

# EFFECTS OF E-COMMERCE ON AUDITING PRACTICES OF SELECTED FIRMS IN RIVERS STATE



## Original Research Article

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## ABSTRACT

This paper examined the Effects of E-Commerce on Auditing Practices of Selected Firms in Rivers State. The research design for this study is the survey research design. The data used in the study were generated from two major sources namely; Primary sources and Secondary sources. However, the major instrument for data collection was a five point likert scale questionnaire titled e-commerce and auditing practices questionnaire (ECO&APQ). The Spearman rank correlation coefficient (r) was used to calculate the reliability index. The statistical tools used for data analysis are: simple percentage (%) and kruskawalis test (H) using the Minitab software. The major findings revealed that the p-value for both hypotheses were below 0.05 (i.e 00.0<0.05, 0.00<0.05) respectively hence; it was concluded that to maintain the accuracy and integrity report, auditors need to acquire knowledge on how to apply e-transaction data in preparing their report. The researchers recommend that; E-commerce skill development should be made an invaluable component of auditors training programmes, Organizations should establish robust electronic accounting information collection, collation and dissemination system. This can help auditors develop a more accurate audit reporting system.

## KEYWORDS:

auditing, automated, continuous, e-commerce, e-marketing, e-payment

## I. INTRODUCTION

In today's Nigerian business environment, there is a shift towards the acceptance of information and communication technology in business processes. Moreover, as competition grows in the business environment, organizations strive to develop and strengthen their web-presence as a strategy to enhance their competitiveness. The resultant effect is the massive embrace of online driven transactions known as e-commerce. E-commerce according to Turbanet, King, Lee, Liang and Turban (2010) is defined as the process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks, mostly the internet and intranets. They further explained that e-commerce is a part of a broader definition which is referred to as e-business; it includes not just buying and selling but also servicing customers, collaborating with business partners, and conducting electronic transactions within the organization.

Accounting according to the business dictionary is the practice and body of knowledge concerned primarily with methods for recording transactions, keeping financial records, performing internal audits, reporting and analyzing financial information to the management, and advising on taxation matters. It is a systematic process of identifying, recording, measuring, classifying, verifying, summarizing, interpreting and communicating financial information. It reveals profit or loss for a given period, and the value and nature of a firm's assets, liabilities and owners' equity. Accounting provides information on the resources available to a firm, the means employed to finance those resources, and the results achieved through their use. In this study, the researcher shall concentrate on three major dimensions of accounting practice which are; auditing, accounting information system and financial disclosure.

### Statement of the Problem

The adoption of e-commerce has exposed accountants to a new risk of skill obsolescence. This is because the traditional skill required in the generation of vital information in normal paper accounting process is not same as that of e-commerce. Accounting generally and auditing in e-commerce business environment requires that the auditor must be abreast with computer application skill and knowledgeable in specialized accounting software packages. The implication of this is that by the adoption of e-commerce, a skill and knowledge gap is created as a result of skill obsolescence and this affects auditing and practices negatively. The use of e-commerce has exposed organizations to cyber security issues as it affects the integrity of official accounting information and data. Internal and external intruders can compromise the integrity of the accounting information system by altering existing data or fabricating non-existent information to suit the interest of the user, and this hampers proper and effective auditing and the disclosure of audit reports. The problem of this study therefore is to establish the effects e-commerce has on auditing practices. The independent variable (e-commerce) was proxied by; e-procurement and e-marketing. On the other hand, the dependent variable (auditing practices) was proxied by continuous auditing and automated auditing.

### Objectives of the study

The general objective of this paper is to examine the accounting implications of e-commerce. The specific objectives are to;

- i. Examine the effects of e-procurement on continuous auditing practices.
- ii. Examine the effects of e-marketing on automated auditing practices.

## Research Questions

The following questions will serve as a guide to this study;

- i. What are the effects of e-procurement on continuous auditing practices?
- ii. What are the effects of e-marketing on automated auditing practices?

## Hypotheses

The researcher made the following hypotheses for this study.

**H<sub>01</sub>:** E-procurement does not have significant effects on continuous auditing practices.

**H<sub>02</sub>:** E-marketing does not have significant effects on automated auditing practices.

## II. REVIEW OF RELATED LITERATURES

### E-Commerce

According to Al Basoos (2009), E-commerce consists of the buying and selling of products or services over electronic systems such as the Internet and other computer networks. According to Weil and Vitale (2001), from the business process perspective, e-commerce is doing business electronically by completing business processes over electronic networks, thereby substituting information for physical business process. From a service perspective, e-commerce is a tool that addresses the desire of governments, firms, consumers, and management to cut service costs while improving the quality of customer service and increasing the speed of service delivery.

