# Empirical Study of Barriers to Electronic Commerce Adoption by Small and Medium Scale Businesses in Nigeria

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## ABSTRACT

*Electronic commerce (E-commerce) is a technological innovation that enables small to medium enterprises (SMEs) to compete on the same level with their larger counterparts. And it has the potential to improve efficiency and productivity in many areas and, therefore, has received significant attention in many countries of the world. A thorough analysis of the impact of the internet and e-commerce across firms, industries and economies is necessary to separate hype from reality. However, several researchers have called for the investigation of the association between the perceptions of e-commerce and the barriers to its adoption in developing countries. It is however on record that SMEs the world over are faced with significant challenges that compromise their ability to function and to contribute optimally to the respective economies where they operate. This study was conducted in three states of Nigeria (Lagos, Abuja and Enugu states) with the use of interviews to gather relevant data; the aim of which was to understand the challenges which serve as barriers to E-Commerce adoption by small and medium scale enterprises in the Nigerian context. Findings indicates that small and medium scale online present is at best unknown. The most common e-Commerce applications used by most SMEs include but not limited to the use of e-mails for communication purposes and a simple website for basic product information – information contained are usually outdated as most of these websites are hardly updated. Findings revealed, among others, that lack of and total absence of a regulatory framework on e-Commerce security, as well as technical skills, and basic infrastructures are some of the barriers to electronic commerce adoption. The findings however, provide a constructive insight to financial practitioners, governments as well as other stakeholders on the need to give e-commerce a place in all aspects of e-commerce activities.*

## INTRODUCTION

The internet technological explosion into the world arena coincided with the new millennium and the uses of the internet for commercial purposes have since spiralled out of control. The internet known to have originated from the United States of America has received a worldwide acceptance and is now at par with global products such as coca-cola. The Dot.com companies in the United States such as Amazon and eBay led the way by creating new and distinctive online services where none ever existed. The successes recorded by these organisations paved the way for other organisations including other well known traditional organisations all over the western world such as Wal-Mart, Tesco, and others in retail; Cisco in networking, Dell in the PC manufacturing industry, Well Fargo, HSBC, Bank of America, etc, in banking services. Bakos (1998) stressed that a company without a website today is considered as outdated. The radical changes that have braved the world of business in general and businesses that now run only over the internet could be viewed from a different innovative perspective. The various changes evidenced by its impact have redrawn the boundaries of businesses, thus creating a new but strong world economy never envisaged before and at a much faster rate that the industrial revolutions. Based on these however, the radical changes came with new requirements such as new but strong competitive strategies by organisations, new business models, new products, and new management techniques. The internet compresses time and space making it easier for organisations to expand beyond regional boundaries. Control of commerce as usual has now gone beyond the grips of individual countries and governments of the world. The internet and e-Commerce compared to physical channels have also given consumers more benefits and variety of choices on both products and services. However, many industry analysts attribute the slow growth of SMEs to lack of awareness of e-commerce applications.

Based on the above, the fundamental research question is: *what are the drivers and inhibitors to e-Commerce adoption among SMEs in Nigeria as a developing country?* The paper also explored other factors such as:

1.  Lack of capital and skilled personnel;
2.  The significant and often understated cost of such e-commerce applications and solutions; and
3.  The core structures of SMEs.

This research therefore sets out to establish the reasons for the usage and non-usage of e-commerce among small and medium scale enterprises in Nigeria. This will however be accomplished through the use of interviews as a primary data collection technique in selected regions of Nigeria.

## What is Small and Medium Scale Enterprise?

Small and Medium Scale Enterprise (SME), an economic coinage, have been defined in various forms and shapes. Quantitative view of SME has been premised mostly on the turnover or assets and number of employees, while qualitatively, it has been viewed based on how the company is organised. However, a number of definitions have sprouted from various angles including government agencies.

According to the United States Small Business Administration (SBA), cited in Saffu, et al (2008, p.398), which is based on section 3 of the Small Business Act of 1953:

*An SME shall be deemed to be one which is independently owned and operated and which is not dominant in its field of operation.*

By comparison, the United Kingdom took a more quantitative approach (Harindranath, et al., 2008 p. 94), defining SME as:

*Having fewer than 50 employees and is not a subsidiary of any other company.*

Furthermore, other researchers have also viewed SME as:

*One in which one or two persons are required to make all of the critical decisions (such as finance, accounting, personnel, inventory, production, servicing, marketing and selling decisions) without the aid of internal (employed) specialists and with owners only having specific knowledge in one or two functional areas of management. (Turban, et al., 2008)*

Not only do the definitions of SME vary, but there are wide ranging views on the characteristics of SMEs in various countries and contexts. There have been many studies that have attempted to define the characteristics of SMEs. Central to all of these studies is the underlying realization that many of the processes and techniques that have been successfully applied in large businesses do not necessarily provide similar outcomes when applied to SMEs (Kapurubandara 2009). Rose, et al., (1999) stated that SMEs are not 'small large businesses' but are a separate and distinct group of organizations compared to large businesses. Hadjimanolis (1999) noted that a borderless global economy was beginning to emerge. It is also envisaged, as seen in cases of the European Union (EU), that there is now a shift towards global market place, with significant ramifications for supply chains, business processes, customer services and the stiff competition regimes.

SMEs play vital roles within all economies all over the world. It is often seen as the offshoot of many conglomerates based on the diversified nature of the various products and services it offers. Oliveira and Martins (2010) stressed that SMEs provides more than 75% of jobs within a country and Saffu, et al (2008) also argued that SMEs plays a very strong role in every economy. Therefore the importance of SME in the economies of both the developed and developing countries cannot be over –emphasized. Apart from the banks, oil companies and of recent communication companies in Nigeria, the SMEs occupy an enviable (Lal 2007), position within the Nigerian economy, accounting for more than 64% of the jobs. The Nigerian economy, though heavily dependent on oil, however, the small, medium and micro enterprises dot every nooks and crannies of the country.

