Impact of Electronic Banking on the Nigerian Banking System
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Abstract: This study was carried out to assess the effectiveness of electronic banking systems in enhancing service delivery in the Nigerian banking industry. Three research questions and hypotheses were formulated in line with the objectives of the study. Survey research design was adopted. Data were obtained through the questionnaire administered on a sample of 89 draw from the population of 116 bank officials. Data obtain were analyzed with means and standard deviation. Z-test statistical technique was used to test whether electronic banking system enhancing service delivery in the Nigerian banking industry. The study found that the Electronic banking enhances the customer’s satisfaction of easy access to their financial transactions. Another finding of the study is that electronic banking system curbs the negative consequences associated with the high usage of physical cash in Nigerian economy. The implication of this study is that the banking industry will has it as their role to alert customers on any suspicious and unusual transaction on their accounts and as customer is the essence of any business being, the development of electronic banking customers’ needs should be the watchword right from idea conception, development and use of the e-services. Consequently, it is recommended that the aforementioned stakeholders as well as the law enforcement agencies should work co-operatively to give life to the electronic banking system. This is because they have significant individual roles to play.

Keywords: Nigerian Banks, Internet facilities, cyber frauds, customer’s services

INTRODUCTION
Three or four decades ago, banking was a simple business; consumers saved their money with and received their financial services from banks. When customers open savings account, they received passbook from the bank with which the account would be operated; and when it is a current accounts, they received cheque books for the same purpose[1].

Today, the banking industry has moved into an era of menu-driven ultra-robust specialized software programmes called banking applications. These applications can carry out virtually all banking functions relying heavily on information collection, storage, transfer, and processing[2].

The Central Bank of Nigeria (CBN) has in recent times engaged in series of reformations aimed at both making the Nigerian financial system formidable and enhancing the overall economic performance of Nigeria so as to place it on the right path in tune with global trends. There was the capitalization (to the tune of minimum of N25billion) agenda[3]. There was also the aborted move at redenomination of the Naira.

Some of these policy measures came with tremendous success despite the initial skepticism of Nigerians. For instance, when the CBN in July 2004 set December 31st, 2005 deadline for N25billion minimum capitalization, it was greeted with considerable cry and criticism, when the programme was completed, the banking landscape was transformed out of a system dominated mainly by “fringe banks to one made up of largely “mega banks”[4]. The product of the exercise was to “ensure a diversified, strong and reliable banking industry where there is safety of depositors” money, and reposition the banks to play active developmental roles in the Nigerian economy”[5].

The application of electronic banking products/services to banking operations has become a subject of fundamental importance and concerns to all banks operating within Nigeria and indeed a condition for local and global competiveness[6]. The recent consolidation exercise in Nigerian banking sector has drawn the attention of many banks to application of various technological devices in promoting/achieving better customer service delivery that guaranteed customer satisfaction that translates into increase profitability and higher return on investment[7].

Customer’s satisfaction holds the potential for increasing an organization’s customer base, increase the use of more volatile customer mix and increase the firm’s reputation[8]. Consequently, obtaining competitive advantage is secured through intelligent identification and satisfaction of customer’s needs better and sooner than competitors and sustenance of customer’s satisfaction through better products/services. Technology is then essential in providing faster and
more efficient services to customers. Technology acquisition must be based on actual needs and the proven ability to deliver customer-friendly solutions.

This manual system involves posting of transactions from one ledger to another without the aid of computer systems. Before the emergence of modern banking system, banking operation was manually done, that solely account for the inefficiency in settlement of transactions. This led to the introduction of electronic banking, to ameliorate the sluggish nature of banking transactions[9].

However, electronic banking is a recent invention that has come to stay in the Nigerian banking system. The thought on whether these services rendered by the banks to their customers are recent as they are create optimum satisfaction to teeming customers.

Moreover, most of the study had revealed on both negative and positive effects of e-banking. For instance, Alabar [1] on his paper “Electronic banking services and customer satisfaction in the Nigerian banking industry” set to examine the relationship between these services and customer satisfaction in the industry.

