

The role of e-commerce in the competitiveness of SMEs in developing economies: evidence from Nigeria

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Abstract

The aim of this paper is to understand the role of e-commerce in increasing the competitiveness of SMEs in developing economies. The study adopts a qualitative methodology which involves in-depth, semi-structured interviews and direct observation in order to derive answers to such questions as 'why' the system is adopted and 'how' the developing economy conditions influence the system. The study suggests that the adoption of e-commerce by small businesses in developing economies enhances customer relations and satisfaction, global awareness of product and services, market expansion, reduced market costs and increased competitiveness. Other findings indicate that increasing access to the Internet and changing lifestyle enable the success of e-commerce in developing economies. The main implication of the study is that small business owners should be encouraged to adopt e-commerce in order to enhance their market expansion and global competitiveness. The study is limited to the extent that it can be generalised to a wider population of small businesses.

Key words: *E-commerce, e-business, innovation, small enterprises, internalisation, globalisation.*

Introduction

The Internet is one of the most powerful discoveries ever made (Shek *et al.* 2013). As an agent of globalisation, the internet has made the world much smaller than before, bringing people closer in spite of distance, making communication easier, improving healthcare, education and access to information (UNESCO 2009). Shek *et al.* (2013) estimates the number of internet users worldwide to be about 5 billion. Africa and other developing countries have not been left behind in this growing phenomenon as internet connectivity has become increasingly popular in recent years (Moriarty *et al.* 2011). This is a far cry from the early 90s when access to telephones was non-existent and the internet was still foreign to majority of Africans and other developing countries (Moriarty *et al.* 2011).

Over the past decade, internet users in Africa are increasing 9 times faster than in Europe and 20 times faster than in North America (Nielson 2010). As at June 2012, African internet users were estimated to be around 1.1 billion which is 7 percent of the world's internet users (UNESCO 2009). Nielson (2010) suggests that over 110 million people living in the continent regularly use the Internet, with an estimate of 10 million new users every year. This shows that despite low incomes and limited telecom infrastructure, Africans have embraced the concept of the internet fully (Hattingh *et al.* 2012). Though most Africans and other third world countries cannot afford a PC or laptop, the increasing popularity of smartphones has provided an avenue for them to connect to the internet and keep up with activities around the world (Shek *et al.* 2013).

In Nigeria for example, it has been estimated that almost 48.5 million people, constituting about 28.4 percent of the population, are connected to the internet (Hattingh *et al.*

2012). Since the internet started becoming a popular phenomenon in Africa, some businesses have realised that to remain competitive, they must capitalise on the resources presented by information and communication technology (WTO 2013). This means using the internet to market, buy and sell products and services (Jagoda 2010). This is known as e-commerce which does not only enable a business to reach its immediate market, but also provides access to a huge global customer base (Jagoda, 2010). Apart from this, e-commerce presents opportunities for Small and Medium sized Enterprises (SMEs) who have limited resources to reduce operating costs and at the same time increase profitability by overcoming logistic problems (ITC 2013). Regrettably, most businesses in Africa and other third world countries have not taken advantage of the benefits of the internet to market their products and services (Jagoda 2010; Hattingh *et al.* 2013; WTO 2013).

This is understandable to an extent as there are major challenges faced by SMEs who decide to capitalise on using the internet to expand their business. Such challenges include limited infrastructure, financial impediments, high inflation rate and price sensitive consumers (Moriarty *et al.* 2008). Moriarty *et al.* (2011) also suggest that high internet fraud rate especially in Nigeria and Ghana is also a limitation to the growth of e-commerce in Africa. On the other hand, Jahanshahi *et al.* (2011) suggest that SMEs sometimes create challenges for themselves as a result of lack of thorough market research and inadequate business strategy. Similarly, a study carried out by International Trade Centre (2013) found that most owners/managers of SMEs create challenges for themselves as a result of lack of the required skills to combine physical business operations with e-commerce.

Regardless of these challenges, it is apparent that small businesses need to take advantage of the potentials e-commerce offers to businesses in this increasingly integrated

world (WTO 2013). This is especially true in developing countries where operating costs are significantly high and bureaucracy and inadequate infrastructure affects ease of doing business (Moriarty *et al.* 2011). Also in developing countries, trends and lifestyles are changing as the continent rapidly urbanises creating a fast growing middle-class with rising discretionary incomes (WTO 2013). For instance, the use of the internet to buy goods and services in Africa is on the increase as more people realise that it is more convenient to shop online than go to the stores (Hattingh *et al.* 2012). In Nigeria for example, Euromonitor (2011) reported a 25 percent increase in internet shopping between 2010 and 2011. Therefore, it can be seen that as the developing countries develop, e-commerce will provide significant benefit to SMEs to not only reach out to their immediate markets but also catch the attention of global consumers and compete effectively with larger companies.

