



ASSESSMENT OF E-COMMERCE USAGE FOR EFFECTIVE SERVICE DELIVERY IN NIGERIA BANKING SECTOR

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Abstract:

This study assessed the extent of e-commerce usage for effective service delivery in Nigeria banking sector. Four research questions and four null hypotheses guided the study. Descriptive survey research design was adopted for the study. The study covered 64 microfinance banks in Oyo State, South-West, Nigeria. The population was made up of 1275 staffs from the 64 microfinance banks. The sample size consisted of 28 microfinance banks of which 280 staffs were purposively selected. A 28-item structured questionnaire was used as instrument for data collection. Four experts carried out the face and content validity of the instrument. The reliability was determined using Cronbach's Alpha statistic Reliability Coefficient and reliability coefficient of 0.86 was obtained. The arithmetic mean and standard deviation were used to analyze data, answer research questions and determine the homogeneity or otherwise of the respondents' means while ANOVA was used to test the null hypotheses at 0.05 level of significance. The findings revealed that microfinance banks in Oyo State have not use electronic payment cards as e-commerce delivery channels. They also use Internet marketing for product advertising and loan availability display; electronic fund transfer but have not been using it for online customers' enlightenment, online promotion of services and sending statements of account. It was recommended among other things, that management of microfinance banks should adopt most of the e-commerce delivery channel used by commercial banks in order to boost their standard of operation within the banking sector also, microfinance bank management should engage, encourage and

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sponsor their staff for re-training programmes to update their ICT knowledge, skills and competencies to effectively use the resources for quality customer service delivery.

Keywords: usage, e-commerce, banking sector

1. Introduction

Information and Communication Technologies (ICTs) have become key tools and have a revolutionary impact on how people see and live in the world. The place of ICTs in commercial activities and the world in general cannot be ignored. Modern day businesses are conducted and facilitated through the use of telephones, fax machines and computer communication networks through the internet. This phenomenon has given birth to the contemporary e-commerce, e-government, e-medicine, e-banking and e-education among others. Bandele (2006) summed up that ICT is a revolution that involves the use of computers, internet and other telecommunication technology in every aspect of human endeavour. He posited that ICT is simply about sharing and having access to data with ease. It is regarded as the super highway through which information is transmitted and shared by people all over the world. Ozoji as cited in (Jimoh, 2007) perceived ICT as the handling and processing of information (texts, images, graphs, instruction) for use, by means of electronic and communication devices such as computers, cameras, telephone. Ofodu (2007) also refers to ICT as electronic or computerized devices, assisted by human and interactive materials that can be used for a wide range of transactions as well as for personal use. From these views, ICT could therefore be seen as processing and sharing of information using all kinds of electronic device, an umbrella that includes all technologies for the manipulation and communication of information. Watson (2001) observed that, ICTs has revolutionized the way people work today and are now transforming the commercial system. The emergence of ICTs (especially the internet) has revolutionized the mode of conducting business activities across globe. It has change the way businesses operate in this technology era which invariably change business structure, increases competition, create competitive advantages and modified business operations (Ongori, 2009). ICTs have brought about various platforms which serve as veritable tools for improving business growth and economic development. These platforms which serve as new ways of conducting business include e-commerce.

E-commerce is the use of the internet and other electronic means for marketing, identification, payment and exchange of goods and services. According to Harrison (2012) e-commerce is the process of buying, selling, transferring, marketing or exchange of product and services or information via electronic means. It is the sharing of business

information, maintaining relationships and conducting other business transactions by means of telecommunication network (Zwass, 2003). In the words of Laudon and Laudon (2007) e-commerce is the process of buying and selling of goods and services electronically involving transaction using the internet, network and other digital technologies. It is the technology-mediated exchange between individuals and organizations as well as the electronically based intra or inter organizational activities that facilitates such exchanges (Rayport and Jaworski, 2003). E-commerce exposes business organizations to global market which enable business to expand their reach beyond the country of location (Payne, 2003). E-commerce is largely visible in the banking industry in form of electronic banking because latest developments in E-commerce are witnessed in electronic banking services (Oloyede, Azeez and Aluko, 2015). It is widely believed that e-commerce as a broad concept contributes greatly to the rapid development of banking sector because it improves flow of information and increases coordination of actions among banks and customers. However, e-banking is a subset of e-commerce which has been widely adopted in the Nigeria banking sector. Various services of e-commerce can be achieved through e-banking delivery channels to include online banking, internet marketing and advertising, electronic fund transfer, electronic payment card, automated teller machine, cell phone or mobile banking and online customer contact or communication among others.

