

The Impact of Information and Communication Technology in the Growth of E-Commerce in Nigeria: Challenges and Prospects

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Abstract- With the rapid growth of Information and Communication Technology, a growing number of businesses in Nigeria are now applying e – commerce to their business in response to customers demand for new innovations. The need to meet the demand of the growing customers has lead most businesses in the country adopting e – commerce which has significantly impacted positively on the Nigerian economy. E-Commerce has experienced significant development in the country as a result of increased availability of broadband access and low-priced data bundles offered by mobile operators in the country. The coming of new technologies has further decrease the widening gap between the retailer and the customer and in few years to come e-shopping will eventually take the place of the traditional shopping. With an estimated population of about one hundred and seventy million, Nigeria is about to become the biggest market for e-commerce in the African continent. This paper explores the impact of Information Technology and its application in the rapid growth of e-commerce in the country. It also discusses the impact and consequences of marketing goods and services online.

Index Terms- e-Commerce, Internet, Technology, Telecommunication

I. INTRODUCTION

The purpose of this paper is to assess the impact of ICT in the growth of e-commerce in Nigeria. ICT is more and more spreading across all individuals, government, organizations, and the society on daily basis in the developing economies. In economics much attention has been paid to the specific character of ICT as “general purpose technology” that is spread and used across all sectors of the economy (Bresnahan et al, 1995).

ICT is simply the blending of computing and telecommunication technologies for easy acquisition, storage and distribution of information. According to (Boritz, 2000), ICT is the emergence of tools of microelectronic and telecommunications that are used in the automatic acquisition, analysis, storage, retrieval, manipulation, management, control, movement, display, transmission, reception, and interchange of quantitative and qualitative data.

The ICT revolution also presents possibilities for the carrying on of commercial transactions, including buying and selling of goods and services, promotion of businesses and other related activities online. The new issues arising in this regard cut across the formation and validity of contracts, where questions

may be raised about whether, for contracts which are in writing, e-mails and other means of electronic communication satisfy the requirements of writing and signing. Thus, the validity of ICT related commercial transactions, their admissibility in evidence and options for dealing with conflict of laws issues arising where, as is often the case, these transactions are carried out between persons who are connected to different countries have been severally identified as some of the challenges posed by ICT (Bamodu, 2010).

According to Till (1998), “electronic commerce covers any form of business or administrative transaction or information exchange that is executed using any information and communications technology (ICT)”. E-commerce may, however, be simply defined as the production, advertising, sale and distribution of products via telecommunication networks. Most of the discussion on e-commerce is limited to the internet, the medium with which electronic commerce is primarily associated. The Internet is developing as an essential tool for the growth of commerce and business in the African continent.

E-Commerce will be defined broadly to encompass: marketing and selling over the Internet (e-tailing), business-to-business electronic data interchange (EDI), conducting research and seeking information, emailing and computer faxing, internal information networks for employees, and ensuring the security of on-line transactions and information transfers. Business types included among the case studies are business-to-consumer (B2C), business-to-business (B2B), on-line or virtual businesses, storefront (bricks and mortar) businesses with Internet sales or purchases, and home based businesses.

In a keynote address as special guest, Minister for Communications Technology, Mrs. Omobola Johnson (2012), while addressing the possibilities that lay in the new technological developments of e-commerce, said the industry had no doubt opened doors for the upcoming generation of young Nigerian entrepreneurs. Applauding Jumia.com for organising the first e-commerce conference in Nigeria, Johnson noted that the ICT industry had become the primary driver of growth in the Nigeria economy, and commended the likes of Jumia.com who have pioneered online retail trade in Nigeria.

According to her, the e-commerce industry had continued to receive a boost in Nigeria, which has shown that it is possible for Nigerians worldwide to run such a business model within our shores. Johnson further noted that e-commerce, if well harnessed will drive local content development in the country, and urged enterprises like Jumia.com to provide the platform for start-up and small and Medium Enterprises to leverage and grow their

businesses. She also stated that “most of the retail in the ICT industry occurred in predominantly informal, fragmented market places like the Banex market in Abuja and the computer village in Lagos, the wholesale and retail trade sector accounted for 20% of GDP in 2012; making it the second largest contributor to GDP.