Andrew [10] on his study which was conducted to determine the factors that influence consumer adoption of Internet banking service as well as examine the relationship between Internet banking service, customer adoption and customer satisfaction. Siyanbola,[9] on his paper focused on discussed the various aspects of cashless banking channels, where the real e-banking should be, and the problems facing cashless banking, its advantages and disadvantages to Nigerians. Meanwhile lots of the study had not addressed the electronic means of banking transactions in ensure service delivery. It against this background that this study is try to assess the service delivery in the banking industry using electronic means such as mobile banking, ATM, internet banking etc.

The main objective of this study is to assess the effectiveness of electronic banking systems in enhancing service delivery in the Nigerian banking industry. Specifically, the study intends to achieve the followings;

i. To determine the extent to which electronic banking has enhance the customer’s satisfaction of easy access to financial services.

ii. To ascertain the extent at which electronic banking systems has curb the danger associated with the high usage of physical cash in Nigerian economy.

iii. To determine whether electronic banking systems improve the effectiveness of monetary policy in Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Framework

According to Arunachalam and Sivasubramanian [11], Internet banking is where a customer can access his or her bank account via the Internet using personal computer (PC) or mobile phone and web-browser. In addition, Ongkasuwan and Tantichattanom [12] further defines Internet banking service as banking service that allows customers to access and perform financial transactions on their bank accounts from their web enabled computers with Internet connection to banks' web sites any time they wish. Internet banking service also enables bank customers to perform transactions such as transfer and payments, access of latest balance, statement viewing, account detail viewing, customization, print, downloading of statements and obtaining of a history statement on all accounts linked to the bank’s customers’ AutoBank (ATMs). According to Khan [13], Internet banking includes the system that enables financial institution customers, individuals or businesses, access accounts, transact business, or obtain information on financial products and services on public or private network including Internet. Internet banking is the act of conducting financial intermediation on the Internet [14]. It is that process whereby the customer is able to access, control and use his/her account over the Internet. Since the mid-1990s, there has been a fundamental shift in banking delivery channels toward using self-service channels such as electronic banking, mainly the use of automated teller machines (ATMs) and internet banking. According to Qureshi, Zafar and Khan, [15], clients shifted from traditional banking to online banking system. The core reason of this transfer is perceived usefulness, perceived ease of use, security and privacy provided by online banking. Despite the fact that the internet has an ever-growing importance in the banking sector because of the advantages it brings to both the entities and their customers, not all the financial entities that have adopted e-banking have been successful, often because of an inadequate website design and other factors as well [16]. This can be evident in the case of Uganda in which the concept of internet banking came way back in the year 2006 and the adoption has implementation has either been slow in banks or the adoption has been less among the users.

It aimed at reducing the cost of banking services and eventually eliminating long queues at the commercial banks[17].

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According to Wungwanitchakorn [18], in most developing countries, Internet banking is still in its early stages. Only a few banks are developing such services while others merely use the web to provide information about products and services. Thus, it can be concluded that bank customers are still not accustomed to using electronic channels to manage their financial affairs. This low adoption rate is an indication of the hazards of introducing new products and services into the market place; the vast majority of product and service innovations fail, at considerable cost to the companies introducing them. Moreover, those services perceived as necessary by such adopters must also be identified. The identification of personal characteristics related to the adoption of Internet banking is critical for market targeting and the identification of innovative features can help banks in product design and in formulating campaigns that will encourage the adoption of the service. Consumer adoption of a good or a service refers to the acceptance and continued use of a product, service or idea.

According to Baraghani [19], consumers go through “a process of knowledge, persuasion, decision, implementation and confirmation” before they are ready to adopt a product or service. Thus, consumer adoption is the adoption process that describes the steps consumers follow in deciding whether or not to use a new product or services. These stages in the adoption process are awareness, interest, evaluation, trial and adoption. Awareness is to communicate the availability of the new product or service. Interest is to communicate benefits of new product or service to gain consumer interest. Evaluation emphasizes the advantages of new product over alternatives currently on the market. Usage refers to how the customer is able to use the Internet banking services in any transaction[20].

Ogunsemore [21] defined ATM as a cash dispenser which is designed to enable customers enjoy banking service without coming into contact with Bank Tellers (Cashiers). The ATM, therefore, performs the traditional functions of bank cashiers and other counter staff. It is electronically operated and as such response to a request by a customer is done instantly.