As SMEs play a vital role in job creation and economic development in developing regions (Ihua 2005; 2010; Anyadike-Danes *et al.* 2013; BIS 2013), it is important to understand how utilising the internet can increase market share and profitability. Therefore, the main objective of this study is to understand the role e-commerce plays in increasing the competitiveness of small businesses in developing economies with its burgeoning middle class and rapidly changing lifestyle. It focuses on small businesses in Nigeria as an example and explores this avenue using a number of small businesses which have been successful in their businesses by applying the potentials found in information technology. Specifically, the study aims to investigate:

- The significance of e-commerce to the competitiveness of SMEs in Nigeria;
- What motivates SMEs in Nigeria to adopt e-commerce in order to increase competitiveness;

- The major opportunities in Nigeria which make e-commerce favourable for small business' competitiveness;
- The major challenges in Nigeria which hinder small businesses from adopting e-commerce.

The article is structured as follows. It commences with a review of the theoretical framework, exploring the role of e-commerce in developing economies, followed by the research methodology. The findings are then presented and discussed. Finally, the implications are provided based on the research results.

The theoretical framework

The concept of e-commerce

Over the years, rapid advancements have been made in Information Technology and many organisations have sought to capitalise on this to boost their businesses (Moriarty *et al.* 2011). One of the offshoots of this is the introduction and popularity of the term 'e-commerce' (Jahanshahi *et al.* 2011). Simply put, e-commerce can be described as the process of using the internet for activities such as buying and selling products and services as well as other business activities (Jagoda 2010). E-commerce provides an avenue for firms to sell its products and services, advertise, re-stock on supplies, bypass middlemen, keep accounts, simplify filing, and provide information (Jahanshahi *et al.* 2011).

This business technology has created a prosperous opportunity to surpass the boundaries of costs and time, improve the circulation of information, capital and production, change the pattern of trade and provide a competitive environment for businesses (Jagoda 2010). Two major types of e-commerce business model can be distinguished: Business to

Business (B2B) and Business to Consumer (B2C). B2B involves organisations trading amongst themselves in large volumes with minimal profit margins on each product, while B2C involves trade between business and individuals, and characterised by small volume trading with large profit margins on each product (Eriksson *et al.* 2008). The focus of this paper is, however, on the latter which is the most widely used.

While e-commerce is being utilised globally to an extent, the level of its application varies from one location to the other because of certain factors which create either a positive enabling environment or limits it (Deakins and Freel 2012). These factors include the political, economic, social and technological environments.

Motives behind the adoption of e-commerce by SMEs

Motivation has been described as intrinsic (internal factors) or extrinsic (external forces) which brings about certain behaviour (Wright 2010). Intrinsic factors are persuasive, inducing certain wilful behaviour, while extrinsic factors coercively demand certain behaviour (Wright 2010). In the case of SMEs adopting e-commerce, it is submitted that this may be as a result of extrinsic factors which compel businesses to either integrate e-commerce in its operations or lose out on opportunities for growth and expansion. This is consistent with a report by World Trade Organisation (2013) which indicates that SMEs which do not maximise the use of e-commerce in their businesses may experience reduced profitability and productivity.

On the other hand, SMEs that have fully integrated e-commerce into their business operations have grown more quickly and increased their customer base compared to businesses that have not done so (Jahanshahi *et al.* 2011). Similarly, a report by Nielsen

(2010) shows that over one third of consumers globally prefer to patronise businesses which offer products and services online rather than traditional brick and mortar stores. Since the main objectives of most organisations focus on profitability and outperforming their competitors, innovation is a key element to businesses as they must continually evolve business strategies and change their business models to reflect the rapidly changing environment in the 21st Century (Moriarty *et al.* 2011). Therefore, to survive and grow, adopting e-commerce is one of the innovative means by which businesses can remain competitive in this age of rapid technological advancements.

Among the several reasons advanced to justify the adoption of e-commerce in business, the most compelling would be the opportunity it provides SMEs to gain access to international/regional markets without logistical and geographical challenges (ITC 2013). SME's have also begun to use e-commerce as a competitive strategy rather than for making business transactions easier (Jagoba 2010). It is interesting that SMEs have moved from information stage of using e-commerce to proposing its use as a globalisation strategy (Offsein and Childers 2008). This means that SMEs in one geographical area can look beyond their local markets and compete with larger companies for customers on a global scale to increase profitability, develop brand awareness and encourage growth (ITC 2013; Moriarty *et al.* 2013). In addition to these, utilising the internet for business transactions motivates the adoption of the e-commerce technology in order to improve their products and services by monitoring their customer awareness and feedback (Okolo and Obidigbo 2014).