II. LITERATURE REVIEW

According to National ICT Policy, (2012), prior to 1999, development of the ICT sector in Nigeria was far below expectation for a country of its size and resources. Government decided to introduce several policies to help develop ICT in the country and as a result of the policies, involvement of the private sector and zeal to move the nation forward in terms of economic growth, Nigeria has moved from approximately 400,000 available fixed telephone lines pre 1999 to over 90.5 million available mobile telephone lines by the first quarter of 2011, thereby making Nigeria’s telecommunication market the fastest growing in Africa.

According to Rimmel et al (2000), it takes only an idea, a computer and a modem to become a global player and be part of the electronic business (e-business) community, offering products and services worldwide. They also declare that ICT enable the establishment of worldwide networks for information sharing, cooperation and open a multitude of business opportunities especially for smaller enterprises.

According to Iroegbu (2013), e-Commerce is growing very rapidly, an estimated volume of about N75 billion was done by e-commerce in Nigeria as at 2012 and if that is correct, in another four or five years we will be looking at N150 billion. A report has it that with a population of over 160 million and an already thriving e-commerce market, Nigeria is becoming a game-changer in African e-commerce and that Nigeria’s ICT sector has grown exponentially over the past five years, with the recent implementation of its five-year National Broadband Plan, which will see Nigeria’s broadband internet penetration increasing by 80% by the end of 2018, the country is likely to surpass South Africa’s e-commerce market. Iroegbu while assessing the security aspect of the development said that “Ecommerce security is a vital part of online trading. It is essential for customers to be relaxed for protection of their account or credit card information while billing takes place.

Through the e-commerce technology, the Internet has revolutionized the mode of business transactions by providing consumers with the ability to bank, invest, purchase, distribute, communicate, explore, and research from virtually anywhere, anytime where there is Internet access (Anup, 1997).

According to the Internet World Start (2014), there were 200,000 internet users in Nigeria in year 2000. This number is however less than 1% of the national population (precise 0.1%). In the year 2006 – the number has grown to 5,000,000 (again just 3.1% of the national population). In 2009, the figure went above double as 23,982,000 million people used internet in Nigeria. By December 2011, the number of internet users in Nigeria has grown to 45,039,711 that is, 26.5% of the country’s population. By June 30th, 2012, the number of internet users’ has risen to 48,366,711 which is 28.4% of the total population and by 31st December, 2013 the internet users’ stood at 67,319,186

representing 38.0% of the total population. This shows an increasing number of users of the internet in Nigeria from 0.1% in 2000 to 38.0% of its population in 2013 as seen in table 1 below.

Table 1: Internet Users’

YEAR	Users	Population	%
2000	200,000	142,895,600	0.1 %
2006	5,000,000	159,404,137	3.1 %
2009	23,982,200	149,229,090	16.1 %
2011	45,039,711	155,215,573	26.5 %
2012	48,366,179	170,123,740	28.4%
2013	67,319,186	177,155,754	38.0%

Source: ITU

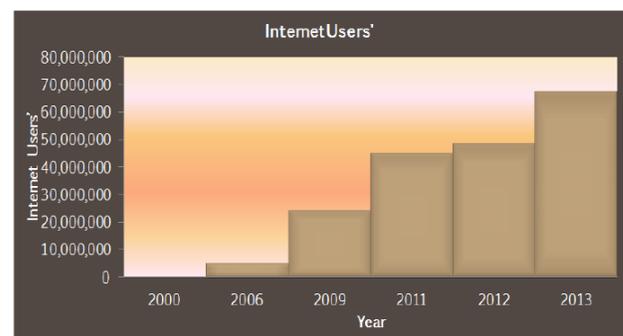


Fig 1: Population of Internet users’

Another area where e-commerce has had a boom in Nigeria is the banking sector. At present, over 90% of Nigerian banks offer online, real-time banking services which allows customers to perform banking transactions from the convenience of their home or offices. The growth of credit/debit cards and ATMs (Automated teller machines) is proving of the country’s rapidly developing e-commerce. Nigerians can now pay, withdraw or transfer funds anywhere in the country with the introduction of MasterCard, Visa Card, InterSwitch, and e-transact (Ovia, 2007).

