

Empirical Assessment of E-Commerce Use Through Smart Phones Among Babcock University Undergraduate Students in Ogun State, Nigeria

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Abstract. A large number of consumers change from tradition shopping to the online shopping through the use of Smartphones which is taking the role of the computer, making it possible to do a lot especially buying and selling of products and services online. On the growth of e-Commerce in the Nigerian community, many steps have been taken for its promotion, but there are still lots to be done to make it operate well in the country.

This study adopted the survey research design with a historical approach to the phenomenon under investigation. The population of the study consists of all the undergraduate students of Babcock University, Ilishan-Remo, Ogun State, Nigeria (referred to in this study as BU). The total population of undergraduate students in BU stood at 8, 650. A sample size of 583 was drawn from the study population using the Australian Calculator. A self-constructed questionnaire was the instrument used for data collection. It consists of 37 items closed-ended questions. The instrument after being administered to twenty (20) respondents recorded 0.65Cronbach's Alpha co-efficient indicating that the instrument is approximately 70% reliable. The method of data analysis adopted was purely quantitative (i.e. descriptive) using frequencies, percentages calculated with SPSS 21.0 software version.

The findings of the study revealed that Babcock University undergraduate students are using smart phones, are totally aware of e-commerce and use it for online shopping, search for information products and pay and order for goods and services. Jiji, Wakanow, Konga, OLX, Jumai and Efiritin are the major e-

commerce platforms used by Babcock University students via their smart phones on a daily basis. However, Babcock University undergraduates prefers to buy directly at sales point than online, perceives e-commerce could be fraudulent and would not advice their friends to use e-commerce.

The study recommended various ways that can be used to improve the use of e-commerce through smart phones and suggested further research areas that can be improved upon.

Keywords: E-commerce, University undergraduates, Students, Smart phones, Use, Nigeria

1. Introduction

The advantages, changes and benefits associated with technological advancements are innumerable and the advent of the Internet has brought about social, economic, political changes, to say the least. One of the most notable changes associated with ICT advancements is the way business is transacted. The Internet as a tool has bridged gaps in the financial sector between customers and businesses today. Though traditional commerce (face-to-face transactions) has not been completely phased out in many settings, electronic commerce is gaining momentous popularity among internet users globally as a convenient and quick way of transacting business. Online shopping systems give consumers a much greater choice with regard to

their desired products and services, and offer much more in terms of ease and convenience, as against overseas travels for shopping purposes (Alley, 2010). In Nigeria, the e-commerce industry in Nigeria began in the mid-nineties when the Internet and telecommunications industry started becoming popular (Oluyinka, Shamsuddin, Wahab, Ajagbe, & Enegbuma, 2013).

The packaging of mobile communications devices with Internet services such as e-commerce and other broadband services is providing customers with fewer restrictions and greater flexibility.

The invention of the Internet has significantly modified to a great extent the way consumers shop. A large number of consumers change from tradition shopping to the online shopping through the use of Smartphones which is taking the role of the computer, making it possible to do a lot with this small handheld device. It has a broad use such as sharing information, paying for the product, browsing and shopping through an application (Malviya, Saluja & Thakur, 2013).

Now, consumers are more likely to engage in online shopping because they become active virtually and this enables them to shop at any time for any product and anywhere around the globe. Hence, it is important to understand the concept of e-commerce to appreciate its adoption.

1.1 Smart Phones

A Smartphone is a mobile device with a voice and data capabilities and which runs an operating system that allows the installation and running of third party native applications (Ayodele & Ifeanyichukwu, 2016). According to Adeleke (2017) a Smartphones and handheld devices (HHD) combine advanced computing capability, such as Internet communication, information retrieval, video, e-commerce and other features, that make the device as one of the necessities for many people.

1.2 E-Commerce

e-Commerce can be defined as the integration of communications, data management, and security capabilities that allows organizations to exchange information on sale of goods and

services. It can also be defined as an act of conducting transaction via electronic medium. Such electronic media can be TV, Fax, or the Internet (Thomas & Jose, 2015). The internet on which e-Commerce rides is a major catalyst for the economic development of Nigeria. E-Commerce can be placed in two categories i.e. e-Merchandise (selling goods and services electronically) and e-Finance (online financial services and transactions). A typical e-Commerce transaction involves four major stages; the customer search stage (from the various e-Commerce sites available), the ordering stage by the customer, the online payment stage for the goods and services and, finally, the delivery stage. Some other stages such as inquiry, complaints, returns of goods, etc., may, however, come in at some point within, or along the major stages of the e-Commerce transaction. The way an e-Commerce site handles the transactions goes a long way in determining customer trust, loyalty, retention and referral, which will further boost sales and profits.

