

**THE CASHLESS PAYMENT SYSTEM AS A PANACEA TO THE
NATIONAL SECURITY CHALLENGES IN NIGERIA.**

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ABSTRACT

The aim of this paper was to ascertain the extent to which electronic payment in all its ramifications and intensities could impact on the systemic cashless economy in Nigeria, on the one hand, and the great potential of recovery of National Security from its current state of implicit and reckless collapse, on the other hand. Before the advent of modern banking system, banking operation was manually done which led to a slowdown in settlement of transactions. This manual system involves posting transactions from one ledger to another with human hands into designated folio in appropriate accounting record book. This study examines electronic management of funds movement in both local and international payments; transfers for both legal and illegal purposes. All sorts of illegality in financial and economic activities are carried out by the use of physical cash. Terrorists, money launderers, Fraudsters, Armed robbers, Drug peddlers Revenue generation fraudsters, corrupt politicians and civil servants, cyber criminals,

and Bank thieves are all economic saboteurs and constituents of the dynamics of national insecurity. All these are pilferers of government resources and prefer executing their dastardly acts using cash transactions.

The new policy by Central Bank of Nigeria (CBN) of cashless system of payment has raised a lot of concern on the growth of the Nigerian economy, with the objective of reducing high cost of cash processing and improving financial intermediation, facilitating an efficient payment system, while at the same time solving the critical challenges of National Security enabled by the use cash by economic saboteurs.

Both descriptive and quantitative research techniques was employed to carry out this study. The study indicates that the electronic system of payment has a great implication for the success of the cashless economy and a facilitation of the recovery of the fragile dimensions of National Security in Nigeria. The successes so imagined from the impact of electronic modes of payment of the systemic cashless policy and the recovery of National Security from its current state of decadence will only be realizable if the implementation of the Central Bank of Nigeria's Cashless Policy can also recover from its present state of failure and lack of focus.

Consequently, the authors concluded that the cashless system of payment will enhance the development of the e-payment system and therefore recommend amongst other things the need for proper implementation of a risked based information security strategy for both financial and non-financial institutions in the Nigerian economy.

KEYWORDS: CASHLESS PAYMENT SYSTEM, SECURITY, CHALLENGES, ECONOMY AND E-PAYMENT

INTRODUCTION

The Nigerian Apex financial institution, Central Bank of Nigeria (CBN) in line with its continued financial reformation process took a major step forward by introducing a cash less payment system, which will no doubt make both the Nigerian financial system formidable and enhancing the overall economic

performance of Nigeria to place it on the right path to be in tune with global trends on one hand and help serve as a much needed panacea to the national security challenges in Nigeria on the other.

The advent of information and computer technology (ICT) for financial transactions in the Banking system poses interesting questions for policy makers and financial institutions regarding the suitability of the current institutional arrangements and instruments to guarantee financial soundness, safety and stability vis-à-vis the efficiency and effectiveness of monetary policy, and indeed the financial system. This therefore calls not only to question but also review, assess and study the potential effectiveness of the cashless policy of the Central Bank of Nigeria (CBN).

Over the course of history, different forms of payment systems have been in existence ranging from the trade by barter, the commodities money and the current fiat money which is mainly paper money. Nevertheless, pundits have predicted the complete superior substitute for cash or monetary exchanges (i.e. the paper money for the paperless money) with a view of establishing a cashless society.

At the end of the 1980s, the use of cash for purchases in the U.S has constantly declined (Humphrey 1996). According to CBN, the new cashless policy was introduced for a number of key reasons, including:

1. To drive development and modernization of the payment system in line with Nigeria's vision 2020 goal of being amongst the top 20 economies of the world by the year 2020. An efficient and modern payment system is positively correlated with economic growth.

2. To reduce the cost of banking services (including cost of credit and cost of currency issuance and management) and drive financial inclusion by providing more efficient transactions options and greater reach.
3. To improve the effectiveness of monetary policy in managing inflation and driving economic growth.
4. The cash policy also aims at curbing some of the negative consequences associated with the high usage of physical cash in the economy including:

(a) High cost of cash

(b) High risk of using cash

(c) High subsidy, informal economy inefficiency and corruption. On the 18th July 2012. Sanusi, the CBN governor specifically said that CBN cashless policy was designed to:

- I. Break the traditional barriers hindering financial inclusion for millions of Nigeria and bring low-cost, secured and convenient economy, especially through the mobile payment system services.
- II. Gradually and radically move the entire payment system in Nigeria from the use of physical cash to the adoption of other non physical mode of payments as this will reduce and eliminate the high cost and high risk of cash handling and indeed cash management.
- III. Deepen and modernize the payment systems and put Nigeria on the track to being one of the top 20 economies in line with its vision 2020 aspiration.

The concept of cashless policy will in effect ensure the following:

- i. People do not have to carry high volume of cash around again so as to avoid crimes in the society and also to make the country a secured place, whereby all transactions will have to be on the web (i.e. online, on the internet).
- ii. In other words, cashlite, as the cashless policy is otherwise called, means cash (i.e. physical cash) will be light on people, even in transit or for purchases

discouraging theft and robbery. There will not even be much money in the vaults of the banks any longer or in transit to warrant breaking into the vaults of the banks or attacks on bullion vans.

- iii. Commercial outfits and shops will also suffer less of pilferages, thefts and robberies; they will also be more prone to transparency and accountability in their records keeping and maintenance.
- iv. Incidence of “Ghana Must Go” (GMG) will be reduced drastically, if not completely eradicated especially among the politicians and fraudsters in public and private services. This also will protect, prevent and or eliminate armed robbery, thuggery, fraud and more importantly corruption.

Corruption is said to be the bane of the economic growth and development in the country. In the 20 years of 1986-2006, Nigeria is said to have lost about ₦10trillion to corruption.

Just recently- specifically on Sunday 25th November 2012, the Three (3) lives that were reportedly lost and millions of naira stolen in the robbery attacks that lasted for 3 hours at an Auchi bank, Edo state on Friday, 30th November 2012.

- The epileptic provision of energy and power necessitating the almost ceaseless reform of the PHCN- the power and energy sector agency.
- Failure in the oil sector due to the bunkering on the high seas of crude oil and on the land of the refined petroleum from the NNPC pipeline network (e.g. Arepo, Ogun state theft/attack of the pipeline which sometimes in the second half of 2012 left the states of Oyo, Osun, Ogun almost economically grounded). Accompanying the bunkering is the spate of kidnappings, murders, and blackmailing necessitating demands for millions of naira as settlement fees or ransom.

