

Abandonment Factors Affecting e-Commerce Transactions in Nigeria

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ABSTRACT

The goal of this paper is to determine the Abandonment Factors affecting e-commerce transactions in Nigeria. This research work is deemed paramount so that online shop owners and developers, online payment facilitators and especially the government of the Federal Republic of Nigeria can be aware of the problems or challenges online transactions participants face and so lasting solution(s) could be devised to solve the problems for its importance in economic growth. For decades, developed countries like Britain, U.S.A and Brazil have been using various e-Commerce tools to conduct various types of business transactions, Folorunso et al (2006) and so Nigeria as a developing nation should not be an exception. An extensive review of work by scholars who have worked in areas relevant to this study was done, questionnaires were administered to the selected places in the six geo-political zones of Nigeria, the responses of the respondents were analyzed using correlation analysis, and stepwise multiple regression analysis upon which conclusions were drawn.

Keywords

Abandonment, Factors, e-Commerce, Nigeria.

1. INTRODUCTION

According to the www.freeditonary.com (2012), to abandon means to withdraw one's support or help from, especially in spite of duty, allegiance, or responsibility; to desert. e-Commerce is an Information Technology (IT)-powered purchase activities made or carried out on the World Wide Web. The www.freeditonary.com (2012) also defined it to be commerce or business that is transacted electronically, as over the Internet. It is a market place without walls, shelves, attendants or cashiers. Customers are not visible to one another though, millions of people all over the world might be patronizing the same site even, the same product(s) at a particular time.

e-Commerce enables consumers to purchase products and services online using Internet technologies and associated infrastructure, Olson & Olson (2000). Recent statistics tell us that people, the world over, are using the Internet in ever-increasing numbers, with estimate of over two (2) billion (precisely 2, 110,765, 810) people online throughout the world, Miniwatts Marketing Group (2011). Despite increased use of the Web, industry studies have documented problems such as an ongoing trend in online shopping cart, "abandonment", in which apparent planned

purchases are never completed online, Hurwicz (1999).

2. EVOLUTION OF e-COMMERCE IN NIGERIA

In Nigeria, e-Commerce is relatively a new phenomenon. At the "beginning of the beginnings" of buying and selling in Nigeria, it was done through trade-by-barter. This was confirmed by E.K. Hawkins (1958, pp.339-354) that, The historical evidence for **Nigeria** suggests that the beginnings came in the late 1880's and that **barter trade** had virtually ended by 1912 when the West African Currency Board was set up.

It is a system of exchange of good(s) and service(s) in one's possession for another good(s) and service(s) desired in equal worth or value with another individual of same or opposite sex, tribe, vocation, family etc. In like vein, farmers who want to sell farm produce put their wares by the road side and place a copy of the legal tender the produce is worth on it such that interested passers-by could pick their copies of the farm produce and drop the legal tender that is commensurate with the quantity they have picked. Trust was invaluable in these transactions. As times went on, Nigerians traditionally operate market places in either 5-days or 9-days intervals. But then, western education brought enlightenment so, shops, kiosks, hawkers and even, the markets operated in either 5 –days or 9-days intervals now open to customers every day. Using the power of Internet, customers or clients now patronize provider of goods and services in virtual offices or market spaces.

As defined by Akintola et al (2011), Electronic commerce, commonly known as e-commerce, or e-business consists of the buying and selling of products or services over electronic systems such as the Internet and other computer networks. It is now an affair of scrolls, clicks, double-clicks, drags and drops into a virtual and possibly, animated cart. Once the delivery day is specified, means of payment indicated, credit card pin supplied, total purchase is calculated including shipping then, the deal is struck. The customers or clients wait patiently for delivery of their goods and services at the other end such as offices, accommodation or even, picnic ground or resort places. In this 21st century, this means of transaction is only known or employed by a few people in Nigeria.

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, Tom Coffrey et al (1996).

2.1 e-Commerce Business Models

There are two major business models of e-commerce. *2.1.1 Business to Business (B2B) model* occurs between two organizations characterized by large volumes of products and small price margin.

2.1.2 The second is *Business to Consumer (B2C) model*. B2C occurs between an organization and an individual. B2C is characterized by small volumes of products and large price margin.