2. Statement of the Problem

On the growth of e-Commerce in the Nigerian community, many steps have been taken for its promotion, but there are still lots to be done to make it operate well in the country. Although there have been previous studies on the adoption and perceptions of undergraduates towards online shopping in Nigeria (Ani, Nyekwere & Chiaha, 2017), little research has been done to assess the use of e-commerce through smart phones by undergraduates in Nigeria universities. Hence, this study seeks to assess the use of e-commerce through smart phones among undergraduates in Nigeria.

3. Purpose of the Study

The main purpose of this study is to assess the use of e-commerce through smart phones among undergraduates in Nigeria.

The specific purpose was to:

- (i) Investigate if Babcock University undergraduate's students are

- familiar with e-commerce and what they use it for;
- (ii) Examine the extent to which Babcock University undergraduates use e-commerce;
 - (iii) Find out the perceptions of Babcock University undergraduate students towards the use of e-commerce through their smart phones.

4. Research Questions

The research questions are:

- (a) Are Babcock University undergraduate's students familiar with e-commerce and what do they use it for?
- (b) What is the extent to which Babcock University undergraduates use e-commerce?
- (c) What are the perceptions of Babcock University undergraduate students towards the use of e-commerce through their smart phones?

5. Empirical Review

In the study conducted in US by Xu and Paulins (2005), results showed that there was a strong relationship between students' attitude and intentions towards e-commerce for apparel products. The demographic variables Internet usage, employment status, and car access had significant influence on students' attitude toward online shopping for apparel products. Students who browsed the Internet on a more frequent basis had a more favorable attitude toward shopping online for apparel products than those who browsed the Internet less frequently. Also, students past online shopping experiences were shown to have significant influence on their attitudes toward online shopping for apparel products.

The study of Charles, Uyinomen, Ibukun, and Ayodele (2007) on e-Commerce Implementation in Nigeria: Trends and Issues revealed that there are enormous opportunities for e-Commerce implementation in Nigeria based on the rate of growth and the diffusion of mobile devices. There is prospect for patronage but may be

dependent on the available services. The major threats to e-Commerce services include insecurity, high cost of services and unavailability of basic infrastructure such as electricity among others.

Chen and Barnes (2007), in their study of college students conducted in Taiwan on "Initial trust and online buyer behavior" in Taiwan, found that perceived usefulness, perceived security, perceived privacy, perceived good reputation, and willingness to customize are the important antecedents to online initial trust. It is also discovered that different levels of trust propensity moderate perceptions toward the web site and online with respect to online initial trust, including perceived usefulness, perceived security, perceived privacy, perceived good reputation, and willingness to customize. Both online initial trust and familiarity with online purchasing have a positive impact on purchase intention.

A study by Seock and Bailey (2008), on college students of two eastern US universities showed that participants' shopping orientations were significantly related to their searches for information about and purchases of apparel items online. Seven shopping orientation constructs were identified: shopping enjoyment, brand/fashion consciousness, price consciousness, shopping confidence, convenience/time consciousness, in-home shopping tendency and brand/store loyalty.

In the study done in India by UshaVaidehi (2014), it was revealed that male students are more interested in purchasing goods online when compared to female students. This study exhibits that the Factors such as shopping online saves time, availability of the product for less price, promotions that E-Retailers are providing, ease in payment are the motivating drives to encourage students to shop more online. However, both male & female respondents preferred to purchase goods online and they were more interested to buy apparels, electronic goods and books through online.

According to the study in the United States of America by Jadhav and Khanna (2016) younger

consumers searched for more products online than did older consumers, but they did not buy more online. Younger consumers were more likely to agree that online shopping was more convenient than older consumers. Also, if they searched for product online, older consumers were more likely to buy the product online than younger consumers.

According to Punch (2016) it was reported that it is not yet uhuru for e-Commerce in Nigeria. Many people have not yet fully adopted the new purchasing technology as according to a research, out of 70 per cent of respondents who know about e-Commerce, only about 32 per cent of them actually use it. The most common online activities of Nigerians in percentage are browsing and searching, 74 per cent, selection of a product, 56 per cent, paying online, 15 per cent, paying offline, 82 per cent and online checking of results, 43 per cent. These figures clearly show that although a huge percentage looked for information online, many of them are reluctant to pay online. The major reasons for this include lack of trust in online retailers, lack of adequate technological infrastructure and fear of inadequate online security of their data when making payments.