All these are pointers to the political and economic threats to national security which the cashless policy, if successful, may reduce or completely be eliminated. This is because of its possibility to:

- I. Reduce and or eliminate armed robbery, murder, fraud and corruption.
- II. Encourage and promote better financial inclusion for widening and mobilization of higher revenue for the government for better national economic planning and implementation to improve the life of people.
- III. Consequently, it will remove all the possible constraints to real economic growth and development and real welfare of the citizenry.

Against this backdrop, the study seeks or aims at analyzing the positive and negative policy implications of cashless policy on Nigerian economy, with a view to assessing the effect of the policy on national security. More importantly is the expected positive effect on the national security. This is in terms of the reduction and eventual minimization (if not complete elimination) of the consequences of armed robbery, fraud and corruption which is almost pulling the knees of the economy down in the Nigeria.

STATEMENT OF THE PROBLEM

The problems concerning cashless transaction and national security are not farfetched; as it appears that the following highlighted faults, amongst others need to be urgently examined:

- I. There were series of doubts by financial experts and interest groups on the readiness of Nigerians and the financial system to effectively commence implementation as scheduled and announced by the CBN. How will the

myriads of challenges ranging from power, infrastructure, information technology, sufficient awareness creation, the need know how by the industry operatives, national security issues, have all combined to constitute obstacles on the way of implementation of the cashless policy.

- II. It is a truism that 65%-70% of the citizens of Nigeria lack functional education, knowledge and access to computers which is a precondition to effective participation in the cashless policy may not be able to participate or benefit from the policy implementation. This constitutes a symbolic challenge to the implementation of the cashless policy.
- III. Criminality, terrorism and economic sabotage in various forms are serious issues of challenge for the Nigerian security today. It is also an established fact that these nefarious activities that are contrary to national economic development and peace are mostly financed and implemented through the utilization of cash payment system. Activities associated with fraud, various degrees of corruption, obtaining money by deceit, money laundering, bunkering, 419ers, espionage crimes, cyber crimes, terrorism, cash theft and so many others are economic misdemeanors' associated with risks to national economy, peace and security. It is also obvious that these criminal activities are mainly carried out through cash transactions, therefore an effective implementation of the cashless policy is needed.

OBJECTIVES OF THE STUDY

The general objective of the study is to investigate the various hindrances and constraining factors to the realization of the cashless payment policy of the CBN especially as the national security is concerned. The study also seeks to consider the following specific objectives:

- I. To investigate what strategies the CBN is planning to device and confer the benefits of the cashless payment system on between 65-70% of the Nigeria citizenry who has no functional education and majority of whom has no knowledge and access to computers and information technology
- II. To establish the various ways the issues of criminalities, terrorism and economic sabotage which besides constituting an impediment to economic growth and development are also critical factors of insecurity to the nation, will be reduced to the barest minimum(as expected) by a full realization of the implementation of the cashless payment system in Nigeria.

RESEARCH QUESTIONS

Since the release of the cashless policy guidelines by the Central Bank of Nigeria in 2011, the questions currently being asked to assert the relevance of cashless transaction to national security include among others:

- I. How prepared and ready is the CBN and the government for the rational implementation of the cashless Nigeria policy?
- II. What strategies are the CBN going to take in order to carry along and confer the benefits of the cashless payment system on between 65-70% of the citizens who have no functional education and knowledge of the cashless policy?
- III. How is the cashless policy going to reduce criminalities, terrorism and economic sabotage which constitute an impediment to economic growth and development which are also critical factors of insecurity to the nation.

HYPOTHESIS OF THE STUDY

Hypothesis to be tested in this study are the following:

- I. **Ho:** the CBN and the people are not prepared and ready for the full implementation of the cashless Nigeria project.
H1: the CBN and the people are prepared for the full implementation of the cashless Nigeria project
- II. **Ho:** the CBN does not have a good strategy to carry along and confer benefits of the cashless Nigeria policy on between 65-75% of the citizenry who have no functional education.
H1: the CBN have a good strategy to carry along and confer benefits of the cashless Nigeria policy
- III. **Ho:** the cashless policy will not reduce criminalities, terrorism and economic sabotage which constitute an impediment to economic growth and development which are also critical factors of insecurity to the nation.
H1: the cashless policy will reduce criminalities, terrorism and economic sabotage which constitute an impediment to the economic growth and development which are also critical factors of insecurity to the nation.

NATIONAL SECURITY: the most essential function of any government is to provide peace and security for its people. There cannot be any development without peace, meaning security is an essential precondition for delivering and executing developmental pledges.

Nigeria as a nation is one country in Africa that must be stable at all costs. However, the country is confronted with new challenges that are evolving everyday which the new cashless policy is meant to eradicate. With the new cashless policy, it is expected that, national security in Nigeria will take a new turn for the better.

The cashless payment system brings so much relevance to the security of the nation, because with this policy, crimes like theft, fraud, money laundering, bank distress, robberies, terrorism and many other cash crimes are expected to be reduced. Before now, all transactions were made manually (i.e. with cash); the cashless policy was consequently introduced whereby most transactions like bills exchange, purchase of food stuff and materials in a supermarket, importation and exportation of goods, transfer of funds can now be made through electronic means without having to carry cash about anymore and having the fear of being attacked by robbers or thieves.

EMPIRICAL REVIEW

The relevance of cashless policy to national security is of great concern to the prevalence of robberies resulting in loss of lives and property of the innocent citizens of this country. The western world were the first to see the need to save human life, increase national security, improve and increase the economy by making life easier through cashless policy. But, before cashless policy, the prevalence of bank robbery was all over the country; for instance, bank robbery in Lagos state was in the region of two serious bank robberies per week over the last ten years. In the suburb where the security is low, for example, the suburb of Ondo state that are far from the state capital where there are armored tanks and security manned vehicles, the robbers go to the banks, bomb the place, kill the people and rob them of their money. In the Western World, take Atlanta in USA, for instance, the issue of bank robbery has reduced to almost 1% because the security over there is very good, as they use the Control Circuit Television (CCTV), Radio Communication Equipment to monitor the banks. There is also the problem of unstable electricity that stabilizes the use of all these security gadgets, thus making banking transactions easy and safe especially, for the cashless payment system.