Microfinance banks are those banks licensed to carry on the business of providing financial services such as saving and deposits, loans, domestic fund transfer, other financial and non-financial service to microfinance clients (Central Bank of Nigeria, 2012). Microfinance banks are those banks licensed by Central Bank of Nigeria to render microfinance services to small enterprises of individuals. According to CBN (2012), the target clients of microfinance services are owners of small enterprises, economically active low-income earners, low-income households, un-banked and underserved people in particular vulnerable groups such as women, physically challenged, youths, micro entrepreneurs, informal sector operators and subsistence farmers in urban and rural areas. Majorly, microfinance banks in Nigeria are owned by either individual, group of individuals, community development association, private corporate entities or foreign investors. The potential of microfinance in poverty reduction, economic growth and development has put the issue of microfinance delivery in the mind of stakeholders including the government. The important roles played by microfinance institutions has put microfinance banks among the top agenda of the government and other stakeholders leading them to taken active measures to ensure an efficient and effective microfinance delivery across the country. According to Soludo (2010), these measures on the part of government include increasing the financial base of microfinance banks; formulating strong policy for the operation of

microfinance banks and categorizing and expanding them beyond the unit community banks of those days. Meanwhile, stakeholders are concerned with activities such as implementation of guidelines introduced by the apex bank, adopting banking innovations most especially in the area of ICT which has brought the utilization of e-commerce into banking sector. While some banks embraced some of the e-commerce delivery channels as innovating way of doing their business some failed to do so especially the microfinance banks.

The implementation of the microfinance banks policy and their operation has not address the current realities development and innovation in the sub-sector (CBN, 2012). This necessitated the need for the review of previous regulatory and supervisory guideline to address those issues that may hinder microfinance institutions from operating in line with current innovations in the banking sector. For instance, the amended microfinance banks regulatory and supervisory guideline issued by Central Bank of Nigeria in 2012 addressed issues such as recapitalization, categorization, director's specification, product and services and statement of permissive activities. It is believed that a robust capital base as contained in the guideline will address some of the challenges such as connectivity power failure, and technical know-how. Also the quality of management of microfinance banks has been strengthened in the guideline to ensure an effective management board for their smooth running. It is believed that the current guidelines ought to have raised the standard of microfinance banks in their mode of operation especially in the adoption of e-commerce delivery channels to better their business and increase competitive advantage in the banking sector. Base on this, there is need for proper examination on the usage of e-commerce as a delivery channels by banking sector in Oyo state, Nigeria.

2. Literature Review

The potential of microfinance in poverty reduction, economic growth and development coupled with the emergence of fast growing Microfinance Institutions (MFIs), has effectively put the issue of microfinance on the potential agenda of most developing countries including Nigeria. A microfinance bank (MFB), refers to any company licensed by the CBN to carry on the business of providing financial services such as savings and deposits, loans, domestic fund transfer, other financial and non-financial services to microfinance clients (CBN, 2011). A microfinance bank target client shall include the economically active low-income earners, low income households, the un-banked and under-served people in particular, vulnerable groups such as women, physically challenged, youths, micro-entrepreneurs, information sector operators, subsistence farmers in urban and rural areas. The provision of financial services by

microfinance Banks is also targeted as operators of microenterprises. A microenterprise is a business that operates with very small start-up capital and its management is often built around the sole owner or micro-enterprises typically include primary production and crafts, value added processing, distributive trades and diverse services. Microfinance Bank loan is granted to the operators of micro-enterprises, such as peasant farmers, artisans, fishermen, youths, women, senior citizens and non-salaried workers in the formal and informal sectors. The loans are usually unsecured, but typically granted on the basis of the applicant's character and the combined cash flow of the business and household. The tenure of microfinance loans is usually within 180 days (6months). Tenures longer than six (6) months would be treated as special cases.

3. Types of Microfinance Banks in Nigeria

There are three (3) types of Microfinance Banks (CBN, 2011);

1. Unit microfinance bank: A unit Microfinance Bank is authorized to operate in one location. It shall be required to have a minimum paid-up capital of N20 million (twenty million naira) and is prohibited from having branches and/or cash centre.
2. State microfinance bank: A State Microfinance Bank is authorized to operate in one state or the Federal Capital Territory (FCT). It shall be required to have a minimum paid up capital of N100 million (one hundred million naira) and is allowed to open branches within the same state or the FCT, subject to prior written approval of the CBN for each new branch or cash centre.
3. National microfinance bank: A National Microfinance Bank is authorized to operate in more than one state including the FCT. It shall be required to have a minimum paid-up capital of N2 billion (two billion naira), and is allowed to open branches in all states of the federation and the FCT, subject to prior written approval of the CBN for each new branch or cash centre.