Opportunities for SMEs to use e-commerce

There are numerous opportunities for the adoption of e-commerce by SMEs, including the increased access to the internet. Interestingly, in Africa alone, the number of internet users is

increasing dramatically at a much faster rate than in Europe and in North America (Jahanshahi *et al.* 2011). In support of this, studies conducted by Hattingh *et al.* (2012) found that around 60% of those in Africa's major cities connect to the internet regularly. This is in contrast to the early years of the "dotcom" boom where the internet was more a notion than reality (Jagoda 2010). This has shown that in spite of low income per capita, inadequate or non-existent infrastructures and other challenges, African consumers have fully embraced the concept of the internet (Hattingh *et al.* 2012). This phenomenon may be the result of the recent invasion of smartphones into the African market which has enabled those living on the African continent to connect to the internet without necessarily owning a PC or laptop (Okolo and Obidigbo 2014).

As a direct/indirect result of this, the lifestyles of people in developing countries have changed dramatically. Directly, the effect of globalisation has spread faster with more people becoming aware of trends and happenings in distant places. Indirectly, these people have consciously or otherwise adopted these trends which have resulted in lifestyle changes. This could be as a result of travel, exposure and increased internet accessibility and connectivity (Zerenler and Sahin 2013). This change in lifestyle has impacted on the current attitudes, behaviours and needs of consumers in developing countries.

The average African consumer, for example, is more sophisticated than ever before and requires an equally sophisticated yet practical shopping experience via the internet in the comfort of their homes. E-commerce is gaining momentum in Africa and other developing countries because apart from the convenience of not having to transport oneself to buy goods, consumers are also attracted to online purchases because of the variety provided which may not always be obtainable physically (Moriarty *et al.* 2011).

Consequently, for SMEs who respond strategically to the changing methods of how consumers shop, there are numerous opportunities to expand into other markets and take advantage of the large number of consumers available globally without geographical challenges (Jahanshahi *et al.* 2011; ITC 2013). For instance, WTO (2013) estimates that in 2011, e-commerce sales globally reached around \$1.25 trillion. This figure is hardly surprising considering that Euromonitor (2011) observe in its study of the Nigerian market that internet shopping is gaining momentum at an alarming rate. Comparing the rate at which Nigerian consumers purchased goods on the internet between 2010 and 2011, Okolo and Obidigbo (2014) found that N62.4 billion (\$390,000) was spent in 2011 compared to N49.9 billion (\$311,875) spent in 2010 which is an outstanding growth of 25 percent. These figures are bound to increase in the coming years as technological advancements, rapid urbanisation, a growing middle class and rising discretionary incomes create a demand for a modern shopping experience which combines convenience with sophistication (Hattingh *et al.* 2012; Moriarty *et al.* 2008).

Challenges for using E-commerce

In relation to SMEs and e-commerce, the most significant issue affecting the adoption of e-commerce stems from under-development in information and communication technology (ICT) in African nations (WTO 2013). Limited ICT infrastructure has severely limited the ability of companies to provide efficient service on the internet (WTO 2013). Despite the increasing number of internet users in Africa, internet connectivity is still relatively unstable in some areas and virtually non-existent in others and this prevents some consumers from being able to access the internet and take advantage of goods and services that are offered on it (Hattingh *et al.* 2012).

In addition, internet service in most developing economies is unstable and inferior compared to that in developed countries, telecom providers charge exorbitant rates for connectivity and this discourages many consumers from shopping on the internet (Okolo and Obidigbo 2014). However, as a result of Smartphones flooding the market, most people in the developing countries use their mobile phones to carry out functions on the internet that users in developed countries would perform on a laptop or PC (Hattingh *et al.* (2012). Another major issue inhibiting the growth of e-commerce stems from inadequate internet protection which seriously impedes the development of e-commerce because of consumer's fear of fraud and identity theft (WTO 2013).

In African countries especially where the issue of fraud is high, a large number of consumers still refuse to purchase goods and services online (Okolo and Obidigbo 2014). Similarly, Moriarty *et al.* (2011) suggest that in spite of Nigeria's rapid urbanisation and growing middle class, e-commerce is still in its infancy because of the risks associated with online transactions and scepticism of the trend. Furthermore, logistics and supply chain problems relating to payment options, shipping and delivery and bad road networks are also limitations to the growth of e-commerce in developing countries (Moriarty *et al.* 2008). Apart from these external factors limiting the adoption of e-commerce, limited skills of business owner-managers to engage in e-commerce is also a challenge in many African SMEs and in other developing countries (ITC 2013).