The use of e-commerce by these Small and Medium Scale Enterprises in Nigeria is a new development. While the internet services have gained ground in all conglomerates and some medium organisations in Nigeria, most SMEs are still lagging behind. The inability of these SMEs to take advantage of this innovative technology forms the crux of this research. Based on these therefore, this paper will in line with the research question address the following:

- Compare the usage of e-Commerce in the selected SMEs within three geographical divides of Nigeria (i.e. Lagos in the West, Abuja in the North and Enugu in the east of Nigeria);
- Explore the reasons or otherwise of adoption within the selected organisations in these regions

## What is E-Commerce?

E-Commerce has been touted as a cost effective avenue to reach global customers, by gaining market shares (Tan et al., 2007). This is however achieved by streamlining a wide spectrum of business processes and technology for competitive advantage utilizing telecommunication and relationship improvement networks. This is however advantageous to adopters who are willing to change and improve communications – internally and externally, with the use of efficient resources and skilled-staff. According to MacGregor (2010), e-commerce encompasses a wide spectrum of business processes and configuration of technology resources to facilitate how business managers perform their tasks, interact with customers and conduct their businesses. Daniel, et al., (2002) stressed that adopting internet's connectivity aspect for business purposes has changed the way organisations communicate internally and externally. Internally, it has changed how they buy and

sell on the web and share information; while external communication activities increases efforts to understand customers, suppliers, business partners and competitors. There are different categorisations of e-Commerce by different authors in different contexts. Chaffey, et al., (2009) categorised various model of e-Commerce into:

1.  **Customer to Customer (C2C):** Consumers directly transact with other consumers in the cyberspace. Furthermore, Hoffman & Novak, (1996) in their submission noted that C2C interactions are very important model in internet based transactions and further suggested the need for companies to take such innovation into consideration in their market planning efforts. Their assertion is exemplified by the growth of social media network sites in recent times such as Facebook, Twitter, LinkedIn, etc.;
2.  **Business to Customer (B2C):** Customers learn about products or services through electronic publishing, and buy them using electronic cash and secure payment systems, and have them delivered electronically or through physical channels;
3.  **Business to Business (B2B):** An electronic market transaction in which businesses, governments, and other organisations depend on computer-to-computer communications as a fast, economical, and a dependable way to conduct business transactions;
4.  **Customer to Business (C2B):** A type of online transactions where consumers initiate trading with companies – these are mostly suppliers;
5.  **Customer to Government (C2G):** A type of online interaction where feedback is given to government through pressure group or individual sites;
6.  **Business to Government (B2G):** A type of online interaction where feedback from businesses is given to government and non-government organizations;
7.  **Government to Citizen (G2C):** A type of online interaction through which govern-

ment offer national transactions such as local government services, national government information, and tax information to its citizens and other stakeholders.

At the moment the only well developed form of e-Commerce in Nigeria are Business to Business (B2B) and Business to customers (B2C). Others such as the government related commerce have not seen the light of the day. Government transactions are still manual in nature and bunch of files are kept under locks and keys in large cabinets and passed round from table to table. Based on the above therefore, this study will further focus on e-Commerce adoption in B2B and B2C within the Nigerian context.

## REASONS FOR E-COMMERCE ADOPTION

Harindranath, et al., (2008) stressed that a well articulated e-Commerce within an organisation often facilitates growth and expansion. Hadjimanolis (1999) however stated that the application and use of e-Commerce in developing countries can lead to substantial savings in communication costs, marketing, advertising, as well as production processes (supply chain) and the delivery of goods and services to various parts of the globe.

MacGregor (2010) further stressed that the possibility of shopping online from anywhere is the most obvious and most commonly cited advantage of e-commerce, and was found to be the most important perceived consumer benefits of internet shopping. Saffu, et al., (2008) in the submissions argued that since the boundaries of e-commerce are not defined by geographical or national borders, consumers will benefit from a wide selection of vendors and products, including a wider availability of hard-to-find products. The internet can provide consumers with up-to-the minute information on prices, product availability, product types, product alternatives, etc. And consumers may benefit from the shopping process being faster

in the market-space than in the market-place as a result of the rapidity of the search process and transactions (Efendioglu, et al., 2004). Bakos, (1998), argued that the internet has the potential to offer consumers benefits with respect to a partial, or even a total privacy and anonymity throughout the purchasing process. Turban, et al, (2008) stressed that by embracing e-commerce consumers may benefit from price reductions as a result of increased competition as more suppliers are able to compete in an electronically open marketplace, as a result of reduced selling prices due to a reduction in op-erational/transaction costs, and manufacturers internalizing activities traditionally performed by intermediaries.

Bakos (1998) and Kurnia (2006), sees e-Commerce as responses to the changing environment due to changing tastes and new types of customers who are now demanding quality and the new sets of value propositions of what these customers want, when they want it and how they want it as well as the cost they are ready to pay. In addition, other reasons for e-Commerce adoption include but not limited to:

- **Access to extensive online informa-tion:** This, according to McDougall and Levesque (2000) gives customer access to large amount of information based on which decisions can be made;
- **Price comparison:** Kapurubandara (2009) stressed that the online market place has presented a stiff competition among sellers and there is always a war on price – this however, gives the consumers opportunity to make wide range of choices;
- **Time savings:** Working parents can con-veniently combine their work schedule and shopping with ease;
- **Online delivery:** Purchases are delivered with ease on the online channel such as e-tickets, e-books, etc. Efendioglu, et al (2004) also stressed that the whole com-mercial cycle can be conducted via a net-work – providing instant access to products;
- **Convenience and accessibility:** This means a customer can shop any time from

anywhere in the world – and this singular benefit is often the most cited reason for e-Commerce adoption.

