shown that delivery channels systems significantly helped to sustain customer's patronage in deposit money banks.

**Conclusion and Recommendations**

The conclusion from our study has revealed that the emergence of e-accounting has restored confidence of the customers on the safety of their funds. Meanwhile that electronic accounting system is a necessity in the operations of government activities in Nigerian banking institutions in this modern era. However the result shows that delivery channels systems significantly helped to sustain customer's patronage in deposit money banks. In the light of the observations made, the following recommendations are made:

1. CBN should make it mandatory for banks staff to embrace e-accounting and also to undergo feasibility study on electronic accounting. Also banks should device a technical way of detecting illegal transaction through electronic accounting.
2. Government should introduce foreign technology from advance and developed country into the Nigeria banking industry and banks that make use of the e-accounting will be more and more globalised, direct and cyberspace oriented. This is a phenomenon that no Nigeria bank can neglect. Banks therefore must give adequate attention for survival and growth of the banking industry.



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