Theoretical Frameworks

Ongkasuwan and Tantichattanon [12] indicate that internet banking helps banks in cost saving, increase customer base, enable mass customization for e-Business services, extend marketing and communication channel, search for new innovation services, and explore and development of non-core business. However, customers’ ability to subscribe to the Internet-base banking services depend on several factors such as user friendly interface, level of Internet experience, types of services provided, (for example e-mail, file transfer, news, online financial services, shopping and multimedia services), attitude and perception, access and delivery time and experience with the Internet.

Ihejiahi [22] expressed concern about the lack of cooperation among banks in the fight to stem the incidence of ATM related frauds now plaguing the industry. He expressed that the silence among banks on ATM frauds makes it difficult for banks to share vital information that will help curb the menace.

Hanson [23] disclosed in his book ‘Service Banking’ that Automated Teller Machine was just introduced in the United Kingdom in 1967 and ever since, Japan and France have used the machine for a multiplicity of purpose.

In Nigeria, the first bank to introduce ATM was the Moribund Societal General (SGBN) in 1990. The trade name for SGBN’s ATM was “Cash Point 24”. One of the first generation banks then, First Bank Plc came on stream with their own ATM in December 1991, a year behind SGBN. They also gave a trade name “FIRST CASH” to their ATM. While that of SGBN was the drive-in-system that of the First Bank ATM was through-the-wall. Access to ATM is through the use of Personal Identification Number (PIN) and a plastic card that contains magnetic strips with which the customer is identified. Banks usually hand over the PIN to the customer personally and the customer is usually instructed not to disclose the number to a third party. ATM card is about the size of a normal credit card and apart from the need to ensure its safety, its surface strips could be mutilated which may make the machine to reject it even though the PIN number is entered correctly.

Ogunsemore[21] advised that the ATM in the advanced countries has been programmed to perform a variety of functions, the commonest being savings / withdrawal, provision of balances of accounts and request for each balances. Other functions which the machines are capable of performing include:

i. Printing of statements
ii. Transfer of funds
iii. Payment of bills
iv. Cash advances
v. Display of promotional messages.

Obiano [24] blamed the menace of ATM frauds on indiscriminate issue of ATM card without regard to the customer’s literacy level. According to him one of the frequent causes of fraud is when customers are careless with their cards and pin numbers as well as their response to unsolicited e-mail and text messages to
provide their card details. Omankhanle [25] opined that the current upsurge and nefarious activities of Automated Teller Machine (ATM) fraudster is threatening electronic payment system in the nation’s banking sector with uses threatening massive dumping of the cards if the unwholesome act is not checked.

Adeloye [26] identified security as well as power outage as major challenges facing the ATM users in Nigeria. A Report on Global ATM Frauds (2007) identified the following types of ATM Frauds:

a. **Shoulder Surfing**: This is a fraud method in which the ATM fraudster use a giraffe method to monitor the information the customer keys in into the ATM machine unknown to the customers.

b. **Lebanese Loop**: This is a device used to commit and identify theft by exploiting Automated Teller Machine (ATM). Its name comes from its regular use among Lebanese financial crime perpetrators, although it has now spread to various other international criminal groups.

c. **Using Stolen Cards**: This is a situation in which the ATM card of a customer is stolen and presented by a fake presenter.

d. **Card Jamming**: Once the ATM card is jammed, fraudster pretending as a genuine sympathizer will suggest that the victim re-enter his or her security code. When the card holder ultimately leaves in despair the fraudster retrieves the card and enters the code that he has doctored clandestinely.

e. **Use of Fake Cards**: Fraudsters use data collected from tiny cameras and devices called ‘skimmers’ that capture and record bank account information.

f. **Duplicate ATMs**: The fraudsters use software which records the passwords typed on those machines. Thereafter duplicate cards are manufactured and money is withdrawn with the use of stolen Passwords.

g. Sometimes such frauds are insiders’ job with the collusion of the employees of the company issuing the ATM Cards.

h. **Card Swapping**: This is a fraud trick whereby a fraudster poses as a “Good Samaritan” after forcing the ATM to malfunction and then uses a sleight of hand to substitute the customer’s card with an old bank card, as the customers is endlessly trying to push the card through, the fraudster offer assistance by pretending to help the customer push through the card.

i. **Diversion**

j. **ATM Burglary**

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**Assessment of E-Banking**

The advent of e-banking has stimulated globalization in banking activities as services are now provided using the infrastructure of global village. Most e-banking applications use the internet to gain the advantage of online banking by providing convenient and flexible services to customers at reasonable cost.