3.1 Functions of Microfinance Banks

According to CBN (2014), Microfinance Banks are allowed to engage in the provision of the following services to its clients;

1. Acceptance of various types of deposits including savings, time, target and demand from individuals, groups and associations; except public sector deposits;
2. Provision of credit to its customers, including formal and informal self-help groups, individuals and associations;

3. Promotion and monitoring of loan usage among its customers by providing ancillary capacity building in areas such as record keeping and small business management;
4. Assurance of redeemable debentures to interested parties to raise funds from members of the public with the prior approval of the CBN;
5. Collection of money or proceeds of banking instruments on behalf of its customers including clearing of cheques through correspondent banks;
6. Act as agent for the provision of mobile banking and micro insurance services to its clients
7. Provision of payment services such as salary, gratuity and pension for employees of the various tiers of government;
8. Provision of loan disbursement services for the delivery of the credit programme of government, agencies, groups and individual for poverty alleviation on non-recourse basis;
9. Provision of ancillary banking services to its customers such as domestic remittance of funds and safe custody;
10. Maintenance and operation of various types of account with other banks in Nigeria;
11. Investment of its surplus funds in suitable instruments including placing such funds with correspondent banks and in Treasury Bills;
12. Pay and receive interests as may be agreed upon between the MFB and its clients in accordance with existing guidelines;
13. Operation of micro leasing facilities, microfinance related hire purchase and arrangement of consortium lending as well as supervision of credit schemes to ensure access of microfinance customers to inputs for their economic activities;
14. Receiving of refinancing or other funds from CBN and other sources, private or public, on terms mutually acceptable to both the provider of the funds and the recipient MFBs;
15. Provision of microfinance related guarantees for its customers to enable them have better access to credit and other resources-;
16. Buying, selling and supplying industrial and agricultural inputs, livestock, machinery and industrial raw materials to low-income persons on credit and to act as agent for any association for the sale of such goods or livestock;
17. Investment in shares or equity of a body corporate, the objective of which is to provide microfinance services to low-income persons;
18. Investment in cottage industries and income generating projects for low-income persons as may be prescribed by the CBN;

19. Provision of services and facilities to customers to hedge various risks relating to microfinance activities;
20. Provision of professional advice to low income persons regarding investment in small businesses; rendering managerial, marketing, technical and administrative advice to customers and assisting them in obtaining services in such fields;
21. Mobilize and provide financial and technical assistance and training to microenterprises;
22. Provision of loans to microfinance clients for home improvement, housing microfinance and consumer credits; and
23. Performance of non-banking functions and relate to microfinance business development services such as co-operatives and group formation activities, rural industrialization and other support services needed by micro enterprises.

3.2 Concepts of E-Commerce

In this technological era, e-commerce is pertinent in the technologically advanced world of business. It has created electronic markets and provided opportunities for business to reach consumers in a very direct way (Ayo, Adewoye and Oni, 2011). This is due to advancement in information and communication technology (ICT). ICT officers have enormous opportunities such as storing, processing, retrieving, disseminating and sharing of information (Apulu and Latham, 2009). The continued existence of business in the 21st century is engendered by information and communication technology. The adoption of ICT would change the way businesses operate in this era of globalization by changing business structures, increasing competition, creating competitive advantage and changing business operations (Ongori, 2009). E-commerce is the use of the internet for marketing, identification, payment and delivery of goods and services (Ayo et al., 2011). The upsurge in the use of internet and telecommunication facilities in the last decade considerably increased the use of e-commerce in Nigeria. The reason for this was a result of the establishment of private telecommunication companies like MTN, Glo, and Multilinks among others (OLoyede, Azeez and Aluko, 2014). E-commerce revolutionized the Nigerian economy by paving the way for firms to satisfy the public and creating a path for the nation to compete globally. In Nigeria, e-commerce is largely visible in the banking industry in form of electronic banking. Latest developments in e-commerce are first witnessed in electronic banking services. This has created the impression that e-commerce can be interchangeably called "e-banking"; however, e-banking is just an aspect of e-commerce which has been widely of banking sector because it improves flow of information and increased the coordination of action.