Despite these benefits, several empirical researches on e-commerce which directly relates to barriers have been widely written in various countries of the world. Thulani et al (2010) in their research in Zimbabwe found that education and channel knowledge as militating factors. While Oliveira and Martins (2010), in their research on SMEs within the European Union stressed that consumers' who are motivated by convenience are more likely to indulge in online purchases. However, MacGregor (2010) found attitude and perceived usefulness as predictors of the usage of the web for retail usage between Australia and Indonesia. Comparative analysis of these findings shows that education and chan-nel knowledge plays key role in the Zimbabwe but same was not the case in Europe, rather it bothered on motivation.

## BARRIERS TO E-COMMERCE TO CONSUMERS AND ORGANISATIONS

There are presently scarce literatures on the antecedents of organisational adoption of e-commerce in the Nigerian context; though this is a country that is today ranked with exception-ally high internet adoption rate in the African continent as shown in Figure 1. Literatures, however, abound in the developed countries such as the United Kingdom, USA, Canada, etc with respect to consumer motivators and impediments to e-commerce.

Tan, et al., (2007) found that the *fear of fraud and risk of loss* has commonly been cited as a significant barrier to B2C e-commerce, with empirical research findings supporting these assumptions. Furthermore, Rose, et al., (1999) discovered that while e-commerce offers great opportunities for one-to-one marketing, it significantly reduces, or even puts an end to the *personal service* (human-to-human contact) characterizing traditional commerce especially

*Figure 1. Africa top internet countries*



**Africa Top Internet Countries**
**December 31, 2011**
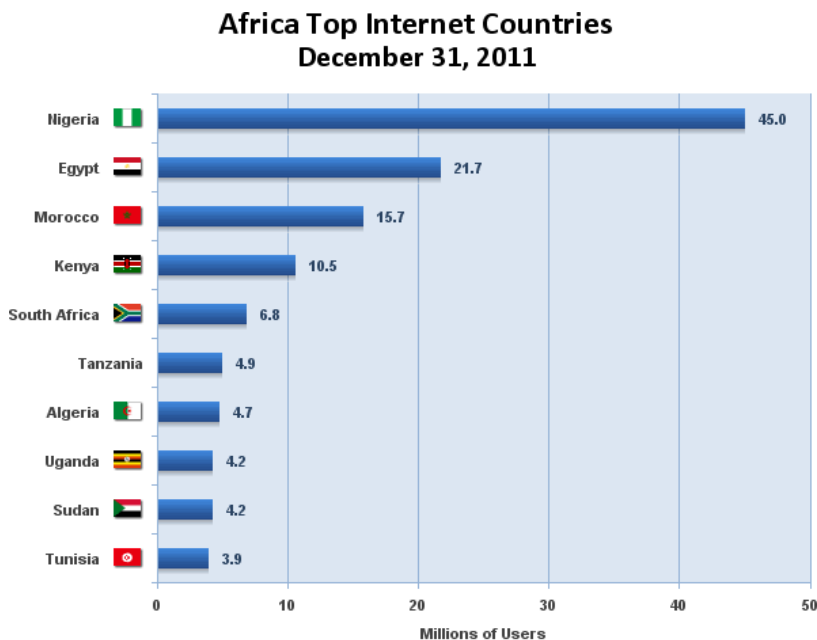
Source: www.internetworldstats.com/stats1.htm
Copyright © 2012, Miniwatts Marketing Group

in the developing countries. This may, be an impediment to e-commerce for many consumers. Kurnia (2006) however stressed that due to low bandwidth connections, using the internet may be time consuming, and thus frustrating. Rose, et al., (1999) further noted that e-commerce may offer consumers *savings in time,* in practice, however, using the internet for commercial purposes may prove to be too time consuming for many users. There are multiple reasons for this: (i) difficulties locating web sites/products/services; (ii) registration procedures required to access services; and (iii) making price comparisons, etc. Cost of acquiring a computer, cost of use and internet access fees have all been adjudged as some of the barriers to e-commerce adoption by SMEs by various researchers. However, MacGregor (2010) presented a more succinct barriers stating that *''on the internet, it is more or less impossible to make sure, beyond doubt, that (tangible) products have the desired features (e.g. design, material, colour,* *fit), giving rise to a quality evaluation barrier to e-commerce'' (p.65).* Empirical findings by Thulani, et al., (2010) showed that the need to feel and touch was the dominating disadvantage for all home-shopping services.

Other cited barriers to e-Commerce are as follow:

1. **Lack of enjoyment:** As opposed to physical stores, e-shopping involves the customer and the computer. The usual feelings of pleasure, variety of products, and so many things to see with the pomp and pageantry are non-existent. E-shopping therefore cannot be a substitute for these experiences;

2. **Difficult to locate items:** Rose et al., (1999) clearly stated that some consumers find it difficult to locate some of the items they wish to purchase, this therefore amounts to poor site usability

MacGregor (2010) however, discussed four major stages adopted by most e-Commerce groups in the United Kingdom. These are (a) those that are developing their first e-mails and websites – known as the developers; (b) those that are using e-mails and exchanging documents and designs electronically with customers and suppliers – known as the communicators; (c) those that have web presence which means websites with online ordering facilities and (d) those using online ordering and payment capabilities known as the "transactors". In comparison with the developing countries such as Nigeria, most SMEs are still at the developers stages while most conglomerates within the polity have attained the four stages.