2.1.3 Other e-commerce models are: *Business to Affiliate model (B2A)*, *Business to Portal model (B2P)* and *Consumer to Consumer model (C2C)* to mention a few, Timothy Cumming (1991) expatiated. This same opinion was shared by Akintola et al (2011) saying, Electronic commerce that is conducted between businesses is referred to as Business -to- Business or B2B. B2B can be open to all interested parties (e.g. Commodity exchange) or limited to specific, pre-qualified participants (private electronic market). Electronic commerce that is conducted between businesses and consumers, on the other hand, is referred to as Business -to-Consumer or B2C, Akintola further confirmed.

Major requirements of conducting e-Commerce over the internet are servers (such as web, catalog, certificate, and mail), online merchant account, payment gateway and mail or web host account. Web merchants facilitate making transactions on internet via websites, electronic mail and so on.

2.2 e-Commerce Payment Method

There are several common payment method(s) such as Digital cash, Credit card and Online check/electronic fund transfer, Debit Card, Micropayment and Money orders, Direct Debit/ Standing Orders, Recharge Cards, Auto Teller Machine (ATM), Point of Sales (POS) and Loyalty Cards.

2.2.1 Digital Cash entails the use of a digital wallet (a plug-in to web browsers) where invoice or receipt of payment is kept and cash is withdrawn, Timothy Cumming (1991). Advantages are that the transaction is completed immediately, and anonymity during transaction is possible.

2.2.2 A credit card is a card whose holder has been granted a revolving credit line, Abhijit et al (2002) and Reserve Bank of Australia (2005).

Credit Cards- A user is issued with a plastic card and PIN number normally by a bank. This card is assigned a credit limit of a certain amount from the onset. The credit limit on the account is then made available for the cardholder to use to pay for goods and services at any merchant that is registered to accept that particular type of credit card. Examples of these are Visa, MasterCard, and American Express and also the Nigerian Credit Card recently launched by some DBA, Ecobank and Oceanic banks, Akintola K.G. et al (2011, pp.334).

2.2.3 With Online check/electronic fund transfer, during the course of making transaction, a buyer enters the digits or numbers found on the

check. This is done for authorization purpose while in electronic fund transfer, there is a financial house called Automated Clearing House (ACH) responsible for transferring the money from the buyer's or originator's account to the seller's or recipient's account on completion of transaction, Patiwah Panurach (1996) and Akintola K.G. et al (2011, pp.334).

2.2.4 Debit Card which enables the holder to access funds in a deposit account at an authorized deposit-taking institution, Abhijit et al (2002). This was also corroborated by Akintola K.G. et al (2011, pp.334).

2.2.5 Another is the *Micropayment*, which is a term used for amounts as low as one cent and allows vendors to sell content, information, and services over the internet at very low unit prices, Abhijit Chaudbury and Jean-Pierre Kuiler (2002).

2.2.6 Money orders which are similar to certified checks, as a known third party such as Western Union money Transfer. The transaction cost is small and the advantage is that it can be sent to the named receiver. If the issuer preserves the privacy of both the seller and the buyer, the transaction is well protected, Abhijit et al (2002).

*2.2.7 Direct Debit/Standing Orders-*A fixed or variable amount is deducted from the customers' current account on a pe-riodical basis and automatically credited to the suppliers account. This is typically used for loan repayments, bill payments, Akintola K.G. et al (2011, pp.334)

2.2.8 Recharge Cards - These are payment cards sold by companies to their customers, they enable customers to purchase goods and services directly from the company electronically. These cards are typically sold in fixed denominations and they will transfer value worth that amount to the customer at the time of purchase. Examples of these are GSM Recharge Cards, International Calling Cards, PHCN and DSTV Recharge cards also belong to this category, Akintola K.G. et al (2011, pp.334)

2.2.9 Automated Teller Machines (ATM) – These are computer-enabled specialized machines that are typically linked via a Switch to the banks network and the account details of the customer. They allow ATM cardholders to withdraw money from the machine directly without interacting with any staff of the bank. Examples of these can be found at First Bank Plc, Diamond Bank, Zenith Bank, GT Bank and Skye Bank amongst many others, Akintola K.G. et al (2011, pp.334), reiterated.