E-commerce in Nigeria is steadily growing as a result of the vast improvement in telecommunication services. The telecommunication industry experienced exponential

growth in the past few years with over 25million telephone line subscribers. The widespread acceptance of telecommunication services was motivated by the individual need to survive in this information age. The advent of the Global system for mobile communication (GSM) and increased use of the internet paved way for the continuous acceptance and appreciation of the variety of opportunities that exist in e-commerce is the internet and information and communication technology (ICT). E-commerce has been very influential to many countries, as it adjudged as one of the main forces in their economic growth and job creation (Kalanje, 2002). Laudon and Laudon (2007) defines e-commerce as the process of buying and selling goods and services electronically involving transactions using the internet, network, and other digital technologies. Rayport and Jaworski (2003) opined that e-commerce can be defined as technology-mediated exchanges between parties (Individuals or organizations) as well as the electronically based intra or inter organizational activities that facilities such exchanges. E-commerce is simply perceived to be the use of electronic devices to trade in goods and services over the internet and telecommunication networks. E-commerce existed in various forms since the birth of internet in the late 1960s, but since early 1990s, companies could perform e-commerce activity better, faster and at a lesser cost because of the new and constantly evolving technologies. E-commerce generally exists in two form vis-à-vis Business-to Business (B2B) and Business-to Customer (B2C). The Business-to-Business form entails electronic transaction between two organizations. B2B improves communication among organization, reduce transaction cost and increase the efficiency of business processes. The Business-to-customer (B2C) involves business transactions between the organization and consumer of its goods and services over electronic means. B2C means sales targeted at individual customers. It promotes a closer interaction of the business firm with the public. Over the years, e-commerce has caused a shift from the orthodox way of doing business to the modern way. This was enabled because of the features e-commerce possesses. According to Laudon and Laudon (2007), the unique features of e-commerce technology includes: Ubiquity, Global reach, Universal standards, Richness, Interactivity, Information density, personalization/customization.

3.3 Related Empirical Studies

Harrison (2012) also conducted a study on the adoption of e-commerce in the Nigeria banking industry with emphasis on the problems and prospects of e-commerce. The findings revealed that banks face some barriers/challenges when they adopt e-commerce. The study recommended among other things that banks should accept e-commerce as a strategy to improve and develop the quality of products and services offered to customers. This study is similar to the present one in the area of adoption of

e-commerce in the banking industry but differ in scope because the present work focused on the usage of e-commerce.

Johnson (2005) considered an overview of the electronic payment (e-payment) system in Nigeria: strategies and technical issues. The study considered the different e-payment systems.

Ayo, Adewoye and Oni (2010) reviewed the State of e-banking implantation and evaluated the influence of trust on adoption of e-payment in Nigeria. The study revealed that perceived ease of use and perceived usefulness not only precedes the acceptance of e-banking, study in that it examine low the implementation of e-banking has influence the adopted e-payment in Nigeria but differ in scope because it only focused on adoption of e-payment as a component of e-commerce and e-banking.

3.4 Problem of the study

Commercial and banking activities from inception were performed traditionally with the use of subsidiary and principal books of account as well as physical efforts. This system limited the quality and quantity of transactions carried out by business and banking institutions. Prominent among the problems encountered with this system include; too much of paper work, difficulty branches or location, too frequent human errors as well as poor crowd and database management among others. These problems necessitated the quest for an innovative and effective means of delivering business transactions and banking services through the use of modern technology. The emergences of ICTs have created a platform for the use of e-commerce as important instruments for improving business strategies and strong catalysts for business growth and development. E-commerce has created electronic markets and provided opportunities for business (Especially banks) to reach customers in a very direct way.

Despite the benefit of e-commerce delivery channels, as observed by the researcher, some banks especially microfinance might have not fully adopt and utilize some of the available channels in the course of their operations in Nigeria. Their inability to adopt and utilize some of these delivery channels could be attributed to poor management, technical knowhow, lack of adequate banking infrastructures, poor formulation and decision making policies and financial strength for policy implementation to mention but a few. Even some of these microfinance banks might lack organizational connectivity which could make some services like on-line banking, electronic fund transfer, internet marketing and the use of automated teller machine inefficient and infective. It is pertinent to note that, inability to adopt and utilize e-commerce delivery channels could be traced to the caliber of customers available to this type of bank. Some of their customers might be neither computer literate nor ICT inclined. The lack of required knowledge makes it difficult for them to avail themselves

of the opportunities and benefits of using e-commerce. Studies have been conducted on the adopted of e-commerce and e-banking by banks in Nigeria. Many of these research studies examined the extent of utilization of e-banking delivery channels by commercial banks (Anyasi and Otubu, 2009; Efughi, 2010; Ayo, Adewole and Oni 2011; Harrison, 2012; Oloyede, Azeez and Aluko, 2015). None of the studies to the knowledge of this study investigated the extent of usage of e-commerce by microfinance banks in any part of Nigeria. This necessitated the need for a research study to assess the extent of usage of e-commerce by microfinance banks in Nigeria.

3.5 Purpose of the study

The purpose of this study is to assess the extent of usage of e-commerce by microfinance banks in Oyo State, South -West Nigeria. Specially, the study sought to determine the extent to which;

1. usage of internet marketing by microfinance banks in Oyo state;
2. usage of Automated Teller Machine by microfinance banks in Oyo state;
3. usage of Electronic payment card by microfinance banks in Oyo state;
4. usage of on-line customer communication by microfinance banks in Oyo State.

