

**Examination of Accounting Implications of E-Commerce in Nigeria:
A Study of Selected Firms in IMO State**

Abstract: This paper examined the accounting implications of e-commerce in Imo state. The study took a descriptive survey approach and data was sourced from 183 members of staff in the account unit of twenty selected e-commerce oriented firms in Imo state. The data gathered was analyzed with non-parametric kruskawalis (H) test using the 20.0 version of statistical package for social sciences (SPSS). The paper concludes that e-commerce has significantly changed the way the auditing of accounts and accounting information are sourced, stored and managed. It was therefore recommended among others; that government should provide or domesticate and implement cybercrime laws that can protect organizations and individuals who trades on the e-commerce platform; this will help boost the confidence of accounting officers in the use of e-commerce facility and that there is need to ensure the integrity of the processes of e-commerce, this is to ensure that information from it used in preparing accounts of organizations meets the objectivity, accuracy and completeness criteria

keywords: : Accounting, AIS, Auditing, competitiveness, E-commerce, Organization.

ISSN CODE : 2456-1045 (Online)
 (ICV-BM/Impact Value): 2.84
 (GIF) Impact Factor : 1.952
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 Journal Code : ARJMD/BM/V-2.0/I-1/June-2016
 website : www.journalresearchijf.com
 Received : 16.06.2016
 Accepted : 21.06.2016
 Date of Publication :30.06.2016
 Page: 12-17



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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 e-commerce as the process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks, mostly the internet and intranets. They also indicated 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 two major dimensions of accounting practice which are; auditing and accounting information system.

Statement of Problems

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 knowledge in specialized accounting software packages. The import of this is that by the introduction of e-commerce, a skill and knowledge gap is created and this affects auditing in accounting process 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 accounting process. The process of reporting audited accounts to end users is another problem area e-commerce has introduced to accounting. Not all end users of a financial account are ICT compliant. When e-commerce data are therefore used to prepare final accounts and the same process used to communicate the report to the end users, the challenge of comprehension and usability may arise, and this affects accounting practice.

Objectives of the study

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

- i. Examine the implications of e-commerce on effective auditing practice.
- ii. Examine the implications of e-commerce on accounting information system.

Research Questions

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

- i. What are the implications of e-commerce on effective auditing practice?
- ii. What are the implications of e-commerce on accounting information system?

Hypotheses

The researchers made the following null hypotheses for this study

- **H₀₁**: e-commerce does not have significant implications on effective auditing practice.
- **H₀₂**: e-commerce does not have significant implications on accounting information system.

REVIEW OF 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. 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 posits 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

Perceived benefits of e-commerce technologies (applications) discussed in the research literature are remarkably similar. This indicates that organizations' experiences with regards the benefits have been fairly consistent (Dyer and Chu, 2000). Perceived benefits of e-commerce in this study are categorized as perceived direct (economic), 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). Murkopdhyay, Kerke, and Kalathur (2005), conducted a study of Chrysler assembly centers and identified that EDI use improved the quality of information exchange and reduced inventory, transportation, and administrative costs.

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

Limitations to E-Commerce Adoption

Turban et al, (2007), analyses e-commerce limitations/barriers in developing countries in terms of Technological and Non-Technological.

Technological limitations

- Lack of universal standards for quality, security and reliability.
- The telecommunication bandwidth is insufficient, especially for mobile commerce.
- Software tools are still evolving.
- Internet accessibility is still expensive and/or inconvenient

Non-technological limitations

- Security and privacy concerns deter customers from buying.
- People do not yet trust paperless and faceless transactions.
- Many legal and public policy issues, including taxation, have not yet been resolved or are not clear.
- Some customers like to feel and touch products.

Accounting Issues and E-Commerce

The growth of e-commerce has not changed the existence of professional guidelines, reporting requirements and the mentality of the business world. This information and technology can help accountants by providing meaningful details that allow the true cost of products to be found.