## METHODOLOGY

An online data collection procedure was not an option given the stated research question, instead, a qualitative research method was deemed fit. Accordingly, two dimensions of consumer e-commerce adoption were drawn; i.e., internet adoptions and internet transaction based users. These were further operationalized as: internet non-adopter – these include the organisations that have never used the internet for their business transactions. And internet adopters – these includes those that have consistently or occasionally use the internet.

The qualitative research methodology was utilized for this research with interview as the data collection tool. Merriam (1998, 2009), stressed that qualitative research, often described as exploratory research are used in areas where there are few theories or a deficient body of knowledge. Furthermore, Yin (2008) also states that a qualitative research is an experimental enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not evident as is the case with the SME's adoption of e-commerce in the Nigerian context. Byrne and Ragin (2009) contend that evidences from qualitative research are often considered more

compelling and the overall study is therefore regarded as being more robust. The next section contains the profile of organisations.

## PROFILE OF SMES

- **Business Sectors:** Thirty SME's of similar sizes and shapes were used to gather qualitative evidences for this study. Ten SME's from each state of Lagos, Abuja and Enugu were selected out of the multitude of SMEs in these states and Nigeria in general. Overall, thirty managers of these SMEs participated in the interview for this study. The SMEs selected were engaged in the different types of businesses as shown in Figure 2;
- **Age of Organisations:** Most of the SMEs have been in operation for more than 15 years and are duly registered with the Corporate Affairs Commission (CAC). Ten of them have a turnover of between =N=20m to =N=50m While the other has a modest large balance sheet of =N=70m with less than 45 employees in each (see Figure 3);
- **Educational Levels of SME Owners:** Most participants in the study had formal education, majority of which had diploma and above while 29% has secondary school level education (see Figure 4);
- **E-Commerce Experiences:** The organisations sampled had varying lengths of experiences with e-commerce adoption and implementation. The figure shows a high percentage (62%) of late adopters. While only 7 percent have used e-commerce for more than 13 years (see Figure 5).

Byrne and Ragin (2009) and Yin (2011) both share opinions on the underlining use of qualitative research methods and stated that the researcher should select each case (organisation) with care in order for it to either predict similar results (a literal replication) or predict contrasting results for predictable reasons (a theoretical replication).

*Figure 2. Business sectors: Ten different small and medium scale enterprises*
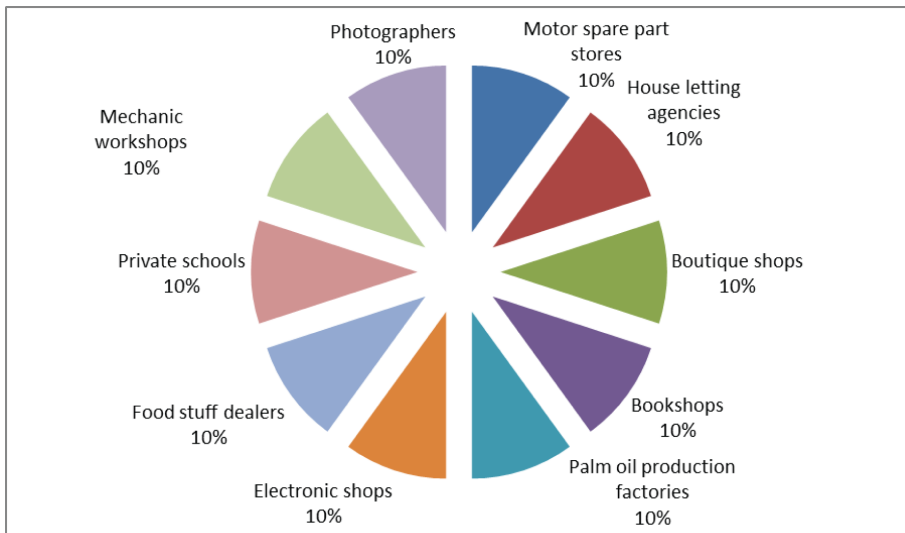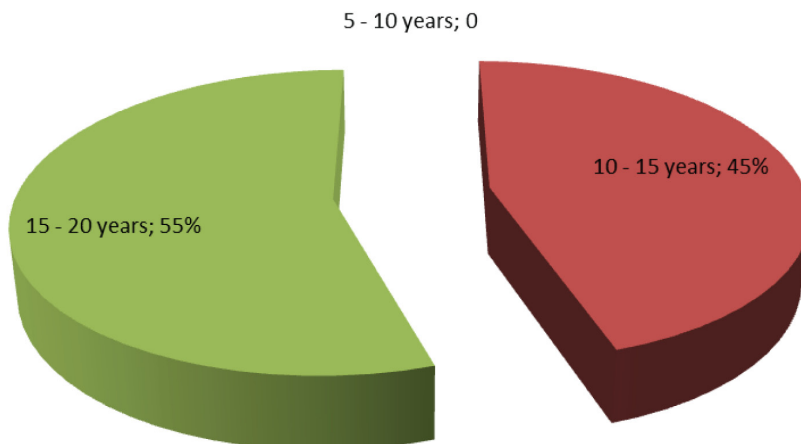


*Figure 3. Age of organisations*



## INSTRUMENT

Interview method was used as an instrument for the collection of data for this study. The interview structure consisted of three sections: information about interviewee/ business, demographic profile and interview question guide. The interview guide consists of:

1.  **Internal:** Human resource, e-commerce impact, customer demands and services provided, reduced transaction cost, critical success factors;
2.  **External:** Competitors, partnerships, networks;
3.  **Environment:** Market, Brand, technical;
4.  **Organisation:** Strategic objectives, reasons for ecommerce adoption;
5.  **E-Commerce:** Operational issues.