2.3.0 Point of Sale (POS) Terminals -A POS is an electronic device capable of processing credit/ debit cards typically issued by banks. These devices are deployed at commercial outlets where they enable the merchant to collect cards as a means of payment for their goods or services, Akintola K.G. et al (2011, pp.334).

2.3.1 Loyalty Cards - These are payment cards normally issued by companies to the customers. It enables the customers to earn "Loyalty Points" each time they make a purchase from the company or any of their strategic partners. These loyalty points are then subsequently converted to value for the customers to purchase goods and services from the

company. Examples include Virgin Flying Club cards, Fuel Station Cards, Akintola K.G. et al (2011, pp.334).

In Nigeria today, companies that facilitate e-Commerce are Interswitch, eTransact, Cyberspace, Virtual Terminal Network (VTN), Fortis and Chaps to mention a few.

3.FACTORS AFFECTING BANDONMENT OF e-COMMERCE TRANSACTIONS IN NIGERIA

Earlier pre-Internet studies investigated why people shop, why they go to the store, and why they look but do not buy. For instance, Tauber (1972, 1995) went beyond retail patronage and demonstrated that people have numerous motives for shopping that are unrelated to the actual purchasing of products. The shoppers in his sample reported that their shopping trips included carrying out expected roles, diversion from daily routine, self-gratification and response to moods, learning about new trends, physical activity, sensory stimulation, meeting others with similar interests, interaction with peer groups, and the pleasure of bargaining.

3.1 Challenges of e-Commerce Transactions in Nigeria

As mentioned earlier on, e-business or e-commerce awareness had been low, even till now, in Nigeria. Very recently, the Nigerian Government through the CBN proposed a Cashless Nigerian Economy, using Lagos as take-off location but according to THE NATIONS (a local newspapers) of April 23, 2012; In the view of Comrade Baba Omojola, renowned economist and World Bank consultant, he said, “If the CBN cashless policy is a template to lead the country to modern economy, then it is a

welcomed idea. But it is an idea of the future, not now. Very few people have the knowledge of e-Commerce transactions and even those that do, are sometimes skeptical of its use for a number of reasons.

The design of e-Commerce websites or navigational difficulty is sometimes a challenge.

Other times, low computer literacy on the part of the consumer is a serious concern.

The eventual price of the product or service to be bought could be too high or impossible to pay in a specified currency or particular e-payment system.

At times, physical feeling of presence with other customers or clients, urge to seek counsel from co-shoppers whether for or against a brand, color or model of a particular good or the other.

All, most or some of the above are possible challenges for abandonment of e-Commerce transactions which, this research is out to determine.

3.2 Consumer Experience during Online Transactions

Questionnaires tagged “Identifying the potential abandonment factors involved in e-Commerce on selected Nigerian Websites” were administered to the selected places in the six geo-political zones of Nigeria vis-à-vis Kano (NW), Kwara (NC), Borno (NE), Lagos (SW), Enugu (SE) and Rivers states (SS) employing random sampling (two-stage cluster sampling design). A sampling factor of 250 was used per geo-political zone. The responses of the respondents were analyzed using chi-squared test. Where:

NW- NorthWest, NC-North Central, SW-South West, SE-South East and SS-South South

Table 1: Distribution of Consumer experience during online transaction on Nigerian websites

Item	Questions	Consumers Responses in the Six Geopolitical Zones in Nigeria (100%)						
		NW	NC	NE	SW	SE	SS	Average
QU1	<i>I am skeptical about giving my PIN information for transaction.</i>	70.38	76.30	77.72	87.31	67.05	75.53	75.71
QU2	<i>It is usually difficult to access a credit.</i>	41.32	74.12	75.51	16.86	41.21	71.45	53.41
QU3	<i>It is usually difficult to get a debit card (or I don't have a debit card).</i>	67.77	92.44	90.65	36.21	9.33	42.99	56.57
QU4	<i>The credit card information's are not usually accepted.</i>	35.25	78.05	21.01	71.39	50.64	89.41	57.63
QU5	<i>The sites are usually clumsy making it difficult to locate products.</i>	45.17	59.78	76.71	41.08	98.13	6.35	54.54
QU6	<i>The interfaces on the websites are not usually user friendly.</i>	83.15	12.74	64.94	21.80	79.75	72.64	55.84
QU7	<i>I am uncertain about the delivery of the goods after purchase.</i>	49.70	60.59	50.49	73.45	11.81	6.49	42.09
QU8	<i>I have made a transaction sometimes, and the products were not delivered.</i>	79.26	91.49	56.28	48.74	43.77	69.48	64.84

