

Awareness and Readiness to Adopt Electronic Commerce by Small and Medium Firms in Borno State

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Abstract— This study explored the awareness and readiness to adopt e-commerce by small and medium firms (SMFs) in Borno State, Nigeria. A semi-structured interview guide was used to collect data from 25 SMF owners in Maiduguri city. Recorded data were transcribed verbatim, coded and manually analysed through thematic and content analysis technique. This study reported that SMFs in Nigeria fully understand the concept of e-commerce as described by various respondents. Also, this study found that adoption of e-commerce technology by SMFs depends on managements' decision and readiness. In addition, some SMFs are already adopting and some are ready to adopt e-commerce in the day to day transactions of their businesses provided appropriate infrastructure and encouragement are made available by government.

Keyword— Small and Medium Firms, E-Commerce Readiness, E-Commerce Awareness, Technology Adoption, Nigeria.

1 INTRODUCTION

The background of this research contain a short review of archival studies relating to the concept of small and medium firms (SMFs), the electronic commerce (e-commerce) technology concept, level of awareness and readiness to adopt electronic commerce, and importance of e-commerce technology among SMFs. In the following section, the researchers presented the methodology, the analysis of demographic profile, interview analysis and discussion, and conclusion of the research.

2 BACKGROUND OF THE STUDY

In the developed countries of Western Europe, North America and the newly industrializing countries of Asia, research has shown that a consensus exist among SMF owners that implementation of e-commerce technology will transform business activities (Oluyinka et al., 2014; Abiso and Ajagbe, 2018). However, in Nigeria, there is a copycat approach in adopting e-commerce technology (Usoro, 2010). However, for Jamali et al. (2015), family SMFs beign the majority of businesses and are the most spread businesses across the world, play a dominant role in the global economy. This is done by creating a safe and transparent investment environment and overcoming the milieu of economic crisis. Ukoha et al. (2011) stressed that family SMFs are the crucial sector, not merely based on their critical involvement in economy, but that they present long-term steadiness and responsibility. They represent 70-90% of the global gross domestic product (GDP), 50% of the GDP and employment in US (Oluyinka et al., 2014; Olatokun and Kebonye, 2010). In Europe, over 60% of the business organizations in most of the industries are SMFs (OECD 2009). In Australia, two-thirds of SMFs are dominant form of business (Voges and Pulakanam, 2011). Whereas in Japan, over 90% of local ventures are SMFs, 95% of the private firms in the Middle East are dominated by small and medium firms sector.

This comprise of about 98% of businesses in Iran (Usoro, 2010; Ukoha et al., 2011; Jamali et al., 2015b). Hence, national economic growth in many societies are highly dependent on contribution from family SMFs. Thus, such group of firms has direct impact on poverty reduction and employment.

Eventhough, as argued by Ukoha et al. (2011) that the adoption of e-commerce by SMFs in Nigeria is a new development, the internet services have widely been accepted among large and some medium sized firms. Thus, most SMFs are still lagging behind in the adoption of e-trading. Nonetheless, the inability of this category of firms to take advantage of this innovative technology forms the crux of this research. Previous studies have shown that the adoption of information technology (IT) by SMFs is still lower than expected in Nigeria and many other developing countries (Usoro, 2010; Oluyinka et al., 2014). Several barriers to IT adoption have been identified, including: lack of knowledge about the potential of IT, a shortage of resources such as financial and expertise, and lack of skills. Many studies have also focused on identifying the determinants that influence IT adoption (Sharma et al., 2013; Abiso, 2017; Abiso and Ajagbe, 2018). Some studies looked into a broader perspective of Internet adoption and found that environmental factors such as government intervention, public administration, and external pressure from competitors, suppliers, and buyers play the key role in the adoption and implementation of information technology, especially in e-commerce (Sharma et al., 2013). Other studies focused instead on the organizational factors, such as organization support and management support; however, few studies focused on skills and use among the owners (Jamali et al., 2015; Usoro, 2010). Hence, this study focussed on the awareness and readiness of adoption of e-commerce technology among small and medium firms in Nigeria.