According to Omobola, a study from a renown institute Euromonitor, Nigeria’s GDP based on purchasing power increased by 21.67% in the last 4 years. In the same period, internet users grew by 46% in the country. Nigeria, one of the upcoming emerging markets in recent years continues to grow and attract foreign investors for the retail market.

At present, Nigeria’s e-commerce industry is significantly growing after the coming of jumia in 2001. There are now numerous online retailers such as Konga.com, taafoo.com.ng, sunglasses.com.ng, kamdora.com.ng, cheki.com.ng, kaymu.com.ng, tradestable.com.ng, nutrotechnologies.com.ng, ladiesshowwarehouse.com.ng, dealdey.com.ng, oyoyo.com.ng, mystore.com.ng, olx.com.ng and so on.

III. ICT IMPACT ON THE GROWTH E-COMMERCE

ICT is one of the most crucial determining factors for the growth of e-commerce. The growth of e-commerce requires

reliable access to modern technologies which is typically lacking in most developing economies.

ICT's relevance in the growth of e-commerce cannot be overemphasized because it integrates all communication channels such as phones, computers, internet and so on for us to use in our everyday life. The impacts of ICT on the growth of e-commerce in Nigeria are:

- i. ICT has brought a major paradigm shift in e-commerce in the entire world. It has made access to buying and selling of goods and services less complicated.
- ii. ICT is a tool that helps in improving communication among businesses and commerce activities in different parts of the world. In fact, ICT is so commonly used in commerce field to communicate various financial matters such as acceptance of money, producing receipts and transferring funds that ICT and e-commerce have become almost tantamount terms.
- iii. ICT has help business organisations in cost savings by using e.g. VoIP instead of normal telephone, e-mail instead of post, video conferencing instead of travelling to meetings, e-commerce web sites instead of sales catalogues. Access to larger, even worldwide, markets. Web sites can be seen from all parts of the world and orders can be taken wherever there is a compatible banking system to process payments, e.g. credit / debit card, Pay-Pal, bank transfer facility.
- iv. ICT enhance efficiency in e-commerce by provide access to new markets or services which in turn create new favourable condition for income generation that can lessen poverty, improve governance, improve per capita income, and reduce unemployment.
- v. Through the help of ICT, e-commerce can reduce the delivery time by using efficient integrated computer systems which allows buyers to browse a wide selection of goods and services from their home.
- vi. ICT has made e-commerce to become the cheapest means of doing business since costs of trading are lower and there is savings on staff, premises and storage of goods and services.

CHALLENGES TO GROWTH OF E-COMMERCE IN NIGERIA

E-commerce in Nigeria has numerous challenges and these challenges have impacted negatively to the rapid growth of the economy. Some of these challenges are:

- i. One of the major problems that have hindered the growth of e-commerce is the low broadband penetration in Nigeria most especially in the rural areas and this is suppose to be a high priority growth for the ICT industry in the country.
- ii. It has been reported that 97% of Nigerian firms experience power outages, and such outages lasts on the average for some 196 hours per month. As a result of this situation, 86% of Nigerian firms have their own generators which produce over half of their electricity needs. (Larossi, Mousley, Radwan 2009, 24). Therefore, firms will have to incur extra costs in the consumption of petrol or diesel.