Research methodology

The study employed a qualitative approach based on the assumption that individuals construct their own meanings from their experiences (van Manen 1990). The method

involves in-depth, semi-structured interviews, direct observations and archival data/records. Archival documents were examined to see how adoption of e-commerce has impacted on the performance and case material built up on each company. Although owner-managers were the main target for interviews, sales managers were also interviewed where available. This method, amongst other benefits, enabled the aims of the study to be more effectively achieved. It also enhanced the richness and depth of the data collected despite the small sample size (Ekanem 2007).

The case study firms consisted of ten companies of between 1 to 5 years old and employing 100 employees or less. The business sectors included network marketing, e-publishing, e-investments, e-retail, social media marketing, e-marketing, web applications and software. The largest firm had 100 employees and the smallest had 5 (see profile in Table 1). The turnover is expressed in British pound sterling (GBP) since it is the world's oldest and stable currency. The ten case study firms were selected through the help of a freelance web designer and an enterprise agency executive who acted as 'gate-keepers' (Stockport and Kakabade 1992). The choice of ten firms was influenced by Eisenhardt (1989 p.545) who argues that *'...while there is no ideal number of cases to include in the sample, a number between 4 and 10 usually works well. With fewer than 4 cases it is often difficult to generate theory..., with more than 10 cases it quickly becomes difficult to cope with the complexity and volume of the data.'*

The interviews were in two parts. The first interviews were exploratory in nature (Jarvis *et al.* 1996) and by telephone. They took the form of a personal open-ended reflective interview where each participant was asked to narrate their life history in business from start-up to present. They established the initial boundaries for the research as well as providing

details of the owner-managers' background and personal biographies such as age, education and training, and experience (Ekanem 2007). They also focused on the motivations for starting the business and the problems the business is facing. This helped to throw up the major issues of the study and was also useful in building rapport (Gill and Johnson 2010).

The second part of the interview was face-to-face and in-depth. In this part of the interview, participants discussed the main influences/motives for adopting e-commerce and their experiences with e-commerce in running their business. In this part of the interview, owner-managers were probed to discuss in detail the emerging themes from the first part of the interviews. These included the impact of adopting e-commerce on their business performance. It was also at this stage of the interview that their ledgers and books of accounts were examined to confirm the impact of sales figures.

The first interviews lasted for about an hour, but the second lasted for one and half hours as matters were dealt with in detail. With the verbal agreement of the owner-manager all the interviews were tape recorded, on the understanding that the material provided would be treated as confidential. During this part of the interview, the interviewer took the opportunity to review meanings of what was heard (for example, 'Did I hear you emphasise that...', 'Would this be a fair interpretation ...?', 'Is my understanding correct that ...?').

Apart from asking questions, the researcher watched, listened and learned because not all information are produced by informants responding to questions: they may be unsolicited (Ekanem 2007). The presence of the researcher during the second part of the interviews provided the opportunity for direct observations of some of the relevant behaviour, and such observations served as yet another source of evidence in the case study (Yin 2014). This

allowed access not only to what owner-managers said during the interview but also the way they use e-commerce in their business.

Data Analysis

The data in this study were collected and analysed using an inductive process of recording, tabulating, coding, and constantly comparing emerging codes and categories with data until meaningful ideas emerged (Yin 2014; Ekanem 2007). Categories were allowed to emerge according to the topics emphasised by each participant related to their adoption of e-commerce and the perception of its significance. The process of analysing the data began as soon as the researcher started collecting data. It was ongoing and inductive as the researchers were trying to make sense of the data collected (Shaw 1999).

The data analysis utilised a set of techniques such as content analysis, pattern-matching, and explanation-building technique (Yin 2014; Ekanem 2007). Content analysis involved listening to and transcribing the tapes, reading the transcripts to list the features associated with the behaviour of each owner-manager and establishing categories which were then developed into systemic typology. These features included motivations, opportunities and other influences for adopting e-commerce.

Pattern-matching technique involved examining whether there were any interesting patterns and how the data related to what was expected on the basis of common sense or previous theory (Yin 2014). The period for which the companies have been using e-commerce and its impact on performance was examined for each company and matched. This involved comparison of costs and turnover. It also involved examining whether there were

inconsistencies or contradictions between owner-managers' perceptions or attitudes to e-commerce.