3.6 Research Questions

The following questions guided the study;

1. To what extent do microfinance banks in Oyo State use Internet marketing in their banking activities?
2. To what extent do microfinance banks in Oyo State use automated teller machine in their banking activities?
3. To what extent do microfinance banks in Oyo State use electronic payment card in their banking activities?
4. To what extent do microfinance banks in Oyo State use online-communication in their banking activities?

3.7 Hypotheses

The following null hypotheses were tested at 0.05 level of significance;

1. There is no significant difference in the mean responses of unit and state microfinance banks employees on the usage of Internet marketing
2. There is no significant difference in the mean responses of microfinance banks employees on the usage of automated teller machine base on location of their banks

3. There is no significant difference in the mean responses of microfinance banks employees on the usage of electronic payment card base on location of their banks
4. There is significant difference in the mean responses of microfinance banks employees on the usage of online customer's communication base on their years of experience.

4. Method

The study design adopted for this study was descriptive survey because the researcher collected information on the extent of e-commerce usage from bank employees in this area without manipulating any variable. The study covered 64 microfinance banks in Oyo State, South-West, Nigeria. The population was made up of 775 staffs from the 64 microfinance banks. The sample size consisted of 28 microfinance banks of which 280 staffs were purposively selected. Data were collected with structured questionnaire. Four experts carried out the face and content validity of the instrument. The reliability was determined by administering the questionnaire on forty staff of microfinance banks in Osun State who were not part of the study population. Data collected were analyzed using Cronbach's Alpha statistic Reliability Coefficient and reliability coefficient of 0.86 was obtained. The researcher personally administered the instrument to the respondents with the help of three research assistants. The arithmetic mean and standard deviation were used to analyze data, answer research questions and determine the homogeneity or otherwise of the respondents' means. ANOVA was used to test the null hypotheses at 0.05 level of significance.

5. Results

The results of the study from the four research questions answered and test of the four null hypotheses are hereby presented below:

Research Question 1

To what extent do microfinance banks in Oyo state use Internet marketing in their banking activities?

Table 1: Descriptive statistics on the usage of Internet marketing by microfinance banks

S/N	Statements	\bar{X}	SD	Remark
1	Online product advertising	2.58	0.84	Agreed
2	Internet display of services	2.41	0.91	Disagreed
3	Online awareness of product or services	2.67	0.77	Agreed
4	Online customers enlightenment	1.86	0.55	Disagreed
5	Online promotion of services	1.82	0.58	Disagreed
6	Internet for loan availability	3.09	0.60	Agreed
7	Internet for financial report display	2.46	0.72	Agreed

Data on Table 1 above showed that items 1, 3 and 6 had their mean scores between 2.58 and 3.09 which are above the cut-off point of 2.50. This means that microfinance bank use Internet marketing in the area of online product advertising, awareness of product and loan availability display. Also, items 2, 4, 5 and 7 showed mean scores of 2.41, 1.86, 1.82 and 2.46 which is below the cut-off point of 2.50. This means that Internet marketing such as display of services. Online customers' enlightenment, online promotion of service and display of financial report has not been used by microfinance banks in Oyo state.

Research Question 2

To what extent do microfinance banks in Oyo State use automated teller machine in their banking activities?

Table 2: Descriptive statistics on the utilization of automated teller machine by microfinance banks

S/N	Statements	\bar{X}	SD	Remark
The use of ATM				
8	By your bank branches in the state	2.77	1.35	Agreed
9	By customers	2.59	1.27	Agreed
10	For cash withdrawal	2.90	1.29	Agreed
11	For making deposit	2.95	1.37	Agreed
12	Transfer of funds within Nigeria	3.03	1.27	Agreed
13	For opening of new accounts	2.62	1.23	Agreed
14	For making enquires	2.56	0.78	Agreed
15	For buying airtime	2.79	1.13	Agreed

Data in Table 2 showed that all the items on the usage of Automated teller machine by microfinance Banks had their mean score between 2.59 and 3.03 which are above the mean cut-off point of 2.50. This means that microfinance banks in Oyo State use Automated Teller Machine as e-commerce delivery channels in their banking activities.

Research Question 3

To what extent do microfinance banks in Oyo State use electronic payment card in their banking activities.