From a learning perspective, e-commerce is an enabler of online training and education in schools, universities and other organizations including business. From a collaborative perspective, e-commerce is the framework for inter –and –intra organizational collaboration. From a community perspective, e-commerce provides a gathering place for community members to learn, to transact and to collaborate. E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value.

In the view of Mohammed (2004), E-commerce refers to the use of communications technology particularly the internet to buy, sell and market goods and services to customers. The Internet has brought about a fundamental shift in national economies that are isolated from each other by barriers to cross-border trade and investment; isolated by distance, time zones and language; and isolated by national difference in government regulations, culture and business systems. Espousing the significance of the concept, Mohammed posit that E-commerce has dramatically reduced locational importance. Retailers are now able to sell their products all over the world. This has the potential to increase their revenue and customer base dramatically. The need to adopt e-commerce for survival of business organizations in the global competitive environment is imperative. An awareness of the critical success factors of e-commerce implementation also becomes essential for business organizations to appropriately address the relevant issues and move forward, since failed implementation may have severe repercussions on businesses performance

### Perceived Benefits of E-Commerce

According to Dyer and Chu (2000), the Perceived benefits of e-commerce are categorized into perceived direct

indirect, relationship-related and strategic benefits of e-commerce discussed in the next section.

### 1. Perceived Economic Benefits of E-commerce:

Perceived direct (economic) benefits arise from improvements and efficiencies in business processes, as a result of speed and automation of e-commerce applications. These benefits occur because transactions are sent electronically from one application to another. They include a reduction of transaction costs and administrative expenses, time savings from a faster trading cycle, and improved accuracy because the receiving trading partner need not re-key the data. Perceived economic benefits are derived from operational savings in using e-commerce technologies (Senn, 1999). If properly configured, Internet applications can increase and enhance trading partners' productivity, and increase their capability to communicate globally. As more information and services are added to an organization's intranet, business decisions can be made more quickly. Intranets contribute to reduced costs of distributing corporate information such as newsletters and memos. Extranets on the other hand offer richer capabilities for information transfers, open new revenue prospects and decrease costs and cycle times by providing real-time tracking and monitoring information (Jevans, 1999). Extranet benefits include using familiar Internet tools and interface, increased communication between trading partners that allow for both internal, external communication, and real-time transaction recording. Transactions are duplicated across both the trading partner and supplier databases, thus facilitating a high degree of information sharing and enabling decision makers to make more informed decisions. In addition there is greater flexibility and rapid, customized product development because e-commerce systems are only monitored by trading partners. An extranet also provides improved communications among customers, suppliers, and collaborators who find it effective in decreasing overheads and increasing revenue because it permits precise and effective management of service and products. Buyer's benefits arise primarily from structural characteristics such as availability of information, provision of search mechanisms, and online product trial, all of which can reduce uncertainty in the purchase decision. Businesses benefit from the potential of the web as a medium for marketing (Sharp, 1998).

### 2. Perceived Strategic Benefits of E-commerce

Perceived strategic benefits refer to the long-term gains an organization achieves from developing closer ties with their trading partners by using e-commerce to improve its competitive position. Perceived strategic benefits include a compressed business cycle, intensified relationships with trading partners and the development of corporate benefits are often unseen and difficult to quantify. Ecommerce provides decision-making support where strategic use of information becomes available in a computer usable format. Changes to business processes from the use of e-commerce contribute directly operational improvements. For example, e-commerce allows for time-based competitive moves such as quick-response retailing, just-in-time manufacturing and close-to-zero inventories (Kalakota and Robinson, 2001). In addition, e-commerce helps to achieve the broader goals of improving an organization's image, strengthening its reputation, increasing long-term investments, and reaching new markets. Others have also printed that trust is an essential element of ecommerce and can be used as a strategic mechanism in trading partner relationships.

According to Turban et al. (2008), the benefits of e-commerce can be classified into three namely; benefit to the organization, customer and the society.

### Benefits to Organizations

- Global reach: Locating customers and/suppliers worldwide, at reasonable cost and at a fast speed.
- Cost reduction: Lower cost of information processing, storage, and distribution.
- Supply chain improvement: Reduce delays, inventories and cost.
- Customization/personalization: Make it consumers' wish, fast and at reasonable cost.
- Lower communication cost: The internet is cheaper than VAN private lines.
- Efficient procurement: Saves time and reduces cost by enabling e-procurement.
- Improved customer service and relationship: Direct interaction with customers, better customer relationship management.

### Benefits to the Consumer

- Ubiquity: customers can shop anytime from any place
- More products/services: Large selection to choose from
- Cheaper products /services: Customers can compare and shop for lowest prices.
- Instant delivery: Digitized products can be downloaded immediately upon payment.
- Find unique items: Using online auctions, collectible items can be found.