Explanation-building technique allowed series of linkages to be made and interpreted in the light of the explanations provided by each respondent. The aim was to build a general explanation based on cross-case analysis. Explanations were also collated about the significance, motivations and opportunities for use of e-commerce.

Results

The profile of the case study companies and the summary findings from the interviews are presented in Table 1 and discussed below:

(Insert Table 1 here)

Significance of e-commerce to the competitiveness of SMEs

The participants were asked about the significance of e-commerce in their businesses. The responses were mainly customer relations and satisfaction, and global awareness of products and services.

Customer relations and satisfaction

The study firms expressed the view that e-commerce has helped them to create good customer relations. For example, the owner-manager of Company G, who owns and manages a social media marketing business, acknowledged the importance of e-commerce as the ability for her to render and monitor her services through an online portal. She explained as follows:

“By setting up my website which gives details of my experience, I was able to freelance, get jobs and reach a wide array of clients. It also helped me to monitor the views and responses to my work through the internet” [Company G, Social media marketing].

Participant E who owns and manages an online clothing retail business which distributes to every location within Nigeria indicated that she gets feedback from her customers through the quick and easy access contact menu. She emphasised that e-commerce has helped in creating strong customer relations and satisfaction:

“Using an e-commerce strategy has helped me to get closer to my customers who I now consider as my fans [laughing]. They also give me tips on how to improve my business which is very beneficial to me. This could not have been achieved through a traditional store because some people will not let you know if your product is not up to standard” [Company E, E-Fashion Retail].

Global awareness of products and services

The owner-manager of Company A, a network marketing company, explained how e-commerce has changed his perspective of reaching a large audience by creating a global awareness for his products. He reflected:

“Before I discovered e-commerce systems, I used to have to arrange several meetings with clients about 5 a day which was very tedious. However, now I use network marketing through the internet by means of software from the comfort of

my home to reach out to several people who buy my products online and I receive a good commission on that” [Company A, Network marketing].

The above quote represented the views of other companies in the study.

Motivation for using e-commerce system to increase competitiveness in SMES

In seeking to understand the role of e-commerce in SMEs in developing countries, respondents were asked about their motivation for using e-commerce. A number of motivating factors were established including inadequate capital for business start-up, minimising business costs, and product and service marketing.

Inadequate capital

With regards to inadequate capital, the owner-manager of Company E, an internet-based clothing retail store, commented:

“Opening my own store was not possible due to inadequate capital. However after attending an innovative forum on E-business, I realised I could start an e-commerce site for my clothing outfit. This has tremendously helped me gain traction for investment for my business” [Company E, E-Fashion Retail].

Inadequate capital was also acknowledged by the owner-manager of Company J who was able to venture into online foreign exchange investments by setting up of an e-commerce website. He explained that the traditional ‘brick and mortar’ approach would have cost him a minimum of £2,000 to set up but with his e-commerce system, he spent only £360 for the system set-up and £20 per month for technical support.

Minimising business costs

The case study firms also mentioned minimising costs such as rent, utilities and labour as a motivation for adopting e-commerce. For example, the owner of Company D explained how poor infrastructure such as electricity and transportation made him spend the bulk of his revenue on overheads costs. As cutting down cost was necessary, he was inspired by the eBay online concept to start a similar virtual trade which required minimal business expenses.

The marketing manager of Company F, an e-publishing company, claimed his company was forced to switch from traditional means of conducting business when their annual sales and profitability reduced by 15 percent from the previous year in 2010. He remarked:

“No one had to tell us we were doing something wrong. I was at an event when a colleague of mine showed me a journal on his I-pad. That technology was just foreign to me but the concept of people reading books and magazines on a device dawned on me. The reduction on overhead cost was substantial” [Company F, E-Publishing]

The owner-manager of the publishing company indicated that the concept of e-commerce eliminates overhead costs associated with traditional publishing. He intimated that after subsequent changes to incorporate an e-commerce system for purchasing their magazines, they advertised the new technological development and their sales gradually improved.

Products/services marketing

Participants mentioned that getting their products and services to the public was a reason for their decision to use e-commerce. For example, the owner of Company B, an electronic technology retail company, admitted that his motivation for e-commerce spawned from the desire of ‘showrooming’, which is the practice of examining merchandise in a traditional brick and mortar retail store, and then buying it online. Participants in Companies A, C, D, E, G and H gave similar reasons as Company B above. Their motive was to find a way to advertise and sell their products/services at a competitive price to consumers.

Opportunities for using e-commerce to increase competitiveness in SMEs

Apart from motivating factors, the case study participants also disclosed other factors which influenced the adoption of e-commerce in their organisations. These were in the form of opportunities such as increase in mobile device usage, increase in internet access, improved banking sector and changes in consumer lifestyle.