CONCEPT OF CASHLESS ECONOMY

The internet is perhaps one of the most useful tools to businesses and individuals in contemporary world economies. Its use has touched virtually every aspect of human endeavor especially banking. Technological breakthroughs and product designs have led to the emergence of e-banking services which, in recent time has become globally popular except in developing countries including Nigeria (James, 2012).

Electronic banking, otherwise called e-banking is defined as the provision of banking services to customers through the internet (Daniel, 1999). Services offered by banks using the internet include, Mobile banking (M-banking), Video banking, Fund Transfers, e-payments, POS, ATMs, and Cards, amongst others. Of these entire e-banking services, ATM is by far the most popular in Nigeria. However, technological advancement keeps broadening the frontier of possibilities in all human endeavors and thus more e-banking services are being developed and introduced.

The Central Bank of Nigeria (CBN) in 2011 released a circular on the introduction of ‘cashless’ policy which sets the daily cash deposit and withdrawal limits at ₦500,000 for individuals and ₦3 million for corporate bodies. That the country would from June 1st 2012 join the committee of nations that embrace the electronic means of payment and limit the use of cash to the very barest. The apex bank also asserted the commencement of the “cashless policy” for cities such as Lagos, Abuja to demonstrate (it has recently been extended to Port Harcourt, Onitsha, Kano, Kaduna, Benin) the CBN’s seriousness on the policy which has generated huge debate from Nigerians. While the apex bank is of the view that the cashless policy is the way to go in line with global trends, many Nigerians both informed

and uninformed have divergent views about the policy (CBN, 2011). The Governor of CBN is of the view that the electronic means of payment is the vogue throughout the world. He stressed that the policy, if allowed to succeed, would save the country huge resources such as cost of printing cash and its transportation from the mint to the length and breadth of the country. That such cost could be diverted to other pressing national needs because the use of cash is attributed to corruption problem in Nigeria (Sanusi, 2011).

Consequent upon this policy, the CBN licensed six Payment Terminal Service Providers (PTSPs) to support and maintain Point-of-Sale (POS) terminals.

This step is a bold demonstration that the apex bank is determined to see this policy work. The Bank kick started the policy in Lagos early 2012. The licensed PTSPs are ITEX, Value Card, ETOP, Paymaster, City Serve and Easy Fuel, which are all focused on the downstream sector. CBN moved a step further by assuring Lagos residents that there would be no need for a separate POS terminal for each type of card scheme, as all terminals would be equipped to accept payments for any type of card. The cards in the scheme are; Verve, Genesis, Master Card, Visa, etc (CBN, 2012). The success of this policy requires the increased use of alternative payment systems including e-banking.

CASHLESS TRANSACTIONS AND NATIONAL SECURITY

Generally, national security as a concept is a potential major obstacle to the success of the cashless policy which this research study is all about with a view of finding and suggesting possible solutions that could enhance the success of the policy. National security is threatened by activities revealing information on economic financial and monetary movement activities. Issues of national security

that thrives on the use of cash for transaction are multivariant and multifunctional; a few are discussed here under:

MONEY LAUNDERING

Money laundering is the process of making money illegally through illegal and criminal sources, attempting to make the proceeds (i.e. dirty money) appear legal (i.e. clean). Typically, it involves (3) three steps: placement, layering, and integration. First, the illegitimate funds are secretly introduced into the legitimate financial system. Then, the money is moved around to create confusion, sometimes by wiring or transferring through numerous accounts. Finally, it is integrated into the financial system through additional transactions until the “dirty money” appears clean. Money laundering facilitates crimes such as drug trafficking and terrorism which can adversely impact the global economy. Money launders are known to be major financiers of drug trafficking, terrorism and all sorts of insurgencies against the peace and security of countries. Money laundering is a criminally conceived way of accumulating money, making illegal profits from unauthorized business activities and moving the funds all around the financial system of various countries, in most cases such funds are used to sponsor criminal activities as mentioned above.

TERRORISM

Money laundering is therefore not only a threat to national security but globally it is a threat to international security. It would not be unfounded to remark that the Boko-Haram problems and insurgency in Nigeria which have killed hundreds of innocent people in the Northern Nigeria is possibly being financed by the proceeds of money laundering. Boko-Haram is believed to be an international terrorism which is giving the federal and state governments in Nigeria sleepless nights.

Indeed Boko-Haram in Nigeria is giving the world-talk of the developed and highly industrialized countries, sleepless nights and stress, especially with the reported murder of 7 foreigners who had earlier been taken as hostages.

The steps and processes highlighted above of wiring and transfer of money laundering funds through numerous accounts and the integration of the 'dirty funds' into the international financial and payment systems to make it "clean" is apparently through electronic payment (e-payment) and electronic banking systems. Both are channels of cashless transactions which is just being adopted and integrated into the Nigerian financial and payment systems. By the time the cashless policy becomes fully established and integrated nationwide, it would of course be an easy flow of money laundering funds into the systems; only God knows if terrorism would not have been fully integrated and established in the country, as the channel of financing would have been "legalized and easier".

Financial institutions or systems are at the fore front of the battle against money launders. It is not only the institutions that the money launders target to use their various nefarious schemes but under current legislation they are responsible for policing the financial dealings and reporting any suspicious transactions and also transactions over a reporting limit of £10000 (in the UK). Financial institutions are affected by money laundering:

- In a legal sense because of the obligations placed on them by legislation.
- Financially because of the need for compliance. The money laundering regulations 1993 (hereafter called regulations) require financial institutions to put in place systems to deter money

laundering and to assist the relevant authorities to deter money laundering activities.

Namely, the legislation is that any money transfer into the country above USD 10,000.00 (or its equivalent) through the banks and the financial institution should not only be reported to the CBN but also the NDLEA. The objective is to investigate and ascertain the source of the money with a view of confirming whether it is a money laundering fund or not. To effect this investigation and reporting systems, banks are required to have a compliance desk manned by a responsible officer (senior officer) in each branch of the bank.