More recently, Ani, Nyekwere, and Chiaha (2017) in their study investigates “Unizik Undergraduate Students” Awareness, Perception and Practice of e-commerce.” revealed that although majority of undergraduates are aware of online shopping (92.5%), and that their awareness does not immediately translate to knowledge that can influence positive behaviour towards e-commerce, as only a negligible few (29%) practice online shopping. More so, most internet users were found to be familiar with the major online shopping stores but do not know in details their operations and hence, their limited knowledge is believed to have informed their perceived fears about security concerns which hindered their adoption of the activity. Their study also found out that most active internet users (i.e. those who use the internet daily) are mostly youths in their 100 levels and 200 levels of education (87%); they do so mostly with their Mobile Phones (89.2%) and that their pattern of

usage of online shopping reveals that taste and fashion were determinants of each individual’s online buying habits.

6. Methodology

This study adopted the survey research design with a historical approach to the phenomenon under investigation. The population of the study consists of all the undergraduate students of Babcock University, Ilishan-Remo, Ogun State, Nigeria (referred to in this study as *BU*). The total population of undergraduate students in *BU* stood at 8, 650 (source: The Registrar, *BU*, 2017).

A sample size of 583 was drawn from the study population using the Australian Calculator. Also, the multi-stage sampling technique was adopted; first, the cluster sampling technique was used to divide the university into clusters of 10 schools. Thereafter, three (3) faculties were randomly selected (Veronica Adeleke School of Social Sciences, School of Management Sciences, and School of Computing & Engineering Sciences). Out of this number, two (2) departments were further selected using same simple random sampling technique, giving a total to six (6) departments in all.

A questionnaire was the instrument used in this study; it consists of 37 items closed-ended questions. Different scales of measurement were adopted. It ranges from 2 to 5-point scale of measurement.

The instrument after being administered to twenty (20) respondents recorded 0.65 Cronbach’s Alpha co-efficient indicating that the instrument is approximately 70% reliable.

The method of data analysis adopted was purely quantitative (i.e. descriptive) using frequencies, percentages calculated with SPSS 21.0 software.

7. Results and Discussion of Findings

The results were presented in line with the research questions.

Table 1: Summary of the Demographic Data

Demographic Information	Response	Percentage (%)
Level		
100L	70	12.0%
200L	92	15.8%
300L	140	24.0%
400L	281	42.8%
Residence		
On Campus	444	76.2%
Off Campus	139	23.8%
Age		
16-20	163	28.0%
21-25	115	19.7%
26-30	140	24.0%
31-35	94	16.1%
36- above	71	12.2%

Source: Field survey (June, 2017)

The results in table 1 clearly revealed that 70 (12.0%) of the respondents were 100L, 200L 92(15.8%), 300L 140(24%) while, 400L were 281(42.8%).The table also depicts that 144(76.2) of the respondents resides in campus, while 139(23.8%) resides off campus. Also, the age range between **16-20** (28%), **21-25**(19.7%), **26-30** (24%), while **31-35**(16.1%), while **36 and above** were (12.2%)

Research Question One: Are Babcock University undergraduate student’s familiar with e-commerce and what do they use it for?

Table 2 showing student’s familiarity with e-commerce and purpose of its use?

Familiarity and purpose of e-commerce use	YES (583)	% (100)	NO (583)	%(100)
Smart phone user	583	100%	-	-
Aware of E-commerce	583	100%	-	-
Used E-commerce before	583	100%	-	-
Used E-commerce to shop Online	466	79.9%	117	20.1%
Used E-commerce to Search for product information	536	91.9%	47	8.1%
UsedE-commerce for subscriptions	420	72.0%	163	28.0%

Used E-commerce for online bookings	326	55.9%	257	44.1%
Used E-commerce to pay bills	372	63.8%	211	36.2%
Used E-commerce to order goods and services	465	79.8%	94	16.1%

Source: Field survey (June, 2017)

Frequency distribution of responses to the question on the familiarity and purpose of e-commerce used in Table 2 shows that 100% of the respondents are smart phone users, are aware of e-commerce, and have used e-commerce before.