- iii. One huge challenge is the low consumer confidence in using electronic payment means because of lack of diverse internet security and forensic intelligence to contain cyber crime in the country.
- iv. There is the problem of high cost of accessing the web. Most Nigerians access the web through there mobile phones, meanwhile most of the e-Commerce website are configured for PCs.
- v. A critical challenge to e-Commerce growth is the issue of poverty in the country. A greater percentage of the population live on less than \$1hence, they see shopping online as a thing for the rich.
- vi. The coming of e-Commerce in the country has only received awareness in few big cities such as Lagos, Abuja, and Port-Harcourt.
- vii. There is the challenge of timely delivery of goods bought online to the customers.

IV. PROSPECTS OF E-COMMERCE IN NIGERIA

According to Omobola (2013), "In a less fragmented industry with strong growth across most sectors, an estimated 6.2 million jobs will be created by e-commerce and the contribution of ICT industry to the GDP is 7.5% by 2015. The ICT is the primary driver of growth of the Nigerian economy and we are already witnessing increasing participation of indigenou companies and Jumia is one of them". She further stated that developing ICT ecosystem is a source of tremendous opportunities which engenders an environment that encourages and rewards innovation. The opportunities also increases percentage of local content in products and services, utilisation of local capacity, increases percentage of domestic value-add increased retention of value in the country and increased opportunities for job creation.

With the improvement of internet service in the country, which was virtually only accessible to few individuals some years back, has brought with it boundless opportunities for numerous business innovations amid which is e-Commerce.

The appearance of e-Commerce has transformed the traditional means of shopping and doing business, and this swift acceptance had certainly brought with it more e-Commerce business models in Nigeria, and has introduced more competition.

The coming of e-Commerce has brought opportunities for the future generation of creative young individuals in the country and these individuals will in turn contribute to nation's growth technologically.

E-Commerce enhances the speed and accuracy with which businesses can share information and this reduces costs of transactions online. It also provides the teaming buyers with numerous options than traditional commerce.

Lastly, e-Commerce enables the customers to shop at the comfort of their home, office and any place where there is internet connectivity.

V. METHODS

The researcher made use of survey method to obtain relevant data needed to conclude this research work. The survey method is used to obtain information from the respondents because it is cost effective and not time consuming. One of the advantages of survey is that respondents rarely try to please the researchers. Moreover, this technique provides open time for respondents so they can think and answer the questions; they are not bound to complete the survey in one setting (Covey, 2002). This research covers four different cities Abuja, Bauchi, Kano and Lagos States and simple random sampling technique was used to select the target population. The major instrument used to obtain data needed to conclude this research work is questionnaire. The questions in the survey were structured to obtain information regarding the impact of ICT on the growth of e – commerce in the country. Out of the 400 questionnaires randomly administered, 343 were duly returned while 34 were incomplete. Hence, 309 were the valid and complete questionnaires used for the quantitative analysis representing 77.25% response rate.

VI. ANALYSIS OF RESULT

From Table 1 below, it can be seen that 35.60 % of the respondents are female while 64.40% were all male. 33.66% of the respondents are between the ages of 31 to 40 while 24.27% are between the ages of 41 to 50. 36.25% of the respondents are working in the educational field, 28.12% are involved in one form of trading and 11.33% are in the IT industry. 34.63% of the respondents are either BSc or HND graduates while 28.16% are Post Graduate certificate holders. This clearly revealed that approximately 63% of the respondents are educated and potential users of e-commerce facilities to do business.

Table 2: Demographic Profile

Variable	Frequency	%
Gender		
Female	110	35.60
Male	199	64.40
Total	309	100
Age		
20 and below	9	2.91
21 – 30	54	17.48
31 – 40	104	33.66
41 – 50	75	24.27
51 – 60	47	15.21
60 and above	20	6.47
Total	309	100
Occupation		
Civil Servant	22	7.12
IT	35	11.33
Trading	87	28.12
Education	112	36.25
Others	53	17.15
Total	309	100

Education		
Primary	24	7.77
High School	40	12.94
Bsc/HND	107	34.63
Post	87	28.16
Graduate	51	16.50
Others	100	100
Total		