- **PETROLEUM BUNKERERS**

The activities of petroleum bunkerers who illegally move petroleum products between Nigeria and other countries do not only constitute economic sabotage but also very grievous security risk. Just like the money laundering, bunkering is an economic sabotage that has found its way into the nation payment system through the lodgments of the “dirty money” of its proceeds thus making it clean. Unfortunately, bunkering has transited from the international upstream (oceanic/sea) illegal trade to a local downstream one with the vandalization of the pipelines across the nation and the resulting killings and deaths of hundreds of people through fire explosions and accidents. Once the bunkered fuel gets into the petrol stations, especially the new private ones under the banner of the IPMAN (Independent Petroleum Marketers Association of Nigeria), it has illegally entered and integrated into the economic system. One wonders how the cashless transactions policy can checkmate this type of economic sabotage and fraud. Economic sabotage and fraud is a threat to national security without any gainsaying.

- **CROSS BORDER ILLEGAL CURRENCY TRADING**

The cross border illegal currency trading and trafficking thrives across the border of African countries. This illegal activity is not only resulting in economic sabotage but also an avenue of insecurity to the rationales of the countries engaging in it.

ESPIONAGE

Espionage involves a government or individual obtaining information that is considered secret or confidential without the permission of the holder of the information. Espionage is a channel of obstructing secret intelligence work, in sourcing and utilization of information between governments, businesses and the economic systems. Secret agents involved in espionage are enemies of the state whose identities must be desperately hidden; such secret agents life style, spending and financial transactions are shrouded in mysteries of secrets. They conduct their transactions through movements of large amounts of cash in their operations.

Espionage is critical acts of insecurity that can bring the economy down financially; their operations survive on the ability to move funds in cash, as they rarely own accounts, as they keep their identities secret to avoid their activities and persons being exposed. Espionage will be reduced to the barest minimum with a successful implementation of the cashless policy. Espionage is a factor in the success of terrorism.

Most of the challenges of national security are issues of cashless transactions, as all these criminals carry out their activities more with cash transactions, so if the use of cash is reduced and restrained it is going to have a positive effect and those activities may be reduced if not totally eliminated, and that is a plus to national

security. Recently, on 13/03/2013 it was reported in the national news that the Army in a gun battle of cross fire with terrorists/armed robbers in Sokoto, Nigeria wherein 4 of them were killed including a woman, a bank teller for a lodgment of ₦3.5 million was found on them apart from a large catchment of sophisticated weapons. Perhaps with the cashless policy and transactions this socio-political crimes and albatross of national security would be minimized, if not eliminated.

CYBER CRIME

Cyber crimes and the risk to Nigerian cyberspace are part of security considerations that the government should earnestly consider in protecting the E-payment systems under the cashless Nigeria project implementation formalities. On the 12th of August 2012, a conference was organized by the Electronic Payment Providers Association of Nigeria (E-PPAN) to consider the issues of cyberspace protection and a way to curb the activities of cyber criminals and the possibilities of its effect on the cashless economy programme.

David Isiavwe (2012) in his paper presentation at the conference, advocated for an E-payment legislation bill which is already sent to the national assembly to seek the passing of the act that would guarantee the prevention, the detection timely response and prosecution of cyber crimes as part of national security arrangement to check mate cyber crimes and to prevent an abuse of the Nigeria cyberspace in the E-payment procedures under the cashless economy project.

In the approach to the full commencement of the cashless economy project, cyber crime is on the increase in Nigeria both externally and internally, the invasion of cyber criminals are on the increase. Therefore there is need for necessary legislation to check and punish the activities of cyber criminals and any abuse to the Nigeria cyberspace.

David Isiavwe (2012) also stated that the general objective of the act of the national assembly proposed would be to cover the provision of effective, unified and comprehensive legal framework, for purposeful and effective prohibition, prevention, detection, prosecution, and appropriate punishment according to the law of all cyber criminals who may be desperate at sabotaging the E-payment system in Nigeria and its contribution to the Nigeria cashless economy. He however stated that while the bill was a step in the right direction, efforts should be made to revise it and to make it more encompassing so that all aspects of information are extensively dealt with. Gathering, preservation, and presentation of electronic evidence should be covered. Also, privacy laws and unsolicited mail issues should be adequately covered. The law makers should also be careful not to create lacunas that may create enforcement problems. Also, the cashless policy gives a national health bill because the security strategies will combat fraud and other cash related crimes as mentioned above.

The cashless policy is relevant to security because it will help reduce the movement of illegal cash and it will also help law enforcement agencies to trace the movement of money with financial system and therefore detecting crimes become very easy because security cameras will be planted at all halls and blocks to monitor people and transactions.

The cashless policy prior to the year 2000, was not really grounded over there in the USA, where robbers attack the banks and go there to rob and they get away with it, but as at today in Atlanta there are CCTV monitoring every junction, every hall, every road, so if an armed robber enters into the bank to steal, the banker does not need to struggle with the person because the cameras are monitoring every move he makes and as he leaves the bank with the stolen money different calls have been made through communication means like the walkie-talkie, cell phones

and so on, so that the robber will be immediately caught and taken into prison. This has consequently contributed to the reduction of robbery to 1% in Atlanta, Georgia, USA sequel to the enhanced security devices in place with the use of CCTV, Radio Communication Equipment, etc. However, for this to succeed, the power-electricity must be stable and the security personnel especially the police must be adequately literate and trained; they (police) must also be up and doing and loyal to their callings.

SECURITY APPRAISAL OF THE CASHLESS ECONOMY

National security is all about protecting lives and properties. Cash is an essential part of property both at the national, corporate and individual level, it is relatively important to national economic growth. No discussions concerning security will be complete without consideration for its (cash) safety and other near cash items in use within the financial system. Most of the insecurity occurring within the nation has a higher connection with the use, abuse and misappropriation of cash and cash related items. It is therefore obvious that, security consideration will be incomplete without consideration for the use of cash. For example:

i) Fraudulent activities within the fabrics of the Nigerian nation are critically connected with the abuse and appropriation of money, particularly cash and other near cash items like cheques, drafts, treasury bills, treasury certificates, bills of exchange and bonds.

ii) Corruption on the other hand thrives in Nigeria on the abuse of the use of cash, insecurity in the custody of cash, abuse of power and privileges by people in authority who mis-appropriate government valuable resources in cash and other valuable assets, transfer government money from government current account, stealing from government, converting government instrument into personal use. It

is equally instructive to note that a lot of criminal activities like hijacking of bullion van species, money laundering, financial inclusions, fraud, cyber crime, and theft, robberies and even murder would not have been thriving without the use of cash because people involved in such activities will only be able to carry out their nefarious activities as they have access to cash.

iii) Money laundering: over time, money laundering has been of great threat to national economy and survival. It is the act of moving very heavy cash across borders and without authority. Money launders are called economic saboteurs’.

iv) Hijack of bullion van species: we have heard over the news, where robbers have hijacked bullion vans that are moving high volume of cash from one bank to another and this is an epitome of insecurity.

v) Financial inclusion: this is that activity that allows interactive transactions within the financial system.