Agwu and Murray (2015) argued that the adoption of e-commerce is depends specifically, on cultural, social, legal, economic, political context and physical infrastructures which could vary significantly among

countries. However, research on information communication technology (ICT) related areas and essentially e-commerce has emphasized on developed countries (Jamali et al., 2015; Dahnil et al., 2014). Thus, in emerging nations, e-commerce presently occupy a substantial portion of small firms activities and it is believed that it will grow continuously over time. Hence, the growth of e-commerce has resulted in notable impact on the overall economy through its impact on productivity and inflation (Abiso and Ajagbe, 2018). Nevertheless, Abiso (2017) concluded that consumers have the option to enjoy the benefit of reduction in costs in terms of the time and effort needed to initiate and conclude business dealings.

There is insufficient research in the domain of e-commerce in developing nations with particular emphasis on Nigeria. Though, the few available studies in this area have laid more emphasis on South Africa (Ayo et al., 2011; Abiso, 2017). However, considering the insufficient study in e-commerce activity in developing nations, there might be need to think that outcomes from research carried out in developed countries may not be applicable to developing countries. Thus, one might argue that findings from developed countries are not directly transferable to developing countries and that differences in country-contexts can lead to varying adoption and impact patterns of ICT (Agwu and Murray, 2015; Ukoha et al., 2011).

Dahnil et al. (2014) posited that online trading has exposed new set of social and ethical concerns as writers with opposing views are concerned about online privacy. However, highlighting these concerns will therefore not be out of place as it will help to deepen our understanding as well as give assurance that will remove doubts in the adoption of e-commerce (Agwu and Murray, 2015; Jamali et al., 2015). In view of this, the e-commerce adoption literature has implied that in order to successfully implement e-commerce in developing countries, SMFs are required to be both internally and externally ready. Alatawi et al. (2013) defined this readiness in-term of electronic readiness of an SMF as the ability of a firm to successfully adopt, use, and benefit from e-commerce. Ahn and Matsui (2011) demonstrated that in initial adoption of e-commerce in developing countries, internal (organisational) readiness is essentially important. Saffu et al. (2008) defined internal e-commerce readiness as the availability of financial and technological capabilities, the interest of entrepreneurs and/or senior managers to adopt e-commerce, e-commerce technology infrastructure, firm's compatibility, as well as culture and values. On the other hand, the readiness of external trading partners to adopt e-commerce will in no small measure determine institutionalisation of e-commerce in developing countries (Aziz, 2010; Solomon and Ajagbe, 2014). Hence, the necessity of business maturity regarding the readiness prior to e-commerce adoption in developing countries is important to be discussed.

Zhu and Thatcher (2010) reported that in a typical e-commerce adoption model, perceived benefits, firm size and readiness and external and competitive pressures are important factors to consider. In addition, anticipated operational supports, cost reduction and social approval; and application complexity and providers' views are

amongst the major factors. Abiso and Ajagbe (2018) found that though the aforementioned essential adoption motivators and/or barriers have an impact, studies and theories perceive management's characteristics and supports, owners' readiness and growth ambitions, managers knowledge and characteristics, managers' belief differences, and managerial productivity as significant adoption predictors of e-commerce solutions that must complement existing factors. Awa et al. (2015) observed that the adoption of e-commerce solutions depends on the functional and/or emotional feelings of decision makers, which reflect their attitudes, perceptions, psychographics and motivation. Kannabiran and Dharmalingam (2012) opined that entrepreneur or manager is essential for setting appropriate information communication technology goals, recognizing important information requirements, allocating resources, and managing executions. Considering the strengths of existing philosophies, entrepreneur's position and reposition firm's strategic thrusts (Awa et al., 2011; Abiso and Ajagbe, 2018). They drive e-commerce solutions by shaping values and cognitive bases of dominant actors, particularly if it is viewed to contribute to the operational efficiency (Sharma et al., 2013). In their survey of SMFs in Portuguese manufacturing industry, Zeiller and Schauer (2011) found that the opinion of senior managers and attitudes towards adoption of information communication technology explain various corporate success stories. They argued from resource-based points that SMFs develop internal skills, competences, and capabilities subject to senior manager's views and attitudes towards implementation of ICT. In view of this the major objective of this research is to find out the level of awareness and readiness of e-commerce technology adoption by SMFs in Borno state. However, the research question guiding this study is: What is the level of awareness and readiness of adoption of e-commerce technology and how is it been adopted among SMFs in Borno state?