It also, depicts that the respondents use **e-commerce to shop online** (79.9%), while 20.1% of the respondents don't use e-commerce to shop online. Also, majority of the respondents use **e-commerce to search for products information** (91.9%), while 8.1% don't. also, most of the respondents (72.0%) use **e-commerce for subscriptions**, while 28% does not use e-commerce to subscription purposes. The table also depicts that 55.9% of the respondents **use e-commerce to book online**, while 44.1% does not use e-commerce for online bookings. It was also revealed that 63.8% of the respondents use **e-commerce to pay bills**, while 36.2% don't. conclusively the able also shows that 79.8% of the respondents use **e-commerce to order for goods and services online**, while 16.1% of the respondents does not use e-commerce to order for their goods and services online.

Research Question Two: What is the extent to which Babcock University undergraduates use e-commerce?

Table 3 showing the percentage to which Babcock University undergraduates engage in e-commerce

Frequency of e-commerce use by percentage (%)										
Usage	Jiji	Shopahollic	Wakanow	Konga	Vconnect	OLX	Jumia	Cheki	Efiritin	Dealdey
Daily	12.2	-	3.9	12.2	-	3.9	3.9	-	3.9	-
Weekly	16.2	-	-	16.1	4.1	12.0	32.1	3.9	-	-
Monthly	24.2	8.1	16.1	39.8	3.9	40.1	28.0	-	3.9	-
Yearly	11.8	32.2	28.3	28.0	20.2	16.1	16.0	20.4	16.1	24.2
Never	35.8	59.7	51.6	3.9	71.7	27.8	20.1	75.6	76.0	75.8

Source: Field survey (June, 2017)

Frequency distribution of responses to the question on the frequency of e-commerce use in Table 3 reveals that **Jiji** is being used Daily (12.2%), Weekly (16.2%), Monthly (24.2%), Yearly (11.8%), and 35.8% have never used **Jiji** before. Also the it was revealed that **Shopahollic** is being used Monthly (8.1%), Yearly (32.2%), while 59.7% have never used **Shopahollic** before. Also the table clearly shows that **Wakanow** is being used Daily (3.9%), Monthly (16.1%), Yearly (28.3%), and 51.6% have never used **Wakanow** before. It also shows that **Konga** is being used Daily (12.2%), Weekly (16.1%), Monthly (39.8%), Yearly (28.0%), and 3.9% have never used **Konga** before. The respondents also indicated that they use **Vconnect** Weekly (4.1%), Monthly (3.9%), Yearly (20.2%), while 71.7% does not use **Vconnect** at all. It was also revealed that the respondents use **OLX** on a Daily basis (3.9%), Weekly (12.0%), Monthly (20.1%), Yearly (16.1%), and 27.8% have never used **OLX** before. The above table depicts that the respondents use **Jumia** Daily (3.9%), Weekly (32.1%), Monthly (28.0%), Yearly (16.0%), and 20.1% have never used **Jumia**.

The table also shows that the respondents use **Cheki** Weekly (3.9%), Yearly (20.4%), and 75.6% of the respondents have never used **Cheki**. Also the table depicts that the respondents use **Efiritin** Daily (3.9%), Monthly (3.9%), Yearly (16.1%), while 76% don't use **Efiritin**. Conclusively the table reveals that **Dealdeyis** being used Yearly (24.2%) and 75.8% indicated that they have never used **Dealdey** before.

Research Question Three: What is the perceptions of Babcock University undergraduate students towards the use of e-commerce through their smart phones?

Table 4 showing the perceptions of Babcock University undergraduate students towards the use of e-commerce

Perceptions of E-commerce Use	SA	(%)	A	(%)	SD	(%)	D	(%)
E-commerce allows buying and selling online easy for me	306	52.5	254	43.6	23	3.9	-	-
E-commerce allows searching for products prices without distance barrier	235	40.3	301	51.6	47	8.1	-	-
Product and services delivered via e-commerce are reliable and original.	210	36.0	46	7.9	281	48.2	46	7.9
Delivery of products and service via e-commerce is slow.	209	35.8	23	3.9	236	40.5	92	15.8
I prefer buying and selling directly at sales point than via online .	257	44.1	162	27.8	141	24.2	23	3.9
E-commerce can be fraudulent	350	60.0	69	11.8	-	-	164	28.1
I would not advice my friends to use e-commerce	280	48.0	23	3.9	23	3.9	257	44.1

Source: Field survey (June, 2017)

Frequency distribution of responses to the question on student's perception of e-commerce use in Table 4 reveals that 52.5% and 43.6% of the respondents strongly agreed and agreed that e-commerce allows them to buy and sell online with ease, while 3.9% strongly disagreed. It was also revealed that 40.3% and 51.6% of the respondents strongly agreed and agreed that e-commerce allows them search for products prices without distance barriers, while 8.1% of the respondents strongly disagreed. Majority of the respondents (36% and 7.9%) strongly agreed and agreed that delivery of products and services via e-commerce are reliable and original, while 48.2% and 7.9% strongly disagreed and disagreed.