The Computer Professionals Registration Council of Nigeria (CPN) Information Technology (IT) Assembly (2012) has blamed the country’s challenges of security on inadequate manpower and poor infrastructural facilities. Emma Okonji (2009) a reporter and a writer, writes on the need to develop human capacity and IT tools in order to address the challenges of the national security.

The just-concluded annual Information Technology professionals’ Assembly of the Computer Professionals Registrations Council of Nigeria (CPN) on July 2012 raised issues on intelligence gathering and national security, as well as the opportunities and challenges that abound in cashless transactions.

The CPN IT Assembly is a yearly gathering of information technology practitioners in Nigeria and Diaspora with the objective of discussing and

strategizing on emergent issues in IT in order to come up with recommendations and decisions that will impact positively on the industry and the nation. The theme for this years' assembly: "National Transportation", was informed by the need to highlight the country's drive for development in the area of information technology that can improve national security.

Lead speakers presented papers on different topics that were focused on national security challenges and the opportunities of a cashless society. At the end of the sessions, a communiqué providing solutions to identified challenges, were released. These are:

- 1) To provide adequate infrastructural facilities for the cashless society
- 2) To reduce high cost of handling cash
- 3) To eradicate bribery and corruption in the economy.

THE RELEVANCE

Knowing that all the areas of insecurity will be blocked out and the criminals will be caught, expectantly, the cashless policy will offer unhindered support to national security as most of the issues and challenges of national security operate more conveniently with cash at their disposal, a few examples here will suffice:

1. The bunker who steals crude oil or refined fuel from a depot, at all times offer the goods for cash and carry, he will not wait for anyone who wants to give him cheque or who wants to transfer money into his account through electronic means, because he is not willing to be identified by financial institutions or the regulators of financial system or political leaders, all he is ready to do is to deliver the goods and collect his cash speedily.

2. Also take another example of the money launders, after committing his economic atrocities by carrying out illegal business, the proceeds of the 'jumbo' cash he received from such illegal business, he cannot easily take the cash to the banks, so he begins to look for how to split the money in little bits for safe keeping, such huge proceeds of illegal business will conveniently be traced to the identity of the operator of the illegal business of money laundering provided bank accounts are properly and appropriately opened, the cashless economy will conveniently expose the identity of the owners of such funds.
3. It is informative that espionage, which is an activity spying on a government or people are carried out under hidden identities of movement of funds, with the aid of the cashless transactions espionage cannot be done with clear or open identity. Movement of funds, in this case are done in secrecy or more conveniently in cash. A cashless economy will surely open up the lead covering the hideous activities and illegitimate activities carried out by spies. It is an advantage that the cashless economy can yield to national security, making espionage an activity that can be exposed very cheaply.
4. Concerning cyber crime, the government has to establish base standards and have protective devices for the security of the cyberspace.

The security of electronic cash cannot be the sole responsibility of financial institutions. A careful look at the source of security breach on electronic cash over the decades points to sources such as from the third-party processor of payment data, as seen in the breach that occurred at Card Systems Solutions in Tucson, Arizona in 2005 where about 40 million credit cards were said to have been stolen by an intruder exploiting the vulnerabilities on the company's system.

Security breach can also come from retailers, for instance in the year 2006 a UK retailer suffered a data breach where more than 4000 credit cards were said to have been stolen by hackers. Even, POS machines as small as they may look, come with their own set of security challenges. POS devices are usually based on standard PC architecture; therefore they share much vulnerability like weak or default configurations, missing security patches and weak passwords and account policies. Therefore, there must be conscious efforts to perform security assessment on POS devices or put other information security measures at the retailers and third-party processors end.

Other source of data breach can be from the point of the end users' mishandling of their cards or revealing card details. In 2010, Panda security's anti-malware laboratory (Panda Labs) reported that hackers are creating 57,000 new websites each week that exploit many of the major high-profile brand names. In the investigation, Panda Labs found that banks, by far, comprise the majority of fake websites with 65% of the total. Hackers in Nigeria that are yet to go sophisticated with electronic payment systems are currently capitalizing on end users ignorance to steal card details either through fake websites, spam emails or via other social engineering techniques. While there have been several user awareness sessions to motivate end users to embrace the cashless society initiative. Have we considered addressing the potential security challenges as part of the awareness sessions? Beyond the knowledge of prior mishaps with going cashless, and the anticipated challenges, the benefits of such a society should not be forgotten.

A cashless society is indeed very beneficial and appears to be the next best alternative for us. But given that in a cashless society we trade two major

currencies- electronic cash and trust. Therefore all hands must be on deck to ensure that we maximize the benefits and minimize the risks.

BASELINE STANDARDS FOR ELECTRONIC CASH AND INFORMATION SECURITY STRATEGY

We should also learn from the events that have led to data breaches in Nigeria and other parts of the world. Lessons learnt include: the need for implementing a risk based information security strategy, proper configuration of POS/ATMs and IT system, educating operators and end users, implementing end to end control, encrypting data over the wire and stored data, segregation of duties, regular monitoring of logs and controls, getting independent security experts to perform a security health check of IT infrastructure and POS/ATM devices, complying with baseline standards from the regulators and continuous security to cope with the dynamic nature of the online world.

INFORMATION SECURITY CHALLENGES

Is Nigeria ready for the information security challenges of a cashless society? Well, the answer depends on who you are asking. Nevertheless as no system in the world can guarantee a 100% security, there is need for all parties concerned to put measures in place to provide reasonable assurance that the huge benefits of a cashless society will be realized in the shortest possible time and with minimal casualties.

PAYMENT CARD INDUSTRY DATA SECURITY STANDARD (PCIDSS)

The concept of the Payment Card Industry Data Security Standard (PCI DSS) is a proprietary information security standard for organizations that handle card holder information for the major debit, credit, prepaid, e-purse, ATM, and POS cards.