E-commerce and Taxation Accounting: the newest battle that has arisen from e-commerce is the issue of taxation. Do current taxation laws apply to Internet sites? Are the buyers subject to the taxes where they live or where the business is located? These are just a couple of the questions that governments around the world are trying to answer. Most governments support tax free zones or simplified taxes that follow a single tax regime. Governments that rely on sales tax, like local and state governments, are worried that Internet shopping without a sales tax will hurt physical store locations and reduce the sales tax amounts they take in. There still is no definite answer as to what should take place. Governments of many different countries must agree on a similar plan in order to fully solve the problem (Horn 2003). The widespread use of the Internet has fuelled record economic growth and productivity gains because of the readily accessible, free flow of information. With information-sharing technology, companies are able to respond faster in the economy (Livermore 2002).

E- Commerce and Auditing Practices: 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 hasn't 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. The global risk of auditing in the sphere of action of electronic transactions that can occur in e-

commerce is managed by controlling the involved business processes and the information systems that supports them. The controlled business process is obtained by using the technology of software agents. The control process is mainly formed by the software agents that identify possible incongruities when compared to what is real or expected. The software agents are also responsible for the correction of the possible error in real time. As a technological infrastructure, to implement information and communication channel are not operated in an independent manner (Pathak 2003). One can verify the coexistence of the business process and the information systems that support them. Besides, the entities involved in the transaction are also common.

E-commerce and Internal Auditor: E-commerce and the Internal Auditor is another prime area of interest when discussing the auditing implications of e-commerce. The article, Cyber law and e-commerce: An internal audit perspective provides suggestions for internal auditors of companies who are pursuing sales over the Internet. It is very important that with increasing web sales that the company and the customer understand who has the liability if there is a disagreement over a transaction. The four main concerns for an internal auditor are the similarity of electronic records and paper documents, the enforceability of licenses for software, avoidance of customer's denial of an order placed, and use of digital signatures.

1. There may not be any paper records for e-commerce transactions, and electronic records may be more easily destroyed or altered than paper records without leaving evidence of such destruction or alteration.
2. The auditor considers whether the entity's security of information policies, and security controls as implemented, are adequate to prevent unauthorized changes to the accounting system or records, or to systems that provide data to the accounting system.
3. The auditor may test automated controls, such as record integrity checks, electronic date stamps, digital signatures, and version controls when considering the integrity of electronic evidence.

E-commerce and Accounting Information System: Accounting information system (AIS) is a subsystem of the management information system (MIS) that processes financial transactions to provide -

- (1) Internal reporting to managers to be used in planning and controlling current and future operations and for non-routine decision making,
- (2) External reporting to outside parties such as to stockholders, creditors, and government agencies. Romney and Steinbart (2012) indicated that the accounting is the language of business and that the AIS are the intelligence of that language. *AIS is also seen as* a system that identifies, collects, processes, and communicates economic information about a firm using a wide variety of technologies. It captures and records the financial effects of the firm's transactions and distributes transaction information to operations personnel to coordinate many key tasks (Buhaisi, 2011)

Importance of E-Commerce to AIS within the organization:-

According to Romney, Marshall, dan Steinbart, and Paul (2012), as a support activity, e-commerce provides additional value to AIS by:

1. Providing accurate and timely information so the five primary value chain activities can be performed more effectively and efficiently.
2. Improving the quality and reducing the costs of products or services: For example, AIS can monitor machinery so operators are notified immediately when performance falls outside acceptable quality limits. This helps maintain product quality limits.
3. Improving efficiency:- Well-designed AIS can make operations more efficient by providing more timely information. For example, a just-in-time manufacturing approach requires constant, accurate, up-to-date information about raw materials inventories and their locations.
4. Sharing knowledge: - Well-designed AIS can make it easier to share knowledge and expertise, perhaps thereby improving operations and even providing a competitive advantage. For example, the largest public accounting firms all use their information systems to share best practices and to support communication between people located at different offices.
5. Improving the efficiency and effectiveness of its supply chain: - For example allowing customers to directly access the company's inventory and sales order entry systems can reduce the costs of sales and marketing activities. Moreover, if such access reduces customers' costs and time of ordering, both sales and customer retention rates may increase.
6. Improving the internal control structure: - Security, control, and privacy are important issues in today's world; AIS with the proper internal control structure can protect systems from problems such as fraud, errors, equipment and software failures, and natural and political disasters.
7. Improving decision making. Because improve decision making is complex, multistep activity to identify the problem, collect and interpret information, evaluate ways to solve the problem, select a solution methodology, and implement the solution. AIS can provide assistance in all phases of decision making