Online banking allows customers to get current account balances at any time. Customers do not need to wonder whether a cheque is cleared or deposit has been posted, at the click of a button customer can easily check the status of their current, savings and money market accounts, through online banking. Online banking gives the ability to pay bills electronically, customers can also download account transactions online, it is also easy to import the transactions directly into typical PC at home or the office. In summary customer can access his account from any part of the globe.

E-banking is more than just internet banking, it involves using the net to exploit new opportunities by transforming products and markets and business processes. E-banking also means developing new relationship with customers, regulatory authorities, suppliers and banking partners with digital age tools. Customers-bank relationships will be more personalized resulting in novel modes of transaction processing and service delivery. Creating a corporate online presence for your bank should be more than just building a website. It should be about building a web business for your bank, to do this effectively the people in charge, the CEO, IT director and managers must have a deep knowledge of what E-banking culture demands.

E-business or E-commerce is not about routine information management or automation, it is about using automation to create opportunities, create new markets, new processes and growth or increase the creation of e-wealth. E-banking involves collaboration (local and international) on payment systems, cashless transactions, digital cash and other electronic based projects. For e-banking to be effective, security must be addressed. A key concern is that of privacy, you cannot expect to do business on the net without addressing privacy of the people you do business with. Do you have a privacy policy? No customer wants to click away to a negative balance. Security in online banking is typically provided through the use of an ID and password: these and other security measures must be effective to prevent, not only the breach of privacy, but other security concerns like alteration of data. Nevertheless, each bank must identify its own unique targets, focus and style when it comes to e-banking.

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Internet Banking Service and Consumer Adoption

Gao and Owolabi [27] contend that the currently relevant factors determining the adoption of internet banking in Nigeria include the level of awareness or attention, the accessibility to computers and the Internet, convenience, privacy, costs, and the availability of knowledge and support concerning internet banking. The introduction of internet banking services is facilitated by the bank’s reputation in terms of size, awareness and trust awareness of Service and its benefits in form of the amount of information a customer has about Internet banking and its benefit may have a critical impact on the adoption of Internet banking [28-29]. On the other hand, Al-Somali et al. [29] noted that low awareness of Internet banking is a critical factor in causing customers not to adopt internet banking and Katri [28] conquers that most important factors discouraging the use of Internet banking are lack of Internet access and not having a chance to try out Internet banking in a safe environment, thus not being in a position to access account. According to Gan et al. [31], the previous studies have identified that user input factors are a function of control, enjoyment and intention to use. Control could be described as the amount of effort and involvement required by consumers in electronic banking. Enjoyment is the perceived playfulness and intrinsic value that consumers experience from the utilization of electronic banking and this would also influence the level of satisfaction; as Gan et al. [31] indicate that when consumers are aware of the availability of electronic banking, they will use adopt, though some may not.

Influences on Consumer Adoption of Internet Banking

Lichtenstein and Williamson [30] noted that several Musimire and Ramadhan converging reference domains and theories suggest numerous potential influences on consumer adoption of internet banking including theories of consumer behavior in mass media choice and use, gratification theories, innovation diffusion, technology acceptance, online consumer behavior, online service adoption, service switching costs and the adoption of internet banking.

It is proposed that customers’ intentions to use internet banking can be affected by customers’ attitudes toward using internet banking. When customers have positive attitudes, they are more likely to adopt internet banking and vice versa [30]. It found that customers’ attitude are significant factor affecting customer behaviors in accepting or rejecting technology. It was found that the relationship between attitude towards using and usage was significant. Customers’ attitudes are a significant factor affecting customer behaviors in accepting or rejecting technology [31].

Hypotheses

1. HO: Electronic banking does not enhance the customer’s satisfaction of easy access to financial services.
2. H0: Electronic banking systems do not curb dangers associated with the high usage of physical cash in Nigerian economy.
3. H0: Electronic banking systems do not improve the effectiveness of monetary policy in Nigeria.

RESEARCH METHODOLOGY

Survey research was adopted for the study. The population for the study consist all the 29 branches of four selected commercial banks in Enugu state of Nigeria. The elements of the population consists of 4 key officials in each branch, namely the Managers, Head of operations, Resident internal control officials, and Fund transfer officials. The total number of such official is 116.