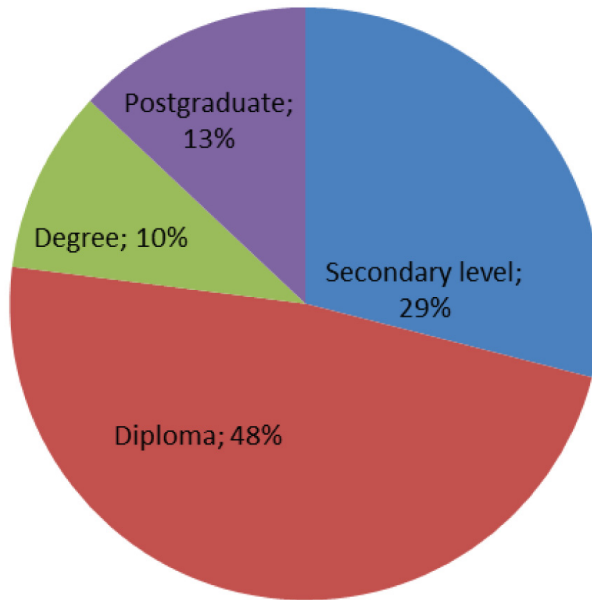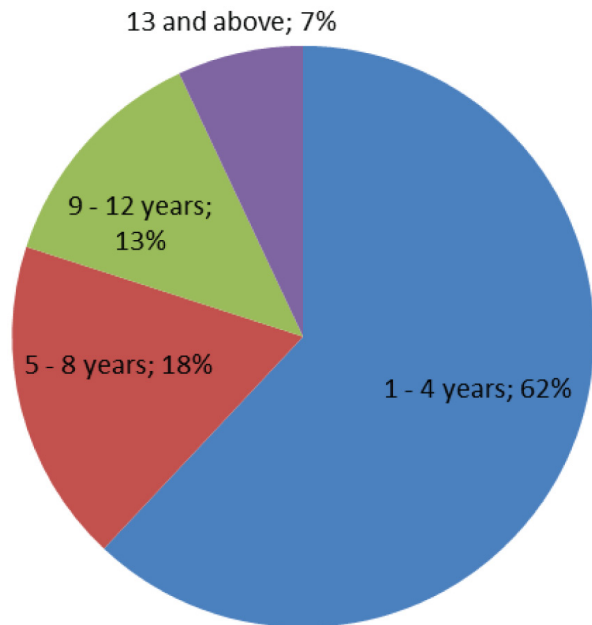*Figure 4. Educational levels of SME owners*



*Figure 5. E-commerce experience*

## RESEARCH CONDUCT

Holliday (2007), states that dialogue can promote professional growth and development and foster engagement especially in a research context. Furthermore, Silverman, (2009) suggest that communication tools promote the iterative process of research. Patton (2002) and Berg (2007) also posit that the iterative process creates a feedback loop that evaluates the conversations that occur between participants and researchers. Conducting interviews with SME managers and other stakeholders serves to inform what an optimal mode of engagement with the core participants was and what was important to research participants regarding the barriers to e-commerce adoption by SMEs in Nigeria as a developing country. In-depth open ended interviews were conducted with top managements of the thirty selected organisations in the three different states of Nigeria over a period of four months. The interviews focused specifically on the problems and effects of e-commerce adoption by small and medium scale industries and hovered also within the ambit of the interview questions which served as a guide. These were tape recorded, with some handwritten notes, and were transcribed and analysed verbatim afterwards.

## INFORMATION ANALYSIS AND THEME DERIVATION

Glesne (2006), Berg (2007), and Stringer (2007) all contributed information on how information gleaned from interviews should be collated and analyzed usually through open coding. Each takes a slightly different approach, but collectively, their suggestions provided for a comprehensive method in collecting, collating and analysis of data collected in this study. Glesne (2006) suggested various methods of cataloguing and indexing information, as well as various methods

and sources of data collection in order to be thorough.

The interpretive approach to data analysis was helpful; this type of analysis recognizes that the participants are stakeholders and thus are interested in the change that might occur as an outcome of the study. A series of steps assisted in asymmetrical analysis of the data by coding the texts and creating labels, and then categorizing, identifying themes, and sorting materials to identify patterns. Finally, the identified patterns were evaluated, and in this process themes were systematically and objectively identified.

## DERIVATION OF THEMES

Themes were derived from the interview techniques utilized in collection of data for this study. As stated above, open coding was utilized to identify themes from the open-ended questions. In total, thirty two (32) managers and staffs of the selected organisations participated in this study; however, comments from twenty three (23) participants, representing 71.9% of the interview participants were transcribed verbatim. The comments from nine (9) managers and staff members, representing 28.1% of the interview population, were discarded as a result of the scanty nature of the discussions and lack of required facts as well as the fact that the discussions with these set lasted no more than one to three minutes, as such, there was nothing concrete to extract.

## STUDY FINDINGS

Study findings revealed that SMEs, today, represent about 90% of firms in the Nigerian industrial sector on numerical basis. Data collected also showed that the spread of cyber cafés in all nooks and crannies of the cities and urban centres are assisting the popularization of the internet services in Nigeria, and this, it is believed may have

*Figure 6. SME capability in the adoption of e-commerce*



assisted in the adoption of e-commerce. However, the result of the empirical analysis of this study proved that small and medium scale enterprises growth in Nigeria has been prevented by structural, environmental and other challenges as stated in Figure 6. Lack of capital as well as paucity of government supports through micro finance was identified in this study as the most serious problem of establishing small and medium enterprises in Nigeria.