Table 3: Descriptive statistics on the usage of electronic payment card by microfinance banks

S/N	Statements	\bar{X}	SD	Remark
	The use of ATM			
16	Use of credit cards	1.43	1.05	Disagreed
17	Use of debits cards	1.66	1.04	Disagreed
18	Use of single purpose cards	2.15	0.88	Disagreed
19	Card to make purchase online	1.43	1.05	Disagreed
20	Make purchase through phones	1.19	0.66	Disagreed
21	Error adjustment	1.22	0.42	Disagreed
22	Card for Credit facilities	1.59	0.49	Disagreed
23	Use of e-purse and micro	1.14	0.46	Disagreed

Data in Table 3 showed that all the items on the use of electronic payment card by microfinance banks had their mean score between 1.14 and 2.15 which are below the mean cut-off point of 2.50. This means that microfinance banks in Oyo State has not utilized electronic payment card as e-commerce delivery channels in their banking activities.

Research question 4

To what extent do microfinance banks in Oyo State uses online communication in their service delivery.

Table 4: Descriptive statistics on the usage of online communication by microfinance Banks

S/ S/N	Statements	\bar{X}	SD	Remark
	The use of ATM			
24	E-mail for balance notification	2.43	0.79	Disagreed
25	E-mail for withdrawal alert	2.38	0.71	Disagreed
26	Sending statement of account though e-mail	2.52	0.85	Agreed
27	Sending general banking information via e-mail	3.77	0.68	Agreed
28	Giving information through social media	2.64	0.78	Agreed

Data in Table 4 showed that only items 24 and 25 had mean scores of 2.43 and 2.38 which are below the mean cut-off point of 2.50. Also the result showed that items 26, 27 and 28 had mean scores between 2.52, 3.77 and 2.64 which are the mean cut-off point of 2.05. This means that online communication channel is not used in the aspect of e-mail

for balance notification and withdrawal alert but used in the aspect of sending statement of account, general information and giving information on social media.

Hypothesis 1

There is no significant different in the mean ratings of bank employees of unit and state microfinance banks employees on the usage of Internet marketing.

Table 5: Analysis of variance of unit and state Microfinance banks staff on the usage of Internet marketing

	Sum of Square	Df	Mean Square	F	Sig.
Between Groups	44.80	1	44.80	6.45	0.01
Within Groups	1929.99	278	6.94		
Total	1974.79	279			

Data in Table 5 showed F value of 6.45 and a significance value of 0.01. The calculated significance value is less than the alpha significance of 0.05 at which it is being tested. This means that there is significant difference in the mean ratings on the extent of usage of Internet marketing by unit and state microfinance banks employees in Oyo State. The null hypothesis was, therefore, rejected.

Hypothesis 2

There is no significant difference in the mean responses of microfinance banks employees on the usage of automated teller machine.

Table 6: Analysis of Variance on the usage of automated teller machine by microfinance bank employees based on status

	Sum of Square	Df	Mean Square	F	Sig.
Between Groups	52.91	1	26.46	0.34	0.71
Within Groups	21713.65	277	78.39		
Total	21766.57	279			

Data in Table 6 showed F value of 0.34 and a significance value of 0.71. The calculated significance value is greater than the alpha significance of 0.05 at which it is being tested. This means that respondents did not differ significantly in their mean ratings on the usage of automated teller machine by microfinance bank employees based on their status in the bank. The hypothesis was upheld.

Hypothesis 3

Respondents mean ratings on the extent of usage of electronic payment card based on their status in the bank.

Table 7: Analysis of variance based on the status of microfinance banks employees' on the usage of electronic payment card

	Sum of Square	Df	Mean Square	F	Sig.
Between Groups	0.75	2	0.38	0.03	0.98
Within Groups	4120.83	277	14.88		
Total	4121.59	279			

Data Table 7 showed F value of 0.03 and a significance value of 0.98. The calculated significance value is greater than the alpha significance of 0.05 at which it is being tested. This means that respondents did not differ in their mean ratings on the usage of electronic payment card by microfinance bank employees based on their status in the banks. The hypothesis was upheld.

Hypothesis 4

There is no significant difference in the mean ratings of unit and state microfinance banks employees on the usage of online customers' communication.

Table 8: Analysis of variance on the usage of online customers' communication by unit and state microfinance bank employees

	Sum of Square	Df	Mean Square	F	Sig.
Between Groups	0.28	2	0.14	0.03	0.97
Within Groups	1213.54	277	4.38		
Total	1213.83	279			

Data in Table 8 showed F value of 0.03 and a significance value of 0.97. The calculated significance value is greater than the alpha significance of 0.05 at which is being tested. This means that respondents did not differ in their mean ratings on the usage of online customers' communication by unit and state microfinance bank staffs in Oyo State. The hypothesis was upheld.

