

Investigating Factors Influencing Electronic Commerce Adoption in Developing Countries: The Case of Nigeria

¹ Umar Tijjani Ali, ²Usman Bukar Usman, ³Sheriff Ali Kachalla, ⁴Hamisu Alhaji Ali, ⁵Mohammed Shettima,

^{1,2,4,5} Department of Computer Science, Mai Idris Aloomaa Polytechnic Geidam Yobe State Nigeria,

Abstract: Business transaction nowadays has tilted toward the use of the Internet in buying, selling and marketing of goods and services. The use of the Internet in business transaction is regarded as e-commerce. But despite the benefits of e-commerce in simplifying business transactions and the comfort it provides to buyers and sellers to transact from the convenience of their rooms or offices, many countries still find it difficult to adopt and successfully run e-commerce services due to some factors that negatively affect the establishment of a successful e-commerce. Nigeria, as a developing country, also face some challenges in adoption of a fully functioning e-commerce services as compared to other developing or developed countries. This research study tries to investigate the factors that are responsible for affecting the adoption of smooth e-commerce services in Nigeria, a case study of Konga Nigeria, which is one of the giant e-commerce service providers in Nigeria. A combination of interview (with five stakeholders) and review of some 25 customers feedback on Konga Nigeria services was used as a methodology for the research. The research shows that about twelve factors are responsible for the poor adoption of e-commerce in Nigeria, these includes online security issues, lack of trust in virtual seller/buyer, poor transportation system and network, etc. For Nigeria to fully adopt e-commerce services in the country, such factors should be treated and overcome.

Keywords: Adoption, factors influencing, e-commerce,

I. INTRODUCTION

Kshetri, (2007) identifies that, e-commerce in the developing countries has more value to add and possible solution to consumers organization than developed countries. Yet most or almost all the developing country they felt to understand the significant benefit of using information and communication technology resources than the developed countries Kshetri, (2007).

Asher, (2007) described e-commerce as a process of buying and selling of goods and services via the internet (i.e. WEB) and email. Another literature by (Garg and Choeu, 2015) emphasises that e-commerce is the term used when individuals do trading whether by buying or selling of products through the use of internet.

Drawing from Turban and King, (2011) describes electronic commerce as the methods of buying and selling of a goods and services (i.e. information) through the use of network called internet. The rationale for this explanation originate from the fact that, all or almost all the developing nations have happened to be lagging behind in terms of utilizing information and communication technology resources within their organization due to this challenges such as; lack of financial resources, lack of good regulatory policies, as well lack of ICT and several other more reasons Kshetri, (2007).

Chang, (2001) further identified that WWW, Internet, and Internet are the technological enablers of the e-commerce. Turban *et al.*, (2008) goes on and concluded that, e-commerce allows business of all sizes to advance and make competition in all form of their marketplace i.e. (small or big). By cutting across all geographical margins and time zones to save time and cost as well as provide them with new market opportunities and allow small and large companies to compete internationally.

The research study aims at investigating factors influencing the adoption of e-commerce from depth inside of organization, to discover factors that can explain the e-commerce adoption in developing countries particularly, the case of Nigeria. Nigeria is chosen as case not only for individual curiosities but rather as an Africans developing countries that has resources with economical characteristics that can present a rich and unique dimension in electronic commerce adoption literatures. Mpofu and Mathys, (2011) insist that, electronic commerce in developing nations is still lagging behind and has small knowledge compare to developed countries, as a result, this research assist in filling the gap and these lead us to the research aim of the empirical study.

II. LITERATURE REVIEW

The core basis of ecommerce has been originated from the internet, in early 60s, the ecommerce growth was first been started. Although almost all applications related with improvements come out at the middle of 70s in a form of EFT meaning Electronic Funds Transfer, Turban and King, (2011). Soon after that, another improvement was also being introduced, which is known to be Electronic Data Interchange (EDI). The EDI allows business transaction to communicate electronically such as invoice or purchase order from one organisation to other organisation by the means of standard process and documents Turban and King, (2011).