Increase in mobile device usage

Rising purchases of ‘hi-tech’ mobile communication devices in Nigeria was identified by the case study participants to be an opportunity for the successful usage of e-commerce in small businesses. For example, the sales manager of Company A explained that the increase in demand for gadgets and devices which have high speed internet connectivity, Wi-Fi and broadband influenced the adoption of e-commerce in his organisation. He emphasised that gadgets which enable wide screen display for browsing such as Near Field Communication (NFC) and which allow constant internet connections significantly boost online purchases through mobile devices.

Also, the owner-manager of Company I mentioned that several e-commerce companies are creating Mobile platforms for existing PC based programmes known as ‘apps’. He stated:

“This will be a revolutionary change in the already early stage of e-commerce in Nigeria because I have designed over 100 apps for different companies between January (2013) till date and I still have clients lined up to take advantage of this mobile opportunity” [Company I, Web Applications and Software].

He therefore confirmed that Nigerians are becoming technology ‘savvy’ and with improved internet connections, there will be no requirement for consumers to search for a computer terminal in order to purchase over the internet.

Increase in internet access and broadband

The case study participants mentioned that increase in internet conditions is a favourable factor to use e-commerce technology in business. The owners of Companies A, E and G shared a similar explanation of how increased internet availability has helped their businesses. They highlighted the fact that improved access to internet has increased the number of people who join social media sites. This has therefore increased the number of visitors to their e-commerce site because the social hubs are an avenue which they advertise.

The participant in Company F indicated that due to increased internet access, his company has experienced an influx of visitors daily to view his contents. He claimed his business has over 2,000 visitors a day with average purchase from 200-300 visitors daily. He reflected: ‘In 2010, our statistics on daily views was 270; in 2011 it was 650 views.’

Improved banking sector

The Nigerian banking sectors have apparently improved in terms of money transfer facilities and security. Several participants in the study shared their views on how the banking reforms in Nigeria have helped in the adoption of e-commerce. The owner-manager of Company D, an online general goods trader, claimed that improvement of E-banking facilities has helped his business with easier payment for transactions through EDI (electronic data interchange). He explained that this has encouraged the paperless exchange during transaction, unlike his earlier 'cash on delivery' transaction method. He commented:

“Two years ago, it was very difficult at the transaction stage because people barely wanted to pay through the website and so we had to deliver the goods to collect the money from them there. During this time, we experienced some robbery and had to stop this process” [Company D, E-Retail of General Products].

He narrated how this period affected his business negatively, but now, the transaction process of his business has been much improved due to recent regulations by the Central bank of Nigeria (CBN) on a 'cashless' system by which people have been forced to cut down on paper money spending.

Similarly, the owners of Companies A and E and the sales manager of Company F mentioned that consumers have been significantly encouraged to use the internet for payments. They explained that the recent payment changes by the banks have influenced Nigerians' spending lifestyle, leading to increase in online transaction since January, 2013 when the policy was introduced.

Improved security in the banking sector was emphasised by the owner-manager of Company J who trades in foreign exchange through his interactive website. He gave an account about how difficult it was to conduct his business few years ago due to the high level of fraud in the country. He paused and reflected:

“Doing this kind of business 5 years ago was almost impossible because then there was inadequate security of electronic data interchange links between the banks and switching companies such as MasterCard, Visa etc. This period encouraged a lot of fraud and discouraged many forms of cashless payment”

[Company J, E-Investment].

However, he pointed out that the benefit of the new cashless policy which limits cash spending has ensured that banks improve their security to international standards in order to retain loyal customers and this has favoured his business since inception.

Changes in consumer lifestyle

The case study participants also mentioned the changing lifestyle of Nigerian consumers which include increased desire for sophisticated foreign goods and home shopping, highlighting the relevance of e-commerce for a business system which makes it convenient for consumers to access their market without any hassle.

The owner-manager of Company B explained how difficult it used to be for Nigerian consumers to purchase electronic devices. He described how Lagos as a metropolitan city has a major electronic shopping centre known as ‘computer village’ but it is very difficult to

access products in this market. This encouraged him to begin an e-commerce business to help consumers to view and purchase goods without having to go to the shop. The owners of Companies A and D also mentioned the difficulty of access to scarce and specialized products such as foreign products in the Nigerian markets. Each of them explained that the difficulty to get information on where to find these scarce commodity in Nigeria but that their e-commerce search engine has made it easier for people to find these products.