Legal and Security Issues: The concern for trust is an important consideration customer's face before they decide to buy a product or service over the internet. Laws and regulations concerning competition and legal business sales have been popping up since e-businesses have become more prominent. The main trust barrier to using e- marketplaces according to a survey conducted by Abbiati (2003) is the protection of sensitive customer and supplier transactions. Also of concern to the respondents is a lack of clear information on the terms and conditions of a contract and the uncertainties relating to settling disputes and online payments. Before a potential customer will purchase a product or service, companies must ensure there are adequate safeguards that protect their confidential information. Currently, a "trust gap" exists between what users want and what marketplace operators' provide. Respondents felt that each business should be responsible for developing its own code of conduct concerning security and contracts. They felt codes of conduct were more effective in improving trust and confidence than additional legislation. The author points out that the best way to lower buyer risks is to conduct a full legal audit that determines if the e-marketplace business safeguards information, complies with laws, and follows its code of conduct (Abbiati 2003).

Some of the specific Legal and security issues that may be particularly relevant in an e-commerce environment according to Sharuddin (2014) include:

- ❖ Adherence to national and international privacy requirements
- ❖ Adherence to national and international requirements for regulated industries
- ❖ The enforceability of contracts
- ❖ The risk of money laundering, and
- ❖ Violation of intellectual property rights.

METHODOLOGY

This study took a descriptive survey approach. Data was sourced from 183 completed and returned five point likert scale questionnaire out of the 200 administered on the finance and account unit staff of twenty selected e-commerce oriented firms in Imo state. The data gathered was analyzed with non-parametric kruskawalis (H) test using the 20.0 version of statistical package for social sciences (SPSS). The H test is given as;

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

RESULT AND DISCUSSIONS

The tables below shows the SPSS output of the kruskawalis test for the hypotheses in this study

SPSS Output for Hypothesis One

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
AIE&AP	20	36.6000	15.13935	9.00	61.00
RANKS	20	3.0000	1.45095	1.00	5.00

Kruskal-Wallis Test

Ranks			
	RANKS	N	Mean Rank
AIE&AP	1.00	4	6.63
	2.00	4	16.50
	3.00	4	16.50
	4.00	4	10.38
	5.00	4	2.50
	Total		20

Test Statistics ^{a,b}	
	AIE&AP
Chi-Square	17.300
df	4
Asymp. Sig.	.002

a. Kruskal Wallis Test

b. Grouping Variable: RANKS

SPSS Output for Hypothesis Two

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
AIE	20	37.1500	17.16568	9.00	69.00
RANKS	20	3.0000	1.45095	1.00	5.00

Kruskal-Wallis Test

Ranks			
	RANKS	N	Mean Rank
AIE&AIS	1.00	4	7.50
	2.00	4	17.63
	3.00	4	15.38
	4.00	4	9.50
	5.00	4	2.50
	Total		20

Test Statistics ^{a,b}	
	AIE&AIS
Chi-Square	17.001
df	4
Asymp. Sig.	.002

a. Kruskal Wallis Test

b. Grouping Variable: RANKS

Discussion: From the kruskawalis test results above, hypotheis one and two had a 0.002 output respectively. This implies that e-commerce has significantly effected a change in the accounting practices discussed (i.e auditing practices and accounting information system).

CONCLUSION AND RECOMMENDATIONS

E-commerce though relatively new in Nigeria generally and Imo state in particular has introduced a new business approach that tend to change the activity chain and processes of doing business. However, this study discovered that the extent of its practice in Imo state is still low but with increased competition, organizations are gradually turning to it as a cost saving measure. The paper therefore concludes that e-commerce has significantly changed the way the auditing of accounts and accounting information are sourced, stored and managed. The paper therefore believes that for businesses in Imo state to fully appreciate and enjoy the accounting benefits of e-commerce, the following are recommended;

- 1) Organizations should train and retrain their accounting officers on the skills required for effective e-commerce practice.
- 2) Government should provide or domesticate and implement cybercrime laws that can protect organizations and individuals. This will help boost the confidence of accounting officers in the use of e-commerce facility.
- 3) There is need to ensure the integrity of the processes of e-commerce, this is to ensure that information from it used in preparing accounts of organizations meets the accuracy and completeness criteria.

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