The electronic commerce transaction is carried out in two phases. This transaction is known to be between internal (Government), and consumer (business). When the transaction is between business and business, its named B2B, the transaction made between business and consumer, its named B2C, the transaction made between consumer and consumer, its named C2C, lastly when transaction or e-commerce is being made between business and government for the same reason as mention above, its named B2G transaction.

Kim *et al.*, (2008) argued that, electronic commerce is prone to disadvantages. (Kim *et al.*, 2008) Go on to states that, the issue with e-commerce delivery is that, soon after transactions, customer have to wait for his goods to be delivered in person because its needs time for a product to get delivered which means end user can never have their goods immediately after paying for an items or completing transduction (Kim *et al.*, 2008).

The adoption of e-commerce has been explained in various firms or organizations as well in several countries Molla and Licker, (2005). Molla and Licker, (2005) go on to explain that, the investigations of e-commerce spans study such as success factors, factors influencing e-commerce, barriers and challenges of e-commerce adoption, factors for adoptions and as well e-commerce solutions. Even though, previous studies mentioned that, most developed countries are known focusing on institutions, e-commerce success factors and methods of payments etc. whereas a

studies in the developing nations are still focusing on ecommerce adoption factors and e-readiness Al-Hudhaif and Alkubeyyer, (2011).

There is framework that been developed for e-readiness which is very significant in early adoption of e-commerce in developing countries Molla and Licker (2005). Its appeared to be two form of model factor Perceived organization e-readiness and also Perceived external e-readiness; the **Perceived organization e-readiness (POER)** has four factor such as: (Government and Resources (organisational); Awareness (innovation); and Commitment (managerial)) also **Perceived external e-readiness (PEER)** has three factors such as: (Government e-readiness, support industries and markets forces). Further, its believed that Tan *et al.*, (2007) identified and extend the model to comprises of business size, sector, business typology, educational level of workers, and industrial funds when analysing (B2B) adoption of ecommerce in China.

It's often known that e-commerce is now been disseminating faster and cheaper due to less cost to the internet access through the use of mobile phones advancing a newly form of e-commerce known as (Mobile marketing) Kaynak *et al.*, (2005). Despite the growing of mobile internet and mobile marketing, the level of e-commerce in developing nations is currently similar to that of United State in mid 90s Hawk, (2004). Even though many scholars and researchers have discussed and put into consideration about adoption and factor influences e-commerce adoption in developing nations (Molla and Licker 2005).

III. RESEARCH APPROACH: METHODS OF ENQUIRY

Hammond and Wellington, (2012) argues that, research method or approach of enquiry is an enquiry process that is rationally been grounded and used as a means of widening consistent and legitimate comprehension to the research community Hammond and Wellington, (2012). Go on to suggest that, the quality of an appropriate research approach is determining by any research area or (discipline) and the nature of the problem to be addressed.

A. DATA COLLECTION

For the purpose of this research study, the researcher is designing to explore the view of the stakeholders in Nigeria, who are belong to the Ministry of commerce (government sector), Academia (lecturers) and Banking sector. The targeted number of participants are six (6) in total, two from each and its depending on participant's knowledge of e-commerce and subject to their availability. Empirical research data will be gathered using combination of two methods i.e. interviews (semi structured questions) and documents review to serve as primary data source and secondary data source respectively as mentioned earlier before. Consent letters and brief about the purpose of the research are been provided to the participants. Seitz, (2015) argue that, the use of qualitative research interview would be more suitable where someone perception of the process in a social unit are to be studied prospectively, using a sequence of interviews.

Furthermore, as stated before, in this research study the qualitative methods will be employed. In addition, the subsequent sections will discuss the chosen qualitative techniques in detail.