6. Discussion

The outcome of this study revealed that microfinance banks used Internet marketing for online product advertisement, awareness of products and services and to display loan

availability for customers. Based on the outcome of the study it was clear that, microfinance banks could not use Internet marketing to display services to customers, outline customers enlightened and outline promotion of service as well as display of financial reports. This corroborates the work of Harrison (2012) whose study revealed that Nigerian banks faces a lot of challenges in adopting e-commerce in order to improve and develop quality of products and services offered to customers. The study further revealed that microfinance banks in Oyo state used Automated Teller Machine in their banking activities. The study also revealed that Microfinance Banks in Oyo State has not utilized electronic payment card as e-commerce delivery channels in their operation in the state. These results are closely linked with the work of Efughi (2010) on investigation of the extent of utilization of e-banking delivery channel by commercial banks operating in Abia State, where it was found that ATM, online banking, have been utilized while electronic fund transfer, payment card and mobile banking have not been fully utilized.

In addition, the study showed that online communication channel is not utilized in the aspect of e-mail for balance notification and withdrawal alert but utilized in the aspect of sending statement of account, sending general information and giving information on social media. This is at variance with the work of Agboola, (2005) who carried out a study on evaluation of recent experiences of ICTs in banking operations in Nigeria. The study reported that adoption of ICTs by banks have improved customer services, facilitated accurate records, provided for home and office banking services, ensure convenience business hours, prompt and fair attention, and enhances faster services.

The test result also revealed that the opinion of microfinance banks employees irrespective of status or category of bank they belong were not significantly differ in three hypotheses. Only hypothesis one indicated a significant difference in the opinion of state and unit Microfinance banks employees on the use of internet marketing. The findings of hypothesis two revealed that there is no significant difference in the mean responses of Microfinance banks employees on the usage of automated teller machine base on their status in the banks. Hypothesis three further revealed that there is no significant difference in the mean responses of Microfinance banks employees on the adoption of electronic payment card base on their status in the banks. Finally the study revealed that there is no significant difference in the mean responses of unit and state microfinance banks employees on the adoption of online customers' communication.

7. Conclusion

Based on the findings of the study, it was concluded that microfinance banks in Nigeria utilize some e-commerce delivery channels such as Internet marketing for online product advertisement, awareness of product and services and to display loan availability for customers; Automated Teller Machine in their operation. They have not utilized other e-commerce delivery channels due to financial strength, caliber of customers and level of computer literacy, poor management, lack of technical know-how, lack of adequate banking infrastructures, poor policies formulation and decision making process. The researcher is of the opinion that the market size and level of operation of microfinance banks will be enhanced if some of the e-commerce delivery channels indicated in the study are judiciously utilized. It will also boost customers' patronage assuring them of quality services.

8. Recommendations

Based on the findings and conclusion of the study, it was recommended that;

1. Management of microfinance banks should adopt most of the e-commerce delivery channel used by commercial banks in order to boost their standard of operation within the banking sector.
2. Management of microfinance banks should improve network connectivity for a hitch-free transaction via electronic means.
3. Microfinance bank management should engage, encourage and sponsor their staff for re-training programmes to update their ICT knowledge, skills and competencies to effectively utilize the resources for quality customer services.
4. Central Bank of Nigeria should make it mandatory for all microfinance banks in Nigeria to utilize some common e-commerce delivery channel such as ATM, Mobile banking, internet banking and online communication channel to enable them compete with other banks and also boost their patronage and reduce the congestions at the commercial banks
5. Government through the CBN should also strengthen the regulatory framework of microfinance banks to ensure security of transactions that will take place via e-commerce platform.