However, from the literatures reviewed and information gathered from other sources, there is enough evidence to belief that e-commerce is an essential element needed to trade successfully online and beyond geographical boundaries. Itemised in Table 1 are the thematic evidences derived from the data analysed as barriers to e-commerce adoption in the Nigerian context.

# BARRIERS TO E-COMMERCE ADOPTION AMONG SMES IN NIGERIA

Based on the analysis of the data collected through interview, the following were identified as some of the barriers to e-commerce adoption in Nigeria.

The next section discusses the thematic evidences derived from the data analysed

## Theme 1: External Environment (Infrastructure, External Pressures and Socio-Cultural Factors)

The World Bank (2012) report stressed that the Nigerian economy is based primarily on agriculture and mineral resources, which provides four fifth of its national income; unfortunately, the economy, (Nwosu 2011) has been battered

*Table 1. Barriers to e-commerce adoption in Nigeria*

| Theme 1: External environment | • Infrastructures<br>• External pressures<br>• Socio-cultural factors |
|---|---|
| Theme 2: Internal environment | • Size<br>• Resource availability<br>• Organisational culture<br>• Trained labour |
| Theme 3: Perception | • Perceived benefits<br>• Perceived risks<br>• Perceived trust<br>• Perceived cost |
| Theme 4: Attitude | • Age<br>• Occupational relevance<br>• Languages and education |

as a result of mismanagement by the political leaders. Despite the country's abundant natural resources and a rich natural environment, the economy has not prospered as most organizations do not operate smoothly and efficiently given the infrastructures available. Findings of this study identified telecommunication infrastructural as one of the barriers hindering the adoption of e-commerce in Nigeria. In most part of the three states visited, there exist out-of-date and unreliable telephone connections in many towns and villages with consequent low connections of the internet services. Broadband connectivity is a key component in ICT development, adoption and use even within the urban centres was observed to be inefficient with slow connectivity. However, the necessary infrastructure for such widespread usage by SMEs that doth the nooks and crannies of Nigerian state simply does not yet exist. Participant 16 particularly picked on the infrastructures and described the telephone connections as outmoded and unreliable especially in the villages. While participants 18 and 25 states that internet connections, where they exist, are very slow and expensive. These views are corroborated by the views of participants 10 and 10, 19 and 30 who stressed that the internet technology and in fact e-commerce is alien and most business

owners do not have trust. Participant 14, CEO of one of the organisations, in resonating with the other participants stated that: ''the constant and singular problem of epileptic power supplies are the major reasons for lack of e-commerce adoption by SMEs''. In furtherance of this, Participants 9 and 13 berated the banks and the government for not helping the small businesses to grow. In their words, they stated that: ''due to the absence of micro-finance, most SMEs find it difficult to expand their operations. The adoption of e-commerce becomes an option, only when you are very sure you have the means capital to purchase stocks and respond to customers' requests''. It is evident from related literatures that e-commerce have gained ground in the developed countries but same is new in developing countries due to their cultural inclinations. Mazrui (1986) cited in Bandyopadhyay and Fraccastoro (2007) defined culture as *'a system of interrelated values active enough to influence and condition perception, judgment, communication, and behaviour in a certain society' (p.56)*. In most societies, culture is generally considered as the foundation on which the societal fabrics in woven. This researcher deduced from the interviews that confidence of usage of e-commerce comes out of the comfort of a family member or a re-

spected member of the society giving a positive verdict about e-commerce. This infers that the Nigerian society is culturally interwoven and the words from a respect leader or head often spiral down the chain leading to positive or negative perceptions. Commenting further on e-commerce services, participant 7 stressed that the e-commerce services will be a ''hard sell'' to most Nigerian SMEs especially in the rural areas due to the negative and unsavoury news about identity theft, hacking, phishing, etc, as daily published by various tabloids, as well as news from cyber café's where these nefarious acts are planned and hatched. And with these educated men and women whose opinions are sought by SME operators in these rural areas, reading and hearing about these news, I believe they would like to advise their people wisely and that is – Do not use the services''.

Commenting further, participant 4 pointed out that 'e-commerce is alien to this culture; the Nigerian culture has been a cash based one. People love to touch money as evidence of a successful transaction. The idea of buying anything without saying hello and receiving that customer services is very strange to many here in Nigeria if not the whole of Africa. Moreover, many organizations are just struggling to host a website, the usual mighty signboards, and large names printed in front of their business premises with one down the road and on the roof top is still the norm and acceptable to all. Advertising over the internet might be good, but how many Nigerians have computers and how many are interested in reading adverts on the internet. Above all, how many are educated to even read the content of a website especially in the rural areas where you hardly have electricity?''

Despite the gory tales about the economy, few SMEs have embraced the e-commerce services and used it to their benefits. Most participants shared the views of participant 4, however, the researcher also noted that in addition to the above, the size of the SME, and the culture obtained within the organisation are among the draw backs of e-commerce adoption among SMEs in Nigeria.