### Auditing Practices

According to Ihe and Umeaka (2006), auditing is a process carried out by suitably qualified auditors during which the accounting records and the financial statements of an organization are subjected to examination by an independent auditor with the main objective of expressing an opinion in accordance with the relevant terms of appointment purpose. They further stated that the objectives of auditing were grouped into two; (a) Primary objective: the auditor (one who carries out audit operation) is to report whether the financial statements shows a true and fair view of the financial affairs of the organization during the period under review. (b) Secondary objective: This concerns the detection of frauds and errors and the prevention of frauds and errors. Therefore, an auditor in an ordinary sense is any person who is in charge with the responsibility of examining the books of accounts of an organization in such a detailed form as well as enabling him form an independent opinion as to the truth and fairness of the financial statement. The avalanche of definitions above points to the fact auditing is a systematic process of financial record assessment with the intention of ascertaining its accuracy with a pre-determined standard while detecting fraud and proffering expert measures to guide against future fraud.

The auditing standard (2004), defined auditing as the independent examination of an expression of opinion on the financial statement of an enterprise by an appointed auditor in pursuance of that appointment and compliance with any relevant statutory obligation. Therefore, an auditor in an ordinary sense is any person who is in charge with the responsibility of examining the books of accounts of an organization in such a detailed form as well as enabling him form an independent opinion as to the truth and fairness of the financial statement. Explaining the importance of auditing, institute of chartered accountants in England and Wales (2005) stated that Audits serve a vital economic purpose and play an important role in serving the public interest to strengthen accountability and reinforce trust and confidence in financial reporting. As such, audits help enhance economic prosperity, expanding the variety, number and value of transactions that people are prepared to enter into.

## Dimensions of Auditing Practices

*Independence of Auditors:* According to the IFAC Code of Ethics, to achieve independence, auditors should be and appear to be free of any interest which may be regarded, whatever its actual effect, as being incompatible with integrity, objectivity and independence. For auditors to be completely independent, they have to be both independent in mind and appearance. According to independence of mind, the auditor has to behave without having objectively being affected by others interest while independence of appearance relates to perceptions of independence i.e. if third parties perceive that auditor interests that may impair objectivity do not exist (Eilifsen et al, 2006). Based on the IFAC framework of auditor's independence, complete independence can never be attained because the client pays the audit fees. What is most important is discovering the independence risk (i.e. the risk that the auditor's independence would be or would appear to be compromised). According to the code, the auditor should establish in each engagement an acceptable level of independence risk. If not, he/she should take the following actions according to the framework:

- Identify threats to independence .
- Evaluate the significance of the threats.
- Identify and evaluate the effectiveness of existing and potential safeguards against the threats .
- Apply appropriate safeguards to bring independence risk to an acceptable low level .

*Continuous Auditing:* There are various definitions of continuous auditing found in literature: definitions where CA is seen as a method or framework used by auditors, but also definitions where CA is a technology. Rezaee (2002) defines continuous auditing as “a comprehensive electronic audit process that enables auditors to provide some degree of assurance on continuous information simultaneously with, or shortly after, the disclosure of the information. He speaks of continuous auditing as a process. The definition of continuous auditing used by the AICPA and CICA: a methodology that enables independent auditors to provide written assurance on a subject matter using a series of auditors' reports issued simultaneously with or a short period of time after, the occurrence of events underlying subject matter. In the Global Technology Audit Guide (GTAG). Coderre (2005) says CA is an umbrella for two main activities: continuous control assessment and continuous risk assessment. With control assessment audit's attention is focused on possible control deficiencies. With continuous risk assessment processes or systems that are experiencing higher than expected levels of risks are highlighted.

Coderre mentions that the frequency of the continuous activity will depend on the risk inherent to the process or system. Continuous audit procedures can be designed to test internal controls, by analogy with traditional auditing. This is called continuous control monitoring. CA procedures can also be designed to execute substantive testing, including analytical procedures. This is then called continuous data assurance. (Alles et al. 2008).

*Audit Report/Disclosure:* Auditing and financial reporting requirements of companies in Nigeria are regulated by a multiplicity of laws and bodies (World Bank, 2004). These include Companies and Allied Matters Act CAP. 20 L.F.N. 2004, Securities and Exchange Commission Rules and Regulations (1999), Investments and Securities Act CAP.124 L.F.N. 2004, Nigerian Stock Exchanges Act (1961), Banks and Other Financial Institutions Act (1991), Nigerian Insurance Act (2003), Nigerian Accounting Standards Board Act (2003), Institute of Chartered Accountants of Nigeria Act (1965) and Association of National Accountants of Nigeria Act (1993).