References

1. Ahmad, B. D. (2005). The impact of E-banking on Customer Satisfactory in Nigeria, MPRA Paper No.23200, retrieved online at <http://mpra.ub.uni-muenchen.de/23200/> (accessed on 5 February, 2012)
2. Anyasi, F. I and Otubu, P. A. (2009). "Mobile Phone Technology in Banking System: "It's Economic Effect", *Research Journal of Information Technology*, 1 (1), 1-5.
3. Apulu, I. and Latham, A. (2009). "Information and Communication Technology Adoption: challenges for Nigerian SMEs" *TMC Academic Journal*, 4(2), 64-80.
4. Auta, M. E (2010). "E-banking in Development Economy: Empirical Evidence from Nigeria". *Journal of Applied Quantitative Methods* Vol. 5(2), 212-222.
5. Ayo, C. K., Adewoye, J. O, and Oni A. A. (2011). "The Business-to-Consumer e-commerce in Nigeria: Prospects and Challenges", *African Journal of Business Management*, Vol.5 (13), 5109-5117.
6. Ayo, C. K. Adewoye, J. O., and Oni, A. A. (2010). "The state of e-banking implementation in Nigeria: A Post-Consolidation Review". *Journal of Emergency Trends in Economics and Management Sciences*, 1 (1), 37-45.
7. Basel Committee report on Banking Supervision (1998). "Risk Management for Electronic Banking and Electronic Money Activities", Bank of International Settlements, Switzerland.
8. Baten, M.A and Kamil, A.A. (2010). "E-Banking of Economical Prospects in Bangedesh" *Journal of internet Banking and Commerce*, Vol.15 (2), 1-10.
9. Burr, W. (1996). "WieInformationstechnik Die Banlorganisation VerändernKonte", *Banki und Banks Market*, Vol.11, 28-31.
10. Central Bank of Nigeria (2012). Revised regulatory and supervisory guidelines for Microfinance Banks in Nigeria.
11. Charity-Commission (2003), "Guidelines on Electronic banking", accessed on 5th February, 2012 from <http://www.charity-commission.gov.uk>
12. Chiemeké, S.C., Ewuekpae, A.E., and Chete, F.O. (2006), "The Adoption of Internet Banking in Nigeria: An Empirical Investigation", *Journal of internet Banking and Commerce* Vol. 11,3.
13. Cloete, E. (2001), "SMEs in South Africa: Acceptance and Adoption of e-commerce Department of Information Systems, University of Cape Town.
14. Gupta, P. K. (2008). Internet banking in India: Consumer concern and Banking strategies, *Global Journal of Business Research*, Vol 2(1) 43-51.

15. Harrison, U. U. (2012). Adoption of E-commerce in the Nigeria banking Industry problems and prospect. Unpublished M.Sc. thesis, Nnamdi Azikwe University, Awka.
16. Information technology Association of America (2003). Creating Business Value through Information Technology Workforce Survey presented at the National IT workforce convocation. U.S.A.
17. Joze, K., Julie F., and Angela, S. (2002), "Electronic Commerce Benefit, Challenges and success Factors in the Australian Banking and Finance Industry", Retrieved online on 5th February, 2012.
18. Kaliski, B.S. (2001). Encyclopedia of Business and Finance. Macmillan: U.S.A
19. Kamokadi, N. and Khan, B.A. (2008). "Looking Beyond Technology: A study of E-banking channel acceptance by Indian Customers", *International Journal of Electronic Banking* 1 (1), 73-94
20. Kulkarni, R.V. (2000). Changing face of Banking to E-banking. IBA bulleting Vol 22.
21. Laudon, K and Laudon, J. (2007). "Management Information System: Managing the Digital Firm", 10th Edition, Pearson, Prentice Hall.
22. Lee, C.S (2001). "An analytical framework for evaluating e-commerce Business Models and strategies", *Internet Research: Electronic Networking Applications and Policy*, pp.349-359.
23. Madueme, I.S. (2010). "Evaluation of the Impact of Information Communication Technology an banking Efficiency Using the Transcendental Logarithmic production Function and Camel Rating" *International Journal Of Engineering Science and Technology*, Vol.2 (1), 1-6.
24. Ojeka,S.A. and Ikpefan, O.A. (2011). "Electronical Commerce, Automation and Online Banking in Nigeria: Challenges and Benefits", *School of Doctoral Studies (European Union) Journal*, 2011, 39-50.
25. Oloyede, J.A., Azeez, B.A and Aluko, A.O (2015). E-commerce and E-banking in Nigeria. *The International journal of management*.
26. Oluwagbemi, O., Abah, J. and Achimugu, P. (2011). "The Impact of information Technology in Nigeria's Banking Industry", *Journal of Computer Science and Engineering*, Vol. 7 (2), 63-67
27. Ongori, H. (2009). "Role of Information Communication Technologies Adoption in SMEs: Evidence from Botswana, *Research Journal of information Technology*, 1(2), 79-85
28. Pohjola, M. (2002). "The New Economy: Facts, Impacts and Policies", *Information Economics and Policy*, 14, 133-144

29. Rayport, J. and Jaworski, B. (2003). *Introduction of E-commerce*, 2nd Edition. McGraw-Hill: New York.
30. Salehi, M. and Alipour, M. (2010), "E-Banking in Emerging Economy: Empirical Evidence of Iran" *International Journal of Economics and Finance*, Vol.2 (1), 201-209.
31. Van Toorn, C., Bunker, D., Yee, K. and Smith, S. (2006). "The Barriers to the Adoption of E-commerce by Micro Business, Small Businesses and Medium Enterprises (online)
32. Zwass, V. (2003). *Electronic Commerce and Organizational Innovation Prospects and Opportunities*. *International Journal of electronic commerce archive*, Vol.7, (3)3, 7-37

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