Also talking about consumer convenience and the changing lifestyle in Nigeria, the owner of Company E described how beneficial e-commerce is to her business. She paused theatrically and remarked:

“It is not easy for the average ‘Lagosian’ [citizen of Lagos state] working woman who works from Monday to Friday to go shopping because the weekends are usually difficult due to traffic in Lagos, markets are crowded or some may want to rest from work stress” [Company E, E-Fashion Retail].

She explained the changing lifestyle where women prefer to shop in the comfort of their own homes even at weekends. She described her business opportunity of using the system as making it convenient for her customers to find and view the specific product they want or to select from a variety at their own convenience.

Challenges in using e-commerce in small firms

Finally, participants in this study were asked to identify from their experiences what they regarded as challenges in using e-commerce in Nigeria. Challenges identified included lack of consumer confidence, ICT infrastructure, technical support and excessive corruption.

Consumer confidence/trust

Participants identified the fear of transacting through the internet as a challenge of using e-commerce system. Some narrated scenarios of how this trust factor affected their business. During the interview, the owner of Company A whose network marketing business involves the sale of foreign products to a niche market disclosed that by monitoring the statistic of his e-commerce website, he receives over 300 visitors daily but transacts an average of between 10 to 20 purchases daily.

The owner-manager of Company H, an e-marketer who has received several questions and comments from customers, claimed that the majority of the questions he receives are requests for payment to be made during delivery or if his business has a contact address where payment can be made. He explains that trying to describe the process to customers discourages them from purchasing from him because they find it difficult to trust.

ICT infrastructure

The case study participants identified the lack of ICT infrastructure as a hindrance to their business. For example, the owner of Company F, an electronic publisher, narrated how his company decided to construct a new branch, mentioning that during this process, they surveyed the different locations for the project and also used the opportunity to survey their new 'e-magazine' awareness. He remarked:

“I was surprised when the results from the research team showed that only 4 out of the 15 selected states in Nigeria were aware that we had a website where people could buy and read our magazines despite all the advertisement we had done on television” [Company F, E-Publisher].

He explained that if this was developed, more people in the country would not have to spend as much on paper publishing; they would rather buy it cheaper online. The owner-manager of Company H, an E-marketing company, described the importance of ICT in terms of the huge amount he has spent on advertising their products on television and radio and blamed limited access to internet in rural areas. He claims that the internet will be the most cost-effective medium to broadcast and attract customers to view the products on their website.

Technical support

The case study participants indicated that costs of maintaining their e-commerce website was a challenge to their business and cited the limited number of IT personnel as a factor. For example, the owner of Company I, a web application programmer, commented:

“Most of the clients I've dealt with do not usually want to pay for the cost of maintenance. I agree that charges for this service may be above the budget for some small companies but I have limited staffs that are good at what they do and I have to pay them well to retain them” [Company I, Web Application Programming].

He described the skill level of several IT personnel whom he has interviewed for jobs as sub-standard and requiring more training and believed this will affect the outcome of the e-commerce establishments in Nigeria.

The owner of Company D described his e-commerce website as a high content site meaning it has several interactive features. He explained that as a trader, he displays all sorts of products for purchases and has to make adjustments when his stock is finished or add new products. However, he stressed that the cost of carrying out these procedures is huge because from his experience, there are limited technicians who can do the job properly.

Lack of security

The lack of security was a significant challenge mentioned by participants. The owner of Company B enumerated how lack of security has discouraged trust in purchasing from e-commerce websites. The owner-manager of Company I confirmed that security is the most important feature in the use of e-commerce. This is due to the exchange of bank details over a server which may not be secure. He emphasised that poor network security has encouraged 'hackers' to constantly try to infiltrate and access peoples' personal details on e-commerce websites.

Discussion

The aim of this study was to understand the role of e-commerce in the competitiveness of SMEs in developing economies using case studies, interviews and observation. The themes emerging from the study are the significance of e-commerce and the motivations for small business owners in developing economies to use e-commerce in their businesses, the opportunities for adoption of e-commerce by these businesses and the challenges they face.

The case study firms claimed that e-commerce serves as a marketing tool used to advertise their products not only to their local but also to foreign markets, thus enhancing good customer relations and global awareness of product and services. Therefore, a

significant motivation of adopting e-commerce in Nigeria is for globalisation which has implications for developing countries in terms of creating new opportunities (Offsein and Childers 2008; Moriarty *et al* 2013). Another important factor which influences the use of e-commerce identified in the study was cost minimisation. The participants commented on how unfavourable conditions in Nigeria have caused small businesses to incur a lot of business costs. Therefore, the adoption of e-commerce by these enterprises is seen as a competitive strategy not only for cost reduction but also for trading beyond their local market (Jagoda 2010; ICT 2013).