QU9	<i>Deductions have been made from my card before, and the transaction was not registered against me.</i>	78.34	80.29	88.77	56.92	72.53	64.88	73.62
QU10	<i>I have been charged multiple times.</i>	74.49	73.89	86.33	94.97	46.86	89.20	77.62
QU11	<i>I don't experience customer services like the off line real life shops.</i>	68.51	75.23	77.68	88.27	51.09	98.38	76.52
QU12	<i>It is usually difficult to compare the available options.</i>	18.95	28.69	17.14	15.77	36.66	69.46	31.11
QU13	<i>The opinion of people who had made the transactions before, are not usually available.</i>	21.56	47.31	81.76	79.16	30.31	31.00	48.51
QU14	<i>It is usually difficult to find additional information on the product.</i>	51.17	64.14	43.82	45.53	73.25	79.02	59.48
QU15	<i>It is usually frustrating waiting for a website to process an order.</i>	77.34	87.19	75.55	91.21	80.02	97.87	84.86
QU16	<i>Speed in downloading information is always slow as compared to physical stores with no waiting time to view the product.</i>	67.43	88.27	68.56	33.07	78.98	69.16	67.58
QU17	<i>I usually know where the product is, and the product information easily and quickly.</i>	63.35	31.88	46.88	95.89	51.51	87.11	62.77
QU18	<i>I usually don't feel in total control when am making purchases online.</i>	41.85	75.23	71.44	38.08	45.39	28.53	50.09
QU19	<i>I usually experience failures with account setups and confusing error messages.</i>	28.95	55.31	67.14	36.24	25.57	68.91	47.02
QU20	<i>I usually experience a delay in delivery.</i>	50.69	77.16	63.39	64.53	18.83	95.09	61.61

The result of the analysis follows;

From the table above, the cells in the average column have value 50% and above except in QU7, QU12, Q13 and QU19 which have 42.09%, 31.11%, 48.51% and 47.02% respectively. This shows that majority of online transactions users have been experiencing one problem or the other transacting business online in Nigeria ranging from distrust, inaccessibility to credit and debit card, cards information are

not honoured, navigational problems, non-delivery of goods even, after deductions have been made, some have even been charged more than once and the like.

3.3 Evaluation of Abandonment Factors Affecting e-Commerce transactions in Nigeria

This section critically looks at the impact of the following abandonment factors that is, risk, navigation, finance, and purchase, on abandonment of online purchases. A breakdown of the variable names for each factor follows;

- Abandonment – denoted as ABD
- Risk – denoted as RSK
- Navigation– denoted as NVG
- Finance– denoted as FN
- Purchase– denoted as PCS

Two dummy variables were included to form part of the model, these are;

- Age– denoted as AGE
- Level of Education– denoted as EDU

Table 2: Multiple Regression output for Abandonment Factors

$S = 0.3385$

$R-Sq = 64.1\%$ $R-Sq (adj) = 59.4\%$

Table 2 shows the coefficient of each independent variable and their respective significance in the model. Each

Predictor	Coefficient	SE Coefficient	t	p
Constant (b_0)	3.5443	0.118	2.63	0.000
RSK	1.042	0.017	4.76	0.001
NVG	0.414	0.022	2.44	0.016
PCS	0.352	0.021	3.44	0.024
FN	0.194	0.018	-1.12	0.042
AGE	-0.009	0.025	-1.19	0.132
EDU	-0.007	0.025	-1.16	0.219

variable is subjected to a test of significance to determine if it's suitable for the model, hence the following hypothesis;

$H_0: b_i=0$ (the co-efficient is not significantly different from zero)

$H_a: b_i \neq 0$ (the co-efficient is significantly different from zero)

The calculated t and P values respectively show that at an alpha level of 0.05 (level of significance), the co-efficient of RSK, NVG, PCS and FN are significantly different from zero; thus implying these variables have significant impact on the abandonment of online purchases. On the contrary, the co-efficient of AGE and EDU are not significantly different from zero, thus implying these variables do not have significant impact on the abandonment of online purchases.