Defined by the Payment Card Industry Security Standards Council, the standard was created to increase controls around cardholder data to reduce credit card fraud via its exposure. Validation of compliance is done annually – by an external Qualified Security Assessor (QSA) that creates a Report on Compliance (ROC) for organizations handling large volumes of transactions, or by Self-Assessment Questionnaire (SAQ) for companies handling smaller volumes.

Looking at the security perspective of the Payment Card Industry Data Security Standards (PCIDSS) in Nigeria, which is a classical nation security phenomenon, the use of card and point of sale machinery are so crucial to the successful implementation around the payment card and data security standard that CBN, in its overwhelmed position of being confused about what to do about proper implementation of the cashless policy vis-à-vis the crucial situation of maintaining data security standard in the application of payment card, has not even taken cognizance of the risk that card users and the financial system itself should as a matter of necessity be made to comply with.

The provisions of the international PCIDSS which are a condition precedent to a successful implementation of the cashless policy, taking national and industry security into proper cognizance (which propose significant threat to the national economy) affect the nation and make the finance industry performance effective.

The apex bank had envisaged this colossal security challenge as it encouraged the country to migrate into a cashless mode. Accordingly, it directed all players in the banking sector and electronic payment sector to attain Payment Card Industry Data Security Standards (PCIDSS) compliance to ensure that card users in the economy would continue to experience enhanced payment data security, efficient and secured service delivery.

Up till now, out of the 21 financial institutions currently operating in the country, only Access bank plc has achieved compliance. Business day on the 13th of August 2012 by Ben Uzor Jnr (cyber security/ national security), gathered that, Inter-switch, Value-card, and only E-transact plc have achieved compliance.

It is evident from the IT experts' opinion, particularly the PCIDSS security certification body that banks are investing fewer resources in PCIDSS efforts for data security certification, because they think implementing these policies will disrupt business operations. Security experts' also stated that PCIDSS certification represents a common set of security best practiced, that if strictly adhered to, will ensure the safe and secured handling of payment card data and transaction. This is a potential security challenges which the regulators should look into.

CONFRONTING SECURITY ISSUES USING THE CASHLESS PAYMENT SYSTEM

Addressing the issue of intelligence gathering in tackling the current security challenges to cashless transactions in the country, the IT assembly insisted that information technology tools were indispensable in the collection and processing of intelligence information, but regretted that IT contribution to intelligence gathering in Nigeria had been hampered by the poor infrastructural facilities, inadequate manpower, as well as absence of a national database for the country.

Since information technology is knowledge-based, CPN (July 2012) said it would be extremely difficult for the IT profession to play the role expected of it in intelligence gathering and national security to cashless transactions without a human capacity development. It therefore called on government at all levels to invest more in the IT education system, so as to develop the right human capacity needed in intelligence gathering that will address national security. The present

low level of human capacity development is actually giving little or no input to the development of IT tools for intelligence gathering, said the CPN (July 2012).

ESSENCE OF SECURITY TO CASHLESS TRANSACTION

- 1) To reduce the high risk of cash handling: cash carrying encourages robberies, fraud, corruption, theft, pilfering and other cash crimes leading to colossal losses as it is also in the case of fire outbreak, flooding incidents in cash storage and management centers within the chain.
- 2) Curbing inefficiency and corrupt practices: high cash usage enables corruption to thrive, through multiple systematic leakages including capital flight, money laundering as mentioned earlier among other related fraudulent practice.
- 3) Essentially, cashless policy and transactions thereof is about redressing a situation of high subsidy in cash management. A critical analysis of the daily activities of banks in Nigeria reveal that only 10% of daily banking transactions are above ₦150,000.00, but the 10% account for majority of the high value transactions. This suggests that the entire 90% volume of lower value banking transactions by the majority, subsidizes the costs of cash usage. In other words, it is the poor majority in the economy that moves the 90% volume of cash in their little transactions in cash movements that bear the burden of subsidizing the high cost of cash management.

RESEARCH METHODOLOGY

METHOD OF DATA ANALYSIS

The study used both descriptive and inferential statistics in analyzing the data. Also, simple frequency counts, percentages and the chi-square and Analysis of Variance (ANOVA) were used in the data/techniques of analysis.

This study used a chi-square analysis model to examine how the cashless payment system can be a panacea to the national security challenge in the country. There is a master table summarizing all the responses while other tables were derived from the master table/raw data. The responses were summarized and classified according to the sector. Simple percentages were calculated and analyses were made from the percentages and summary to enable an informed conclusion. The model used is stated as follows (the formulae for chi-square method)

$$X^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where;

X^2 = Chi Square

\sum = Summation

O_i = Observed frequency

E_i = Expected frequency

Degree of freedom (d.f) = n-1

4-1, d.f =3 and the Level of significance = 0.05

PRESENTATION AND ANALYSIS OF DATA

DATA PRESENTATION

The bio-data in the questionnaire was presented in tables to show clearly all the information about the respondents. The data are subsequently explained in simple and clear terms with frequency tables, bar chart and pie charts illustration.

A. PRESENTATION OF DATA IN FREQUENCY TABLES

TABLE 1: SEX DISTRIBUTION OF RESPONDENTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	FEMALE	28	57.1	57.1	57.1
	MALE	21	42.9	42.9	100.0
	Total	49	100.0	100.0	

Source: Field Survey, 2013.

Comment: The table above shows that 57.1% of respondents are female, while the remaining 42.9% respondents are male.

TABLE 2: AGE DISTRIBUTION OF RESPONDENTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30yrs	17	34.7	34.7	34.7
	31-50yrs	28	57.1	57.1	91.8
	51yrs and above	4	8.2	8.2	100.0
	Total	49	100.0	100.0	

Source: Field Survey, 2013.

Comment: The table above shows that 57.1% of respondents are between 31-50 years, 34.7% respondents were between 18-30 years while the remaining 8.2% respondents are 51 years and above.

TABLE 3: EDUCATIONAL QUALIFICATION DISTRIBUTION OF RESPONDENTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SSCE	2	4.1	4.1	4.1
	B.Sc	27	55.1	55.1	59.2
	Others	20	40.8	40.8	100.0
	Total	49	100.0	100.0	

Source: Field Survey, 2013.