B. INTERVIEW

An interview can be describing as the methods that can often use to provide better depth method than any other methods Biggam, (2015). As stated before, qualitative approach considered to be methodology that will take major part within this research study and the methods of choice for the primary data collection is the interview. For the purpose and example of work, the semi structure interview appeared to be an appropriate type of the research study. In the light of Biggam, (2015) argues that, interview can be classified into three major types such as, the semi structure, structure and unstructured (in depth) interviews.

IV. RESULTS, DISCUSSION AND ANALYSIS

The qualitative research method, as explained in the previous chapter, was carried out to investigate the factors that influence the adoption of electronic commerce (e-commerce) in Nigeria. Using the two research methodologies, interview and document review. First of all, the results of the qualitative research method obtained are presented to provide a general idea of both primary and secondary data obtained. The outcome results of the research are then explained in detail to construct a better understanding of the results findings, which creates way for analysing the empirical research findings. The two methodologies were used to ensure triangulation of the research results outcome.

V. INTERVIEW RESULTS, DISCUSSION AND ANALYSIS

The diagrams in this section presents the interview results obtained from the five participants on the factors influencing the adoption of e-commerce in Nigeria.

The summary of the interview result outcome which present the possible factors affecting e-commerce adoption in Nigeria and the corresponding propose solutions offered by each of the five participants are as shown in the table below.

Table 1: Interview summary table showing the factors affecting e-commerce adoption in Nigeria.

	Themes identified	Number of themes	Propose solution
Participant 1, (Interview)	Lack of legislation; lack of trust; awareness; postal system (home address); issue of fraud; illiteracy; security and bad infrastructure (within some part of the country)	7	That government should address the issue of town planning and established well function system.

Participant 2, (Interview)	Delivery issue; lack of enjoyment in shopping; security issue e.g. fraud; lack of awareness; and poor infrastructure e.g. bad roads and poor transport system.	5	Good infrastructure, general issues e.g. internet, public awareness, security has to be overcome.
Participant 3, (Interview)	Lack of awareness; lack of network reliability; issue of trust among individual; fraud; payment interface; connectivity; delivery issue postal system; and lack of personal service.	9	Recommend that the government should have a political will and work off from their slumbered to provide basic infrastructure
Participant 4, (Interview)	security (for example issue of fraud, terrorist; server crime); delivery; trust; awareness; lack of enjoyment in shopping; and lack of quality in items	6	Good infrastructure, security, create public awareness and e-commerce agencies
Participant 5, (Interview)	Public awareness; connectivity; privacy concern; poor infrastructure; high cost of shipping goods; low penetration in credit card; delivery issue; trust being cheated by (network security issue, payment issues, and poor internet accessibilities; lack of enjoyment in shopping; cost of internet; and lack of payment option.	10	Government should have to educate people and fight against terror to fix this.

The results obtained from the interview conducted with the five participants points out that, about a total of twelve factors are responsible for affecting e-commerce adoption in Nigeria.

The twelve factors revealed by the interview are:

1. Lack of proper public awareness on e-commerce and its benefits.
2. Lack of trust in the security of online transactions by both local buyers and sellers.
3. Poor postal services due to poor, or in some places total lack of postal home address.
4. Poor transport infrastructure for the effective movement of goods and services across the country.

5. Poor Internet infrastructures and facilities.
6. Poor delivery issues, which can result from poor transport system or poor service delivery from sellers.
7. Lack of enjoyment in online shopping by many buyers.
8. Lack of understanding and unfamiliarity with online payment methods.
9. Poor or uncertainty in the quality of products bought online.
10. Lack of Internet access by many people due to the high cost of accessing and connecting to the Internet.
11. High cost of shipping from abroad.
12. Poor credit card services, which could encourage online shopping.

Some of the factors revealed by the interview, as shown above, have been found out by other researches as responsible for e-commerce adoption in developing Nigeria.