Research (e.g. Hattingh *et al.* 2012) indicates that more than a half of internet users in the world are in the developing continents such as Asia and Africa and that about 60% of people in Africa's major cities connect to the internet regularly (Hattingh *et al.* 2012). There has also been an increase in the change in consumer lifestyle where people prefer to search the internet for variety, cheaper prices and convenience of not having to go to a physical market (Euromonitor 2011). These factors have significantly influenced the use of e-commerce by small enterprises in the developing countries. The rapid advancement in mobile technology provides another opportunity which actually provides support for increased internet access.

The most dominant issue in developing countries is unfavourable economic and political conditions, which underlies most inhibitors like poor technological infrastructure, erratic power cuts, and lack of public awareness (Mashanda *et al.* 2012; Taylor and Owusu 2012, White *et al.* 2014). Due to poor technological infrastructure in developing countries the network is very slow and unreliable with a limited coverage. The current poor quality infrastructure and epileptic supply of electricity in Nigeria in particular has a major impact on

SME development (Nwosu et al. 2013). A number of research studies conducted in Nigeria (e.g. Aina 2007; Nwosu et al. 2013) have identified that less than 20% of the Nigerian population have access to stable electricity supply, thus hindering e-commerce adoption by small enterprises. This is an issue which is also applicable to other developing countries.

The lack of security is a major challenge facing small enterprises in adopting e-commerce. Consumers in developing countries are concerned about safety online as they have not gained confidence in online business (Alam *et al.* 2011; Mashanda *et al.* 2012; White *et al.* 2014). It is more difficult to establish trust between partners in e-commerce than in traditional commerce. Yet trust and security are more important in e-commerce than in traditional commerce since online services and products are not immediately verifiable (Gefen & Straubb 2004, Shemi 2012). The lack of technical support underlies internal factors that affect internet and e-commerce adoption of the firms in developing countries such as lack of qualified staff to develop and support e-commerce website from firm characteristics (Taylor and Owusu 2012; White et al. 2014).

Conclusion

By conducting a qualitative research, this study was able to explore an in-depth view on the role of e-commerce in small businesses in a developing country such as Nigeria. The findings suggest that e-commerce enhances strong customer relations and global awareness of product and services and the main motives for small businesses in developing countries adopting e-commerce were to reduce general costs of operating the business, and expansion into both local and international markets. There was also evidence to suggest various enabling and challenging factors for adopting e-commerce by small firms in developing economies. The enabling factors include increase in internet access, increase in mobile devices, improved

banking sector and changes in consumer lifestyle, whilst challenges include lack of security and trust, poor ICT infrastructure and inadequate technical support.

The implications of these findings are three-fold: First, small business owners should be encouraged to adopt e-commerce in order to enhance their market expansion. Therefore, it is suggested that business owners should adopt a learning approach i.e. being ready to experiment with new things and adapting as they learn from experience of what works and what does not work. The second implication of the study is for business owners to endeavour to maintain data security by preventing unauthorised disclosure of confidential information through the internet.

Thirdly, since SMEs have been established to be the backbone of an economy, it is important for policy makers to ensure these firms are protected and helped to maximise their potential. As part of encouraging the adoption of e-commerce by small businesses in developing economies, policy makers should be advised to create a central e-commerce package in which small firms can register and purchase the easy-setup software system at a subsidised cost. This will help small businesses to strive for competitive advantage with larger firms and therefore generate more income through tax (ICT, 2013). Also to encourage the adoption of e-commerce, the government should address major challenges such as poor ICT infrastructure, internet fraud and to improve technical support, there is clearly a requirement for the Ministries of Information and Technology or their equivalents in developing countries to invest more in Computing and IT development (Shemi 2012).

This study makes contribution to the growing body of literature on the role of e-commerce in small businesses in developing economies from the Nigerian example. It sheds

lights on the significance of e-commerce in the small firm sector of these countries, the enabling factors as well as hindrances. It also provides insights in understanding SME e-commerce adoption factors in other contexts with similar characteristics. The qualitative methodology adopted for gathering information has provided clear insights, good quality and rich data from the business owners themselves, thereby leading to a better understanding of the subject matter as opposed to other methods of collecting data.

The study has several limitations which suggest the implications for further research. The major limitation of the study is the extent to which the study can be generalised to wider population of small firms since it was based on only ten case studies drawn from different sectors in only one country and which were not randomly selected. Therefore, a large-scale study of businesses from more than one developing country would be necessary to test out the research results to a wider less heterogeneous population.

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