Comment: The tables above shows that 55.1% of respondents are B.Sc holders, 40.8% respondents are other qualification while 4.1% respondents are SSCE holders.

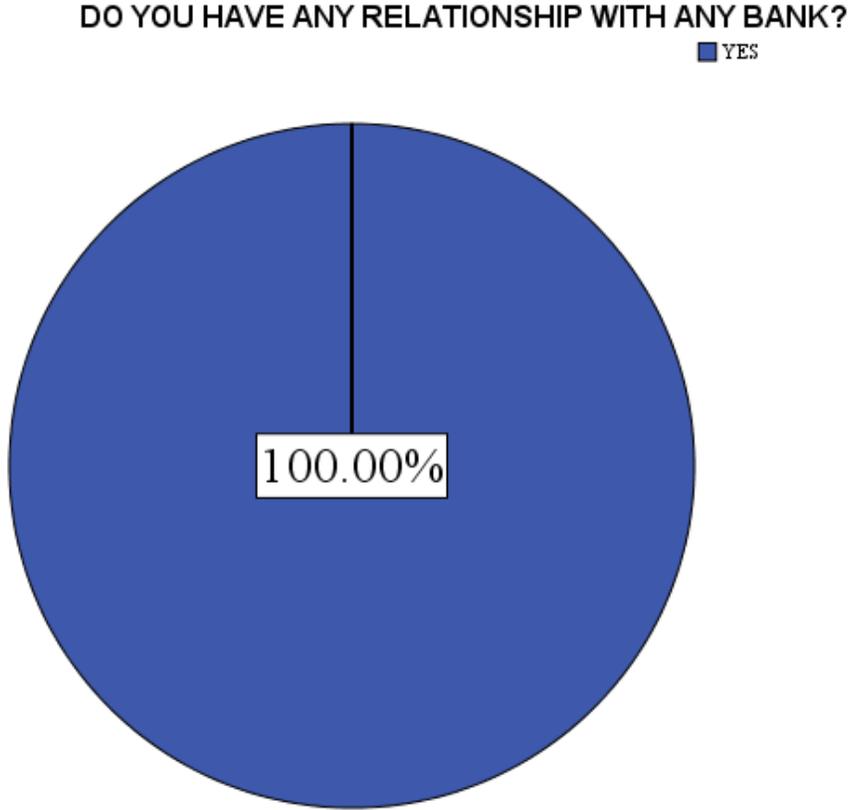
TABLE 4: OCCUPATIONAL DISTRIBUTION OF RESPONDENTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CIVIL SERVANT	23	46.9	46.9	46.9
	BANK WORK	15	30.6	30.6	77.6
	TRADER	11	22.4	22.4	100.0
	Total	49	100.0	100.0	

Source: Field Survey, 2013.

Comment: The tables above shows that 46.9% of respondents are Civil Servants, 30.6% respondents are Bankers while 22.4% respondents are Traders.

B. PRESENTATION OF DATA IN PIE CHART DISTRIBUTIONS



SECTION A

Figure 1

Source: Field Survey, 2013.

Comment: The chart above shows that 100% of respondents have relationships with banks.

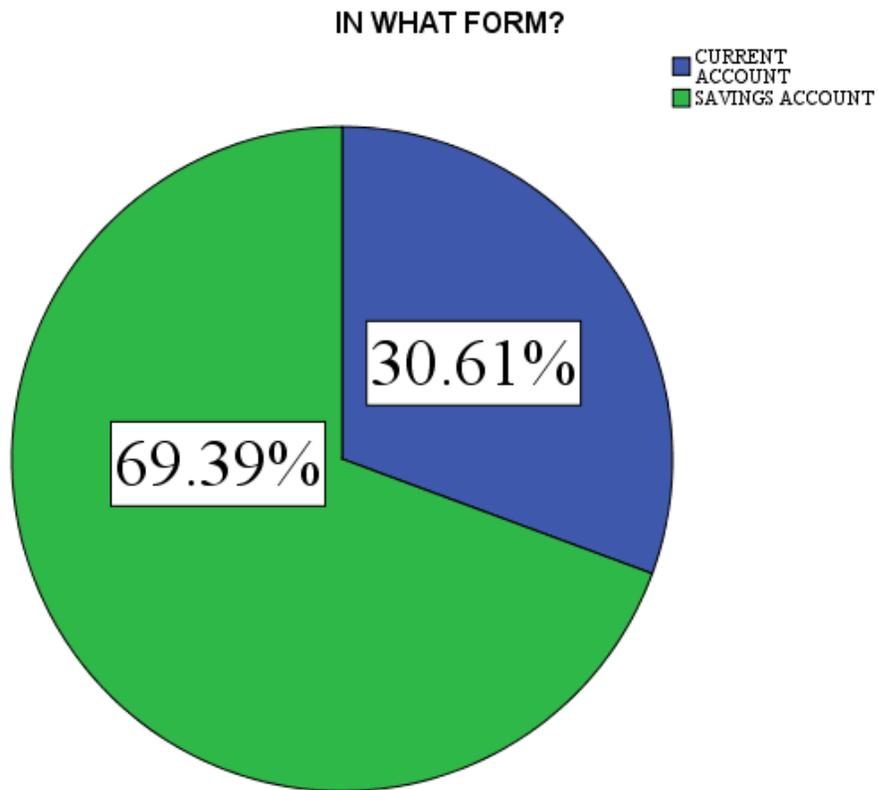


Figure 2

Source: Field Survey, 2013.

Comment: The chart above shows that 69.39% of respondents uses savings accounts while the remaining 30.61% uses current account.

ARE YOU SATISFIED WITH YOUR RELATIONSHIP WITH THE BANK?