3 METHODOLOGY

The philosophy of this research was selected because a review of past studies revealed the urge to have a deep knowledge of the experience of entrepreneurs in Borno state who have implemented e-commerce technology in their daily activites (Ajagbe, 2014; Ajagbe et al., 2015). Hence, this study used purposeful sampling and the case study as a reporting approach. The study adopted the organisational unit of analysis to determine the chosen sample population for the study. The triangulation strategy was adopted by gathering information with the adoption of several techniques. This study used an inductive qualitative strategy that consisted of an average of 65 minutes tape recorded discussions to obtain the perspectives of the SMF entrepreneurs about their awareness and readiness to adopt e-commerce technology in carrying out their business transactions. The researchers randomly selected 25 informants from among SMFs registered in Borno state. Most of the SMFs were selected from Maiduguri city because of high rates of concentration

of SMFs.

In order to present concepts or dimensions, data collected were transcribed and coded, and the investigator connected concept together into a theory, or explanation of the event studied. However, analyzing qualitative information entails having a vivid knowledge of how to make sense of text and images so that you can form answers to your research questions (Tesch, 1990). In the opinion of Creswell (2007), the qualitative study is an interpretative study, in which the researcher makes a personal evaluation as to an explanation that fits the situation or themes that capture the main themes of data. The interpretation that an author makes of a transcript, for instance, varies from that someone else makes. This does not mean that the interpretation of the first author is better or more accurate; Taylor et al. (2006) posited that it simply means that the author brings his own views to the interpretation. Nonetheless, in order to achieve the aim of this study, the authors used both "in vivo codes and lean codes". This is because it was sometimes found to be essential to use the codes exactly the same way the informants described during the interview. However, other situations could warrant the authors to rephrase the words in their own words. Table 1 showed the result of the coding process for the study.

Table 1: Result of the Coding Process

Major Emerging Codes	Sub-Codes	Coding Categories
Level of Awareness	6 Sub-Codes	95 Codes
Level of Readiness	5 Sub-Codes	121 Codes
2 Major Codes	11 Sub-Codes	216 Codes

4 RESPONDENT'S PROFILING

Analysis of the gender profile revealed that 06(24%) among 25 respondents are females while 19(76%) among 25 respondents are males. This is an indication that majority of the respondents interviewed are males. It could also mean that more males are involved in trading activities in Borno state. However, analysis of the educational profile revealed that 01(4%) among 25 respondents are master degree graduate, 09(36%) among 25 respondents have bachelor degree, 08(32%) among 25 respondents have OND/NCE and 07(28%) among 25 respondents have SSCE/PSLC. This indicated that majority of the respondents have requisite level of education to participate in the interview. However, analysis of the SMFs surveyed revealed that supermarkets consisting of 9 participants represents 36% of the participants of the study, restaurants consisting of 10 participants represents 40% of the participants of the study, boutique consisting of 4 participants represents 16% of the participants of the study and furniture consisting of 2 participants represents 8% of the total participants interviewed for the study.

4 ANALYSIS AND DISCUSSION

4.1 Emerging Themes from the Study

4.1.1 Level of Awareness to Adopt E-Commerce

Sharma et al. (2013) highlighted that e-commerce comprises of exchanges of information to the customers and suppliers, resulting to the process of selling and carrying out business transactions through online platforms. The findings from existing studies is in line with that of this study which examined the level of knowledge or rather awareness of entrepreneurial business owners as important ingredients of determining the implementation of e-commerce in Nigeria. However, in this study, e-commerce has been defined in various perspectives depending on the understanding of each individual. The concept of e-commerce was described as the use of more upgraded technological and electronic means to conduct business activities. In addition, it is the process by which businesses and consumers buy and sell goods through electronic platforms or medium. Simplistically put, e-commerce can also be viewed as cashless or rather electronic transactions or marketing. In another dimension, it can also be perceived as the process of engaging or using the internet to carry out business transactions. Respondent 10 who is an owner of a boutique described e-commerce as:

"process whereby you adopt technology in business, cashless or rather electronic transaction, use of internet, machine or electronic means to do business. It also involves the process by which businesses and consumers buy and sell goods through electronic medium".