## Theme 2: Internal Environment (Size, Resource Availability, Organisational Culture and Trained Labour/Skill)

The internal environments as opposed to the external also play a role among the reasons for non-adoption of e-commerce by SMEs in Nigeria. As evidenced by the findings of this study, most the businesses are simple self employed and family businesses. Sizes and resources determine the usage or non-usage of computers in the various businesses. Participant 30, a boutique owner clearly stated that there was no need for a computer as stocks are taken every morning and evening. However, this was in contrast to the views of participant 27, with a chain of motor spare parts. Computers are widely used in both selling and tracking of sales as well as stock taking. It was also discovered that some organisations lack the requisite skill for the operation of computers. The foodstuffs and palm oil production managers clearly stated that they have no knowledge of how computers work. Therefore the organizational culture, readiness and top management support are some of the guiding lights to purchase and installation of computers and internets

## Theme 3: Perception (Benefits, Risks, Trust and Costs)

Findings of this study revealed that unlike the western countries such as the United Kingdom, USA, Canada, etc, there is still a low level of PC penetration in the developing countries and the cost of internet access is too high (Ghobakhloo, et al,. 2011). Majority of the organisations in this study lacks the income required to purchase telephone and broadband services and this applies to other low-income organisations in most rural areas of Nigeria. The cost and maintenance of computers and internet connectivity far outweigh the monthly profits of most of the business organisations in this study. Therefore, the prohibitively high cost of computer equipments within the Nigerian

markets is seen as one of the barriers to the wide use of computers in most businesses. The cost of calls and broadband connections are simply outrageous and most times unaffordable by these organisations. Internet access prices are a key determinant of internet and ecommerce use by individuals and businesses (ITU 2011). OECD, (2004) report stressed that the development of broadband markets, efficient and innovative supply arrangements, and effective use of broadband services require policies that: promote effective competition and continued to stress liberalisation in infrastructure, network services and applications across different technological platforms. Most participants cited the cost of computers as reasons for non-adoption. Unfortunately, these have given rise for the embrace of internet cyber cafés which charge exorbitant hourly rates; and without computers, there will be no internet connections. The lack of computers at the organisational levels therefore becomes a major barrier to accessing the internet and participating in e-commerce activities. Furthermore, a combination of these costs and the high fees charged by internet service providers both contributes to discouraging internet connectivity and SMEs participation in e-commerce activities in Nigeria. Findings of this study further noted that even with access to the necessary equipments, most SME managers will not become active e-commerce participants unless they have reasonable confidence in the use of computers and trust on the online transactions. Participants 20 and 26 stressed that the news on tabloids are frightening, hence the need to apply caution. Most participants shared the views of participants 20 and 26, however, the researcher also noted that in addition to the above, lack of education and computer skills are among the draw backs of e-commerce adoption among SMEs in Nigeria.

## Theme 4: Attitude (Age, Occupational Relevance, Language and Education)

It is often said that age is only a number, however, in the context of adoption of e-commerce by SMEs in Nigeria, age play a strong role as evidenced by the research findings. The older generation and by extension the operators of most small and medium scale enterprises are only content with the use of mobile phones as evidenced by the findings of this study. Traditional economic sectors such as agriculture, fishing, carpentry, petty trading, etc, account for major portions of SMEs in developing country such as Nigeria. Participant 22 summed up the views of many thus: ''at this age and with this harsh economic crisis, with plenty mouth to feed and other responsibilities to attend to; I cannot learn a technology, I have been doing this for the past 37 years, I don't need a technology for it''. In another setting, participant 29, asked ''I already have customers who come from far and near to by my products, why do I need the computer''? The lack of awareness and detailed knowledge of the e-commerce benefits forms the fundamental reasons for lack of usage of ecommerce in Nigeria. This study also noted among the SME operators issues bothering on general and computer illiteracy and lack of English language skills as another major barrier to ecommerce usage in Nigeria. Though, English language is the lingua franca, but majority of the population are much more comfortable in their various local dialects with less English language reading and writing skills. Unfortunately, the content of the internet are largely written in English language in Nigeria.

These does not seem to be peculiar to Nigeria, research findings from other developing countries also lay credence to the problems faced by Nigerian SMEs. For instance, Kurnia, (2006) and MacGregor (2010) found poor electrical supply as well as low tele-density as barriers to e-commerce in Indonesia. Furthermore, Thulani et al., (2010) low usage of credit cards and education as hindrances to e-commerce uptake in Zimbabwe. However the fast and efficient development of e-commerce in developed countries such as the USA, UK, Canada and others, are attributed to the robustness of the infrastructures already in place in these countries as well as total government support backed by an efficient legal framework. Unfortunately, the

legal frameworks of most developing countries and in fact Nigeria are still grossly inadequate.

Findings of this study revealed further that the use of the internet technology has helped many SMEs to become more productive, and does so particularly via improvements to sales, marketing and procurement processes by amplifying information flow as evidenced by the few organisations visited by this researcher who have adopted e-commerce in their business transactions. The findings of this study further revealed that the younger generations, especially students, are vast at trying out new technologies and the number of visitors to internet cafés attests to this. Furthermore, visits by this researcher to several cyber cafés in Lagos, Abuja and Enugu shows that it is mostly the youths that are embracing the internet technology compared to the older generations and business owners and SME operators. Based on this, the researcher concludes that the younger generations are more likely to adopt e-commerce services in their businesses and lifestyles in future. Finding further revealed that the youths, working class and most urban dwellers currently have the highest internet usage in Nigeria and the children of this generation are more likely to adoption all forms of technology than the older generations. Many participants believe that all age ranges are simply content with face-to-face buying and selling as opposed to pressing computer keys and packing wires.

Based on the above, this researcher contends that the multi-cultural settings in Nigeria at the moment and the level of education cannot effectively support ecommerce as the conditions are not *"ripe"*. This is due mainly to lack of confidence in the online technologies and the online platform which provides a total deviation from the status quo and the limitations it places on personal contacts and languages which have been an age-long mode of trade in these multi-cultural/ethnic Nigerian settings.