*Risk Detection and Control:* Despite the fact that, in the last few years, some attention has been given to several e-commerce models, very few of these discussions have been dedicated to the study of internal control systems, which would face the new risks brought along with this new type of e-commerce. Another item that has not been subject to much discussion is the proper way to perform auditing in an e-commerce environment (Harkness and Green 2004). The electronic commercial transactions, rendered effective through the use of the internet as the way for implementation of the necessary information and communication channels, have brought new risks, associated to the business processes and to the information systems that support the above named commercial transactions. These new risks are directly related to the global risk of auditing and, consequently, to its practices. One of the primary aims of the implementation of risk based internal control systems, dealing with the intra-organizational and inter-organizational controls in a holistic fashion, is the global management of auditing risk, according to three of its components: (1) inherent risk; (2) control risk and (3) detection risk:

- *Inherent risk* – the risk of an existing error, material or important when combined with other errors; inherent risks exists, even though an auditing is done, due to the business nature.
- *Control risk* – the risk that there is a material risk, which is not prevented or quickly detected by the internal control system, according to the organization's desire of risk and to the defined risk management criteria;
- *Detection risk* – the risk that the information systems auditor should use inadequate test procedures and could, thus say that there are no existing material errors, when there are.

## III. METHODOLOGY

The research design for this study is the survey research design. The data used in this study were generated from two major sources namely; Primary sources and Secondary sources. However, the major instrument for data collection was a five point likert scale questionnaire titled ecommerce and auditing practices questionnaire (ECO&APQ). The Spearman rank correlation coefficient ( $r$ ) was used to calculate the reliability index. The statistical tools used for data analysis are: simple percentage (%) and kruskawalis (H) test using the Minitab software. kruskawalis which is a non-parametric equivalent for one-way ANOVA may be described thus:

$$T = H = \frac{12}{N(N+1)} \sum_{i=1}^k \frac{R_i^2}{n_i} - 3(N+1) .$$

## IV. RESULTS

### Hypotheses One

**H<sub>01</sub>:** E-procurement does not have significant effects on continuous auditing practices.

This hypothesis was tested using the data extracted from

### Results for Research Question One

#### Kruskal-Wallis Test: C1 versus C2

Kruskal-Wallis Test on C1

C2	N	Median	Ave. Rank	Z
1	12	31.00	42.1	1.35
2	12	49.00	63.5	5.76
3	12	27.50	28.6	-1.41
4	12	28.00	31.4	-0.85
5	12	23.50	11.9	-4.85
Overall	60		35.5	

H = 48.91 DF = 4 P = 0.000

H = 49.13 DF = 4 P = 0.000 (adjusted for ties)

From the Minitab output, the p-value is 0.000, which is less than the level of significance (0.05), therefore we reject the null hypothesis and conclude that e-procurement has significant effects on continuous auditing practices.

**Hypothesis Two**

**H<sub>02</sub>:** E-marketing does not have significant effects on adequate accounting disclosure/reporting

**Results for Research Question Two**

**Kruskal-Wallis Test: C1 versus C2**

Kruskal-Wallis Test on C1

C2	N	Median	Ave Rank	Z
1	5	33.00	14.9	0.65
2	5	46.00	23.0	3.40
3	5	34.00	15.0	0.68
4	5	29.00	9.1	-1.32
5	5	22.00	3.0	-3.40
Overall	25		13.0	

H = 20.57 DF = 4 P = 0.000

H = 20.66 DF = 4 P = 0.000 (adjusted for ties)

From the Minitab output, the p-value is 0.000, which is less than the level of significance (0.05), therefore we reject the null hypothesis and conclude that e-marketing has significant effects on adequate accounting disclosure/reporting.

**Appendix I**

Output of the SPSS for the Pre-Test Retest Reliability of the Instrument.

Correlations				
			VAR00001	VAR00002
Spearman's rho	VAR00001	Correlation Coefficient	1.000	.789*
		Sig. (1-tailed)	.	.012
		N	21	21
	VAR00002	Correlation Coefficient	.789*	1.000
		Sig. (1-tailed)	.012	.
		N	21	21

\*. Correlation is significant at the 0.05 level (1 tailed).

**V. CONCLUSION AND RECOMMENDATIONS**

E-commerce has come to stay and as with every other significant innovation in business processes, it requires that new and relevant skill set must be acquired if the organization must afloat. Sadly, many auditors especially in less developed nations like Nigeria gives less attention to e-commerce hence; their failure to adequately integrate e-commerce transaction data into their audit report. It is therefore concluded in this study that e-commerce has significant effect on auditing practices. Consequently, the researchers recommend that; E-commerce skill development should be made an invaluable component of auditors training programmes, Organizations should establish robust electronic accounting information collection, collation and dissemination system. This can help auditors develop a more accurate audit reporting system.

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