Though majority of respondents have described the concept of e-commerce based on their understanding, very few could not describe the term as reported in below quotation. As stated by RES 25 who owns a restaurant in the city:

"I am not educated, so I do not have any idea of that terminology, hence we don't use technology in running our business activities"

This study found that the reason some SMF owners could not describe the term is due to their level of education and exposure. Abiso (2017) and Abiso and Ajagbe (2018) found that knowledge of entrepreneurial business owners and that of senior managers determine to a greater extent the extent or level of e-commerce implementation in Nigeria.

The table 2 below indicated that 18(72%) among 25 respondents mentioned that they are fully aware of the concept of e-commerce technology, 05(20%) among 25 respondents said that they are partially aware of the concept of e-commerce technology, while 02(05%) respondents posited that they are unaware of the meaning of e-commerce technology. This indicated that majority of the respondents of this study are fully aware of the concept of e-commerce technology and are qualified to participate in this research. Table 3 showed some examples of SMFs that adopt e-commerce in their organization. This study also listed some of the electronic gadgets used by interviewed respondents in their day to day transactions as; personal computer, point of sales machine, automated teller machines, mobile phone, internet connections.

Table 2: Level of Awareness of E-commerce

High Awareness	72%
Low Awareness	20%
Neutral	5%
	100%

Table 3: SMFs that Adopt Electronic Commerce

Type of SMFs	Name of SMFs
Supermarkets	Sidi Groceries and Prawns, Obynado Supermarket, Today Supermarket
Restaurants	Oasis Bakery, Mr. Biggs, Chicken Republic, Pinnacle Restuarants
Furniture	Allah Dey Furniture Works
Online Supermarkets	Jumia, Jiji, Konga,
Boutique	Amazing Royal Boutique
Hair Care Salon	AYB Hairdressing Salon

4.1.2 Readiness of SMFs to Adopt E-Commerce

Table 4 below indicated that 15(60%) among 25 respondents agreed that they are fully ready and are already implementing e-commerce technology, 07(28%) among 25 respondents mentioned that they are partially ready in implementing e-commerce technology, while 03(12%) respondents posited that they are not yet ready to implement e-commerce technology in their day to day business operation. The implication of this findings is that majority of the respondents of this study are fully ready and are implementing the use of e-commerce technology in conducting business transactions. This study also showed that adoption of e-commerce by SMFs depends on managements' decision and readiness. Hence, organizational readiness was conceptualized as the knowledge, financial and technological capabilities at the disposal of the firm to adopt e-commerce technology (Saffu et al., 2011; Alawati et al., 2013). In addition, Ahn and Matsui (2011) argued that organizational readiness includes the interest of entrepreneurs to implement ICT, existing technology infrastructure, compatibility of the firm's e-commerce, and culture and values. Table 4 showed the readiness of adoption of e-commerce technology among SMFs in Borno state. According to respondent 07:

"We are ready to implement e-commerce technology so as to bring up the name of the company and also partake in international trading i.e export of goods from one country to another".

Table 4: Readiness of SMFs to Adopt E-Commerce

High Readiness	60%
Low Readiness	28%
Neutral	12%
	100%

5 CONCLUSIONS OF THE STUDY

The intention of this study is to understand the level of awareness and readiness of e-commerce technology adoption by SMFs in Borno state. This study observed that on the average entrepreneurs has a broad understanding of the concept of e-commerce. Hence, they have described the concept to mean the use of more upgraded technological and electronic means to conduct business activities. In addition, it is the process by which businesses and consumers buy and sell goods through electronic platforms or medium. On the readiness to adopt e-commerce among SMFs in Nigeria, this study found that many SMFs are already implementing e-commerce in their business operations, some are partially implementing it, while very few are not willing to adopt it. Hence, majority of SMFs are fully ready and are implementing the use of e-commerce technology in conducting business transactions. It was however, evident that managements' decision and readiness is a major determinant of e-commerce adoption. The authors suggested that considering the numerous benefits accruable to firms adopting e-commerce and its contributions to national growth. Public policy makers are advised to introduce policies to encourage e-commerce adoption by firms particularly the small and medium sized firm's sector. In addition, since management decisions and readiness influence e-commerce adoption, entrepreneurs are advised to be properly guided to improve their ICT knowledge as this will highten their enthusiasm in experimenting e-commerce technology adoption in conducting their business transactions. Future authors are advised to further this research by expanding their data collection to customers and suppliers perspectives to e-commerce adoption by SMFs. Also themes that have emerged from this study could be quantitatively tested to determine the generalizability of findings from this study.

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