The table depicts that 35.8% and 3.9% of the respondents strongly agreed and agreed that delivery of products and service via e-commerce is slow, while 40.5% and 15.8% strongly disagreed and disagreed. Majority of the respondents 44.1% and 27.8% strongly agreed

and agreed that they prefer buying directly at sales point than via online, while 24.2% and 3.9% of the respondents strongly disagreed and disagreed.

It was also revealed that majority of the respondents (60% and 11.8%) strongly agreed and agreed that e-commerce can be fraudulent, while 28.1% clearly disagreed. Conclusively, 51.9% of the respondents agreed that they cannot advice their friends to use e-commerce, while 48.1% strongly disagreed.

8. Discussion

The study revealed that Babcock University undergraduates are smart phone users, which could be as a result of Malviya, Saluja and Thakur (2013) that the use of Smartphones makes it possible to pay for the product, browse and shop through an application.

They are aware of e-commerce, and have used e-commerce before which could be as a result of Alley (2010), that e-commerce systems give consumers a much greater choice with regard to their desired products and services, and offer much more in terms of ease and convenience, as against overseas travels for shopping purposes.

Also over 60% of Babcock University students use e-commerce for online shopping, search for information products and pay and order for goods and services. This is also in concomitant with the findings of Jadhav and Khanna (2016) that younger consumers searched for more products online and finds it more convenient and as also revealed by Seock and Bailey (2008) that college students searches for information about products, services, and purchases items online.

It was also revealed that less than 45% of Babcock University students use Jiji, Wakanow, Konga, OLX, Jumai and Efiritin on daily despite their level of awareness, which could be as a result of Ani, et al. (2017) findings in UniZik, Nigeria revealed that undergraduate's awareness of e-commerce does not immediately translate to knowledge on how to effectively use e-commerce.

Also the study also revealed that over 70% of Babcock University Students have not used e-commerce which contradicts their initial statement that they have used e-commerce before (*see table 2*) these findings is in concomitant with Punch (2016) findings that was reported that it is not yet uhuru for e-Commerce in Nigeria. Many people have not yet fully adopted the new purchasing technology as according to a research, out of 70 per cent of respondents who know about e-Commerce, only about 32 per cent of them actually use it.

Conclusively, over 50% of Babcock University students perceives e-commerce as it being easy for them to buy and sell online with ease, allows product information search, which also is in line with the study done in India by UshaVaidehi (2014), e-commerce saves time, availability of product for less price, ease in payment motivates students to shop more online.

Also, over 50% of Babcock University undergraduates disagreed that products and services delivered via e-commerce are not reliable and original, services are slow.

Conclusively, majority of Babcock University undergraduates prefers to buy directly at sales point than online, perceives e-commerce to be fraudulent and can't advice their friends to use e-commerce. These might be as a result of Charles, et.al (2007) findings that the major threats to e-Commerce services include insecurity, high cost of services and unavailability of basic infrastructure such as electricity among others can hinder its effective use.

9. Conclusion

This paper assesses the use of e-commerce through smart phones among undergraduates in Babcock University. The findings of the study have shown that undergraduate students are using smart phones, are totally aware of e-commerce and use it for online shopping, search for information products and pay and order for goods and services. Jiji, Wakanow, Konga, OLX, Jumai and Efiritin are the major e-commerce platforms used by Babcock University students via their smart phones on a daily basis. However, Babcock University undergraduates prefers to buy directly at sales point than online, perceives e-commerce to be fraudulent and can't advice their friends to use e-commerce.

10. Recommendations

Having assessed the use of e-commerce through smart phones among undergraduates in Babcock University, the following are therefore recommended:

There is prospect for increased use of e-commerce among undergraduates in Nigeria due to Central Bank of Nigeria (CBN) cashless policy, but may be dependent on the services provided by the owners of e-commerce platforms in Nigeria. Threats to e-commerce services such as insecurity, high cost of data subscriptions, electricity and poor network

services should be resolved by the Government and owners of e-commerce platforms in Nigeria.

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