The researchers used judgmental sampling technique to select (29) branches of banks in Enugu state Nigeria which includes; Diamond Bank, First Bank, Fidelity Bank and UBA.

Considering the population size which is large, and to reduce the size of the population to a manageable size. The researcher uses Yaro Yamane’s formula to determine the sample size to be used for the study.

\[
\text{n} = \frac{N}{1 + N(e)^2}
\]

Where
- \(N\) = the population size
- \(e\) = estimated error of 5%

Applying the formula

\[
\text{Sample size} = \frac{116}{1 + 116 (0.05)^2} = \frac{116}{1.29} = 89
\]

Method of Data Analysis

Data collected for the study were analyzed by the researcher using frequency counts, mean score. The three research questions were answered hypothetically; the hypotheses were analyzed in the following order; Data relating to research question one, two and three were analyzed to determine mean score (x). The three hypotheses were tested using Z-test. This was done to ascertain to test significance of different in mean between the two population mean when the sample size
is large. The three null hypotheses were tested at 5% level of significance.

Using z-test

\[ Z = \frac{x - \mu}{\sigma / \sqrt{n}} \]

Where \( x \) = sample mean

\[ \mu = \text{Population mean} \]
\[ \delta = \text{Standard deviation} \]
\[ n = \text{Sample size} \]

Out of 89 questionnaires distributed, 80 were completed and returned. This represents 90% which is higher to be used to do the analysis for the study.

Data Analysis

Table-1: Summary of data collected using Five Point Likert’s Scale

<table>
<thead>
<tr>
<th>S/N</th>
<th>QUESTIONNAIRE</th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>SD</th>
<th>D</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Cashless banking will assist in actualized the stability of financial sector in Nigeria.</td>
<td>29</td>
<td>24</td>
<td>18</td>
<td>16</td>
<td>7</td>
<td>80</td>
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<td>(18)</td>
<td>(16)</td>
<td>(7)</td>
<td>(282)</td>
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<tr>
<td>2</td>
<td>Use of cashless banking policy reforms is a way to improve monetary transaction in the country.</td>
<td>35</td>
<td>28</td>
<td>22</td>
<td>20</td>
<td>0</td>
<td>80</td>
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<td>(112)</td>
<td>(12)</td>
<td>(22)</td>
<td>(0)</td>
<td>(321)</td>
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<td>3</td>
<td>The policy is a means of removing burden/complexity in the system.</td>
<td>30</td>
<td>25</td>
<td>10</td>
<td>6</td>
<td>13</td>
<td>80</td>
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<td>(6)</td>
<td>(20)</td>
<td>(13)</td>
<td>(289)</td>
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<tr>
<td>4</td>
<td>Cashless banking will facilitate economic development hence made internal generated revenue easy.</td>
<td>21</td>
<td>23</td>
<td>9</td>
<td>18</td>
<td>13</td>
<td>80</td>
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<td>(105)</td>
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<td>(18)</td>
<td>(36)</td>
<td>(13)</td>
<td>(257)</td>
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<td>5</td>
<td>Cashless banking will improve the financial strength of government for providing infrastructural facilities that have impact on the economy.</td>
<td>18</td>
<td>28</td>
<td>9</td>
<td>15</td>
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<td>(30)</td>
<td>(10)</td>
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<tr>
<td>6</td>
<td>Cashless banking will benefit the business taco in achieving economic goal.</td>
<td>20</td>
<td>29</td>
<td>9</td>
<td>10</td>
<td>12</td>
<td>80</td>
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<td>(116)</td>
<td>(27)</td>
<td>(20)</td>
<td>(12)</td>
<td>(275)</td>
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<tr>
<td>7</td>
<td>With cashless banking, some of the financial irregularities in Nigerians will be minimized.</td>
<td>45</td>
<td>18</td>
<td>9</td>
<td>3</td>
<td>5</td>
<td>80</td>
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<td>(225)</td>
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<td>(27)</td>
<td>(6)</td>
<td>(5)</td>
<td>(335)</td>
</tr>
<tr>
<td>8</td>
<td>Cashless banking will be a way to achieve Nigerians economic goal 2020.</td>
<td>24</td>
<td>29</td>
<td>3</td>
<td>14</td>
<td>10</td>
<td>80</td>
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<td>(9)</td>
<td>(28)</td>
<td>(10)</td>
<td>(283)</td>
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<tr>
<td>9</td>
<td>Cashless banking will be an easy way to boom Nigerian financial sector.</td>
<td>37</td>
<td>16</td>
<td>8</td>
<td>8</td>
<td>11</td>
<td>80</td>
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<td>(24)</td>
<td>(16)</td>
<td>(11)</td>
<td>(300)</td>
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<tr>
<td>10</td>
<td>There will be a set of attraction of more foreign investment in Nigeria by the introduction of cashless banking.</td>
<td>23</td>
<td>30</td>
<td>6</td>
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<tr>
<td>11</td>
<td>The policy will improved the financial strength of government for providing infrastructural facilities that have impact on the economy.</td>
<td>30</td>
<td>33</td>
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<td>(0)</td>
<td>(316)</td>
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<td>12</td>
<td>Cashless banking will improve in smooth running of government financial transactions.</td>
<td>25</td>
<td>32</td>
<td>2</td>
<td>8</td>
<td>13</td>
<td>80</td>
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<td>(128)</td>
<td>(6)</td>
<td>(16)</td>
<td>(13)</td>
<td>(288)</td>
</tr>
<tr>
<td>13</td>
<td>The cashless policy will ensure that banking sector live up to the expectation in achieving its economic goals.</td>
<td>21</td>
<td>25</td>
<td>5</td>
<td>18</td>
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<tr>
<td>14</td>
<td>The policy will be taken care of adequate redistribution of wealth to the three tiers of government for economic development.</td>
<td>18</td>
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<td>(14)</td>
<td>(279)</td>
</tr>
<tr>
<td>16</td>
<td>Cashless policy will help in eradicate fraudulent acts in financial transaction.</td>
<td>20</td>
<td>38</td>
<td>2</td>
<td>7</td>
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<tr>
<td>18</td>
<td>There will be an easy and faster means of carrying out government financial transactions with the introduction of cashless economy.</td>
<td>33</td>
<td>20</td>
<td>5</td>
<td>19</td>
<td>3</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(165)</td>
<td>(80)</td>
<td>(15)</td>
<td>(38)</td>
<td>(3)</td>
<td>(301)</td>
</tr>
</tbody>
</table>