From Table 2, 35.92% of the respondents fairly often use the internet for browsing, 33.01% respondents use the internet very often and 31.07% always use the internet for various purpose. It can be clearly seen that 25.24% of the respondents use public café to access the internet, 28.16% browse from their office during working hours while 46.60% of the respondents use their mobile phone data for browsing. This showed the growing number of mobile users’ in the country and the mobile operators provide cheap and fast internet access. 54.05% of the respondents have done one for online transaction. 31.72% of the respondents have done e-shopping, 28.48% have done online fund transfer, and 18.12% have done one form of online payment. 14.56 use Master cards to pay for online line transaction, 17.80% use Visa card for payment, 29.45% representing majority of the respondents make payment using ATM machine, 13.59% use western union money transfer to make payment and 21.68% of the respondents make payment on delivery of the item(s) purchased online. From the study, people agree to make payment on delivery to avoid been defraud. 55.99% of the respondents have visited an online shop in the country while 44.01% have not visited any online shop in the country. 43.37% of the respondents have visited 1 to 5 different online shops while 10.68% have visited 6 to 10 online shops in the country.

Table 3: ICT practice

Variable	Frequency	%
How often do you use the Internet		
Fairly often	111	35.92
Very often	102	33.01
Always	96	31.07
Total	309	100
Mode of Internet Access		
Public café	78	25.24
Office	87	28.16
Mobile internet access	144	46.60
Total	309	100
Have you done any online transaction		
Yes	167	54.05
No	142	45.95
Total	309	100
Types of Online transaction done		
e-shopping	98	31.72
Fund Transfer	88	28.48
Payment of Bill (e.g. PHCN,	56	18.12

Water, DSTV etc.)	67	21.68
Others	309	100
Total		
Mode of Payment		
Master Card	45	14.56
Visa Card	55	17.80
ATM	91	29.45
Western Union	42	13.59
Cash on delivery	67	21.68
Others	9	2.91
Total	309	100
Do you visit any online shop in the country		
Yes	173	55.99
No	136	44.01
Total	309	100
How many online shops visited in the country		
1-5	134	43.37
6-10	33	10.68
20 and above	6	1.94
Non	136	44.01
Total	309	100

VII. DISCUSSION OF RESULT

The major aim of this research is to investigate the impact of ICT in the growth of e-commerce in Nigeria. From observations, it was revealed that there has been significant improvement in the use to ICT tools in the country such as the internet. E-commerce cannot progress without the internet which is the key medium for communication. The introduction of mobile communication system in the country in September 2001 has also boost mode of accessing the internet as presently, most people as can be shown from the study now access the internet through their mobile phones. The study also revealed that more people are now engaged in online transactions such as e-shopping, fund transfer and payment of bills. It was observed that most of the online transactions were mostly carried out in Lagos being the commercial centre of the country and Abuja the capital city of Nigeria and this is as a result of most of the online businesses are actually located in these cities. The study clearly showed that more and more people use ICT tools such as the ATM, Master card, and Visa card to make online payment which will help to advance e-commerce in the country.

The major dispute acknowledged by the respondents is the high inclination to internet fraud, mode of payment and prompt delivery of purchased item(s).

VIII. CONCLUSION AND RECOMMENDATIONS

In conclusion, the study proposes that for Nigeria to become the first in the African continent in terms of e-commerce, stringent measures must be taking in implementing the countries ICT policies so as to boost e-commerce which will in turn raise the country's GDP. There is significant growing number of mobile internet users' in the country which will help to improve

e-Commerce and quite a number of people are now involved in the new technology of e-payment, e-transfer, and e-shopping. It is recommended that e-Commerce industries in the country can only thrive well and raise the countries GDP if the erratic power supply in the country is improved on so as to enhance economic activities in the country, there should be cheap and affordable internet especially for those using the public cafés and the internet should be secured from online fraudsters, the e-Commerce vendors should go along with the current ICT tools by developing well secured websites that will attract and increase the confidence of online shoppers, there should be investment on ICT by both the government and the private sector organisations, and lastly, there should be adequate publicity on e-commerce with emphasis on e-shopping, e-banking and e-business.

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