The value of the co-efficient tells us of the level of impact made to the variable ABD by each of the abandonment factors that is, RSK, NVG, FN, and PCS respectively. This implies that for every unit change in RSK i.e risk in transaction, ABD is affected by a factor of 1.042, while for every unit change in NVG i.e navigation of sites, ABD is affected by a factor of 0.414. Again, for every unit change in PCS, the abandonment rate i.e ABD, is affected by a factor of 0.352, while a unit change

in FN, the abandonment rate i.e ABD, is affected by a factor of 0.194.

Lastly, the R-sq (adj) value reveals that an estimate 59.4% of the variation in abandonment rate i.e ABD is significantly accounted for by RSK, NVG, PCS, and FN.

Based on table 2 above, the regression model is stated as:

$$ABD = 3.54 + 1.04RSK + 0.41NVG + 0.35PCS + 0.19FN$$

The overall significance of the model was tested using analysis of variance (ANOVA), thus the following hypothesis;

$H_0: b_1 = b_2 = b_3 = 0$ (the model is not significant)

$H_a: \text{at least one of the coefficients is not equal to zero}$ (the model is significant)

Table 3: Analysis of Variance output for Multiple Regression model

Source	DF	SS	MS	F	P
Model	4	3.57	0.893	93.898	0.001
Residual	1495	14.21	0.010		
Total	1499	17.78			

Let $\alpha = 0.05$ be the level of confidence

Assumptions:

We accept H_0 if $P\text{value} < \alpha$ (implying a significant difference)

We reject H_0 if $P\text{value} > \alpha$ (implying no significant difference)

The responses of respondents in Table-1 shown the factors affecting the Abandonment of e-Commerce transactions in Nigeria. This is further corroborated

4.CONCLUSION

The study revealed that consumers tend to experience difficulties in terms of navigating the sites visited. It is usually difficult to access a credit or debit card in Nigeria. The credit or debit card even though secured, its information is not usually accepted by online shops all over the world. Some users are uncertain about the delivery of the goods after purchase even though deductions have been made against them. Some have been charged more than once for a single transaction. Consumers do not experience customer services like the off line, real-life shop; speed in downloading product information is always slow as compared to physical stores with no waiting time to view the product. Sometimes when a transaction goes through, users usually experience a delay in delivery.

5. RECOMMENDATIONS

5.1 Organization of Awareness Workshops

Based on findings and the conclusions reached on the issues raised by this study, there arises a cogent need for companies and firms that own “online shops” to get involved in organizing both formal and informal workshops, advertisements, programmes or special promos that will educate consumers on the advantages of doing their shopping online.

5.2 Security and Navigational Issues

Furthermore, based on the functional relationship presented in the model developed, the security of sites and navigational issues should be properly checked as it stands as the primary factor affecting purchases on Nigerian websites.

5.3 Flexibility

Web designers should develop e-commerce sites that somewhat promotes a comfortable and effective interaction between the user and the site.

5.4 Quality of Service

Nigerian Government through the Central bank of Nigeria (CBN), should intervene to see that valid credit and debit card for e-Commerce are issued through the commercial banks and card information are genuine for online transaction all over the world.

by the test of significance in Table-3. Table 3 shows the result for the analysis with an F-value of 93.898 which is significant at

$P(0.001) < 0.05$ (level of confidence), thus the null hypothesis (H_0) is rejected. Therefore the model is significant meaning that the model that explains the functional influence/impact between the indentified abandonment factors, and the abandonment of online purchase is true and valid.

5.5 User-friendliness of Online Sites

Online shops should be developed to provide all it takes for a warm Customer Care Services such as adequate complaint links, contact phone/ email, real-time chatting and internet phone, to users of their facilities. As well, heavy graphics should be avoided for fast loading of sites.

5.6 Standardized Licensing

Licenses should only be issued to worthy e-Commerce facilitating bodies so as to ensure Quality of Services (QoS) to consumers or users.

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