VI. LIMITATIONS

The empirical research aims at finding out the factors that influence e-commerce adoption in Nigeria. The research study is limited to investigating the main factors responsible for the drawbacks and obstacles that hinder the adoption of a successful and efficient e-commerce in Nigeria. The research method is also limited to interview and review of Nigeria customer feedbacks in an effort to figure out the responsible factors that need to be addressed for an effective e-commerce services in Nigeria.

VII. RECOMMENDATIONS

From the empirical research outcomes of the dissertation, as presented under the research conclusion, therefore, for further research studies, the following recommendation are as follows:

1. The restriction of this research study can bring implication for future research study increasing data collecting in more from organisations (i.e. stakeholders) in order to obtain more data and decrease the variety in the responses about the e-commerce adoption in Nigeria.
2. The extending of this research study can be a starting point for the new models and frameworks for studying electronic commerce on developing countries in particular Nigeria where there are not many empirical research studies available.
3. Future studies should also keep focus on issue regarding electronic commerce since e-commerce is relatively low and is not widely been adopted in Nigeria and Africa at large.

References

Adalikwu, C. (2012) **Challenges and opportunities in the implementation of electronic commerce:** The case of Nigeria. African Journal of Business Management, Vol.6 (46), pp. 11495-11503 (1993-8233) November, pp. 11496–11503.

- Al-Hudhaif, S.A. and Alkubeyyer, A. (2011) **E-commerce adoption factors in Saudi Arabia**. International Journal of Business and Management, 6 (9) September.
- Alyoubi, A.A. (2015) **E-commerce in developing countries and how to develop them during the introduction of modern systems**. Procedia Computer Science, 65 pp. 479–483.
- Apulu, I. and Latham, A. (2011) **Drivers for information and communication technology adoption: A case study of Nigerian small and medium sized enterprises**. International Journal of Business and Management, 6 (5) May, .
- Araste, A.R. Mansouri, A. and Jafari, M. (2013) **The factors affecting the e-commerce adoption in SMEs in the industrial towns of Zanjan-Iran: Managers` perspectives**. International Journal of Academic Research in Business and Social Sciences, 3 (10) October, .
- Asher, A. (2007) **Developing a B2B e-commerce implementation framework: A study of EDI implementation for procurement**. Information Systems Management, 24 (4) October, pp. 373–390.
- Ash, T. Corbitsø, K. and Pisone, N. (2011) **Combining the Benefits of Traditional Commerce and E-Commerce with M-Commerce benefits in the Retail Industry** .
- Awa, H.O. Awara, N.F. and Lebari, E.D. (2015) **Critical factors inhibiting electronic commerce (EC) adoption in Nigeria**. Journal of Science and Technology Policy Management, 6 (2) July, pp. 143–164.
- Awiagah, R. Kang, J. and Lim, J.I. (2015) **Factors affecting e-commerce adoption among SMEs in Ghana**. Information Development, 32 (4) February, pp. 815–836.
- Biggam, J. (2015) **Succeeding with your master's Dissertation: A step-by-step handbook**. United States: Open University Press.
- Bank, W. (2015) **Nigeria overview** Available from: <<http://www.worldbank.org/en/country/nigeria/overview>> [Accessed 21 July 2016].
- Bazeley, P. and Jackson, K. eds. (2013) **Qualitative data analysis with NVivo**. 2nd ed. London: SAGE Publications.
- Braun, V. and Clarke, V. (2006) **Using thematic analysis in psychology**. Qualitative Research in Psychology, 3 (2) January, pp. 77–101.
- Buran, A. and Filyukov, A. (2015) **Mind mapping technique in language learning**. Procedia - Social and Behavioral Sciences, 206 October, pp. 215–218.
- Burgess-Allen, J. and Owen-Smith, V. (2010) **Using mind mapping techniques for rapid qualitative data analysis in public participation processes**. Health Expectations, 13 (4) November, pp. 406–415.