## CONCLUSION

The adoption of the information and communication technologies, as evidenced by some participants in this study, is only a part of the story. However, of great importance is the use made of them. The study findings revealed that some SME's in Nigeria use the internet for variety of commercial and product related purposes, on the average, they have limited understandings of the full range of benefits of electronic commerce. This lack of awareness of the great potential of e-commerce is one important barrier to its adoption. Furthermore, inadequate investment in skills and the relative high initial costs in setting up e-commerce strategies all form solid bedrock for the non-usage. The advent of internet based electronic commerce offers considerable opportunities for firms to expand their customer base, enter new product markets, and rationalise their businesses. Although problems of definitions and measurement of electronic commerce make it difficult to gauge the phenomenon, available data indicate impressive growth in the rate of adoption of the internet by small and medium scale industries in the developed countries such as the United Kingdom, USA, Canada, the wider EU, Australia and other emerging markets such as China, India, Brazil, Singapore, etc. It is therefore correct to state that SMEs appear to be gradually bridging the gap in uptake in comparison with larger firms. Of note is the fact that so much have been written about the internet and e-commerce by virtually all comers such as pundits, economists, business researchers, IT experts, essayists; unfortunately, intermingled with these excellent studies and useful insights are monumental collections of hyperboles.

This study therefore is a counterbalance of some sorts, enabling small and medium scale businesses, policy makers, future researchers and future generations to assess as well as understand the internet and e-commerce in-depth and apply same to their daily business pursuits within the Nigerian context and other developing countries. It is

evident from the findings of this study that the internet is not yet a universally accessible resource in the developing countries in general and Nigeria in particular. It was also discovered that Nigeria still lacks the necessary policies and infrastructures that would enable widespread usage of the internet. Despite the dearth of infrastructures in the Nigerian context, this research contends that the internet has enormous potential as a tool for economic and social development. While few SMEs have joined the bandwagon as evidenced by the findings of this research, the study findings further revealed that the extent of adoption is hampered by a range of other obstacles including lack of government policy frameworks, the lack of micro finance from the banks, and ignorance on the part of possible users about the enormously beneficial and potentials of e-commerce services.

The poor levels of education of most SME operators, as well as poor English language and ICT skills, the cost and maintenance of computers and its accessories all combine to form the formidable barriers to adoption of ecommerce by small and medium scale industries in the Nigerian context. It is also of interest to note that despite these insurmountable limitations as presented above, it appears that ecommerce can indeed be relevant to the Nigerian SMEs as it has been adopted in full by conglomerates and most large organisations in the country. Moreover, this study discovered that e-commerce can be an extremely beneficial tool among Nigeria SMEs provided that the identified problems are dealt with by the relevant bodies and the government demonstrates that they have the political will to address these and other barriers that currently stand in the way of widespread adoption. Findings of this study have therefore provided a better understanding of the benefits and barriers of e-commerce. It has also stressed on the benefits which the Nigerian SMEs can derive from its adoption and its overall impact on the Nigerian economy.

## RECOMMENDATIONS

SMEs of various shapes and sizes in the developed countries have greatly embraced in the internet as a channel for business promotion. However, only few SMEs in the developing countries such as Nigeria have not really understood the importance of electronic commerce adoption. These difficulties notwithstanding, very few SMEs have embraced electronic commerce but are hampered by the general national infrastructures such as poor education, communication, ICT, political/legal framework, etc. Based on the above, these authors recommend that:

1.  A detailed political/legal framework with high level government support will assist in the adoption of electronic commerce by most SMEs in Nigeria;
2.  As SMEs are among the greatest employers of labour, there is need for government as all levels to provide the necessary infrastructures such as schools, computer literacy centres, as well as local libraries to assist in the development of ICT;
3.  There seems to be low awareness of the importance of electronic commerce as evidenced by the findings of this study, therefore the creation of awareness using both the electronic and print media and in various languages will assist to create greater awareness and could encourage adoption of electronic commerce;
4.  In order to assist the younger generations, ICT must be made compulsory in schools, colleges and universities as these are not currently the case based on the findings of this study;
5.  All stakeholders such as financial institutions, governmental bodies, at all levels, as well as Internet Service Providers (ISP) could play active role in educating, encouraging and practicalising the importance of electronic commerce to various SMEs and these will ultimately assist in the adoption.

## Contributions

This study has provided policy makers, managers of SMEs, and other stakeholders with adequate tools to redevelop and reshape e-commerce applications to fit into their specific and cultural context, which will on the long run produce results of imaginable standards. More so, as Nigeria's tele-density rate has improved greatly following the deregulation of the telecom industry; however, more government policies and support may be required to provide an enabling environment for widespread e-commerce adoption. Furthermore, small and medium scale industries in Nigeria have been provided with adequate tools to restructure their e-commerce applications to fit their specific localities. As evidenced by the data for this study, only by careful understanding of the prevailing business and cultural conditions can e-commerce application be successful.

## Limitations and Future Research

Although the research rests upon a rather extensive empirical investigation, the study should in no way be seen as to offer conclusive findings, as it focuses on an area subject to constant changes due to technological advances and changing consumer behaviours; more-so as the youths are on technological rampage in Nigeria.

Having undertaken this colossal task, there is still room for further research, it is important that more empirical studies are undertaken in the areas of cross-cultural settings to further understand more reasons for SMEs and consumer acceptance and/or rejection of e-commerce in Nigeria. It is also hoped that this research will serve as a foundational benchmark for further studies of global and e-commerce trends among various cultural settings and other SMEs within the global arena.

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