Source: field survey, 2014

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Test of Hypotheses

Hypothesis one

$H_0$: Electronic banking does not enhance the customer’s satisfaction of easy access to financial services.

$H_1$: Electronic banking enhances the customer’s satisfaction of easy access to financial services.

In testing this hypothesis, questions 1-6 was used.

Mean of population ($u$) = $\frac{3 \times 80 \times 6}{6} = 240$

Mean of sample ($x$) = $\frac{\sum x}{n} = \frac{1693}{6} = 282$

Standard deviation ($\sigma$) = $\sqrt{\frac{\sum (x-x)^2}{n}} = \sqrt{\frac{2413}{6}} = 20.05$

$Z = \frac{x-u}{\frac{\sigma}{\sqrt{n}}} = \frac{282-240}{\frac{20.05}{\sqrt{6}}} = 5.13$

Decision Rule: Accept null hypothesis if the estimate value is less than the table value. Otherwise, reject null hypothesis and accept the alternative.

Decision: Since the $Z$ – table value is less than the estimated value (1.96 < 5.13), the null hypothesis is rejected and the alternative hypothesis ($H_1$) accepted which stated that Electronic banking enhances the customer’s satisfaction of easy access to financial services.

Hypothesis two

$H_0$: Electronic banking systems do not curb the dangers associated with the high usage of physical cash in Nigerian economy.

$H_1$: Electronic banking systems curbs the dangers associated with the high usage of physical cash in Nigerian economy.

In testing this hypothesis, questions 7 to 12 was used.

Mean of population ($u$) = $\frac{3 \times 80 \times 6}{6} = 240$

Mean of sample ($x$) = $\frac{\sum x}{n} = \frac{1798}{6} = 300$

Standard deviation ($\sigma$) = $\sqrt{\frac{\sum (x-x)^2}{n}} = \sqrt{\frac{2490}{6}} = 20.37$

$Z = \frac{x-u}{\frac{\sigma}{\sqrt{n}}} = \frac{300-240}{\frac{20.37}{\sqrt{6}}} = 7.22$

Decision Rule: Accept null hypothesis if the estimate value is less than the table value. Otherwise, reject null hypothesis and accept the alternative.

Decision: Since the $Z$ – table value is less than the estimated value (1.96 < 7.22), the null hypothesis is rejected and the alternative hypothesis ($H_1$) accepted which stated that Electronic banking curbs the dangers associated with the high usage of physical cash in Nigerian economy.

Hypothesis three

$H_0$: Electronic banking systems do not improve the effectiveness of monetary policy in Nigeria.

$H_1$: Electronic banking systems improve the effectiveness of monetary policy in Nigeria.

In testing this hypothesis, questions 13 to 18 was used.

Mean of population ($u$) = $\frac{3 \times 80 \times 6}{6} = 240$

Mean of sample ($x$) = $\frac{\sum x}{n} = \frac{1706}{6} = 284$

Standard deviation ($\sigma$) = $\sqrt{\frac{\sum (x-x)^2}{n}} = \sqrt{\frac{998}{6}} = 12.90$

$Z = \frac{x-u}{\frac{\sigma}{\sqrt{n}}} = \frac{284-240}{\frac{12.90}{\sqrt{6}}} = 8.35$

Decision Rule: Accept null hypothesis if the estimate value is less than the table value. Otherwise, reject null hypothesis and accept the alternative.

Decision: Since the $Z$ – table value is less than the estimated value (1.96 < 8.35), the null hypothesis is rejected and the alternative hypothesis ($H_1$) accepted which stated that Electronic banking systems improve the effectiveness of monetary policy in Nigeria.

Summary of Findings

Based on the analysis of the data collected, the following findings were drawn:

i. The Electronic banking enhances the customer’s satisfaction of easy access to financial services.

ii. Electronic banking systems curbs the dangers associated with the high usage of physical cash in Nigerian economy.

iii. Electronic banking systems improve the effectiveness of monetary policy in Nigeria.

DISCUSSION

Having concluded the study based on the results from the analysis made, the implication of the study is that;
1. There will be need to employ customized software that records relevant information on ATM cards so that banks can establish whether unauthorized transaction has taken place or not.
2. The banking industry will have as their role to alert customers on any suspicious and unusual transaction on their accounts and as customer is the essence of any business being, the development of electronic banking customers’ needs should be the watchword right from idea conception, development and use of the services.

CONCLUSION
This study examined the impact of electronic banking on the Nigerian banking system. It was motivated by a number of considerations. From the analysis above it appears that much has already been done in making the people aware of the electronic banking and that a sizeable proportion of the people are actually awaiting the introduction of the cashless economy. It also appears that many people actually agree with the government on the usefulness of the cashless economy. It is agreed that the cashless system will be helpful in the fight against corruption and money laundering. One most significant contribution of the electronic banking is that it is expected to reduce the risk associated with carrying cash. Since most transactions will now be settled electronically, people will have less need to move around with cash and therefore, loss of cash, theft and armed robbery will drastically reduce.

One major problem in the working of the cashless economy is internet related fraud. Nigeria is a major hub of electronic fraud and this can only be expected to increase as we march into the cashless economy. Illiteracy is also a major factor. The level of illiteracy in Nigeria is still very high. The cashless economy is effectively an e-economy and in any e-system there is almost no room for the non-literate.

Recommendations
To make for the smooth implementation of the cashless system in Nigeria, the following measures are recommended

1. There is the need to intensify the public enlightenment programme about the easy access to financial services associated with e-banking in Nigeria.
2. The aforementioned stakeholders as well as the law enforcement agencies should work co-operatively to give life to the electronic banking system in order to checkmate the fraudulent activities that might arise from electronic means of financial transactions.

3. Harmonization of monetary and fiscal policy. In essence, the federal government should not pursue contractionary/expansionary fiscal policy while the CBN embarks on expansionary monetary policy.
4. Nigeria should make concerted efforts to design an internet security framework to check online fraud so that the public can be assured and protected against cyber-attack and fraud.
5. There should be a careful study of the system to determine the number of point of sales terminals that will ensure its smooth running in Nigeria so as to prevent unnecessary friction in the system.

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