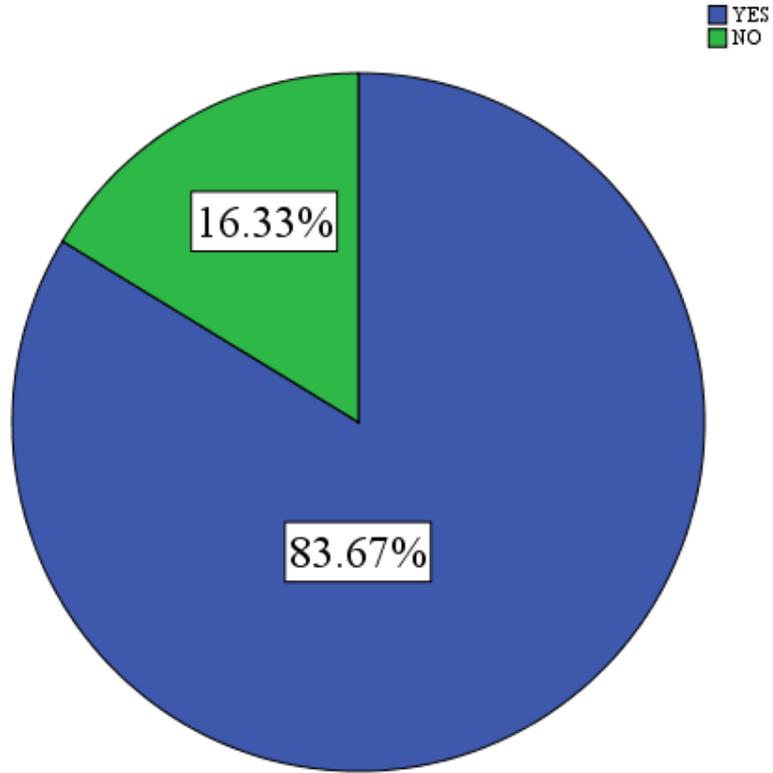


Figure 3

Source: Field Survey, 2013.

Comment: The chart above shows that 83.67% of respondents are satisfied with their banks while 16.33% respondents are not.

SECTION B i

1.

DO YOU HAVE A BANK ACCOUNT

■ YES

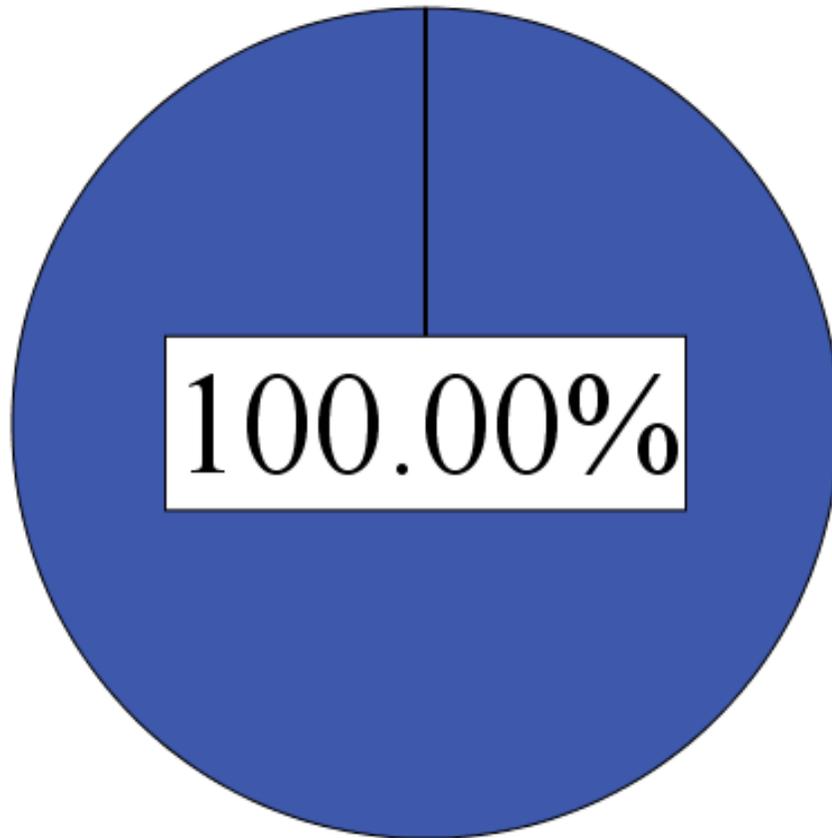


Figure 4

Source: Field Survey, 2013.

Comment: The chart above shows that 100% of respondents have bank account.

2.

DO YOU HAVE AN ATM CARD?

■ YES

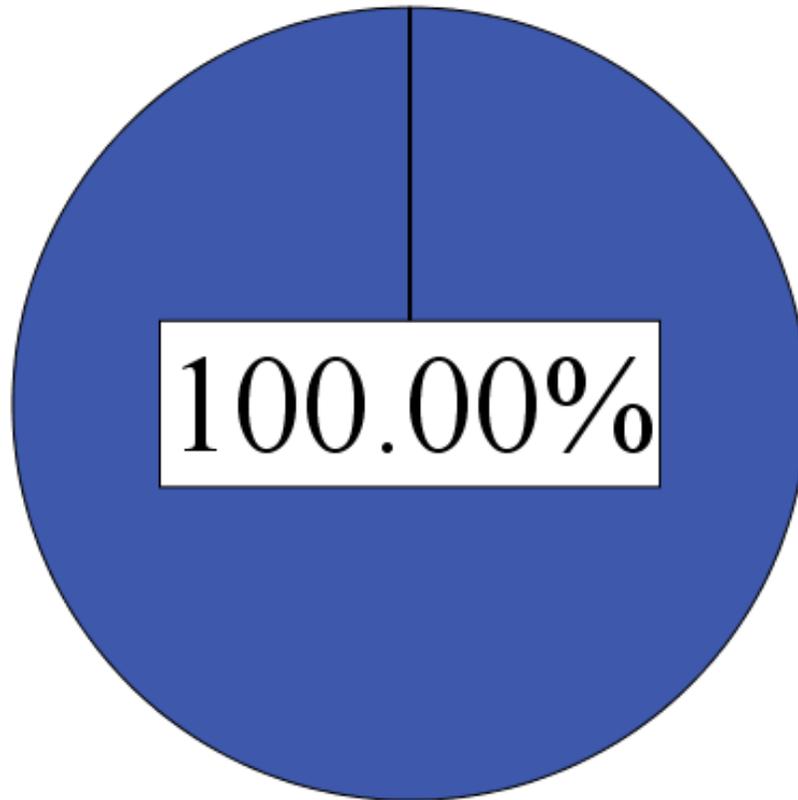


Figure 5

Source: Field Survey, 2013.

Comment: The chart above shows that 100% of respondents have ATM cards.

3.

HOW OFTEN DO YOU USE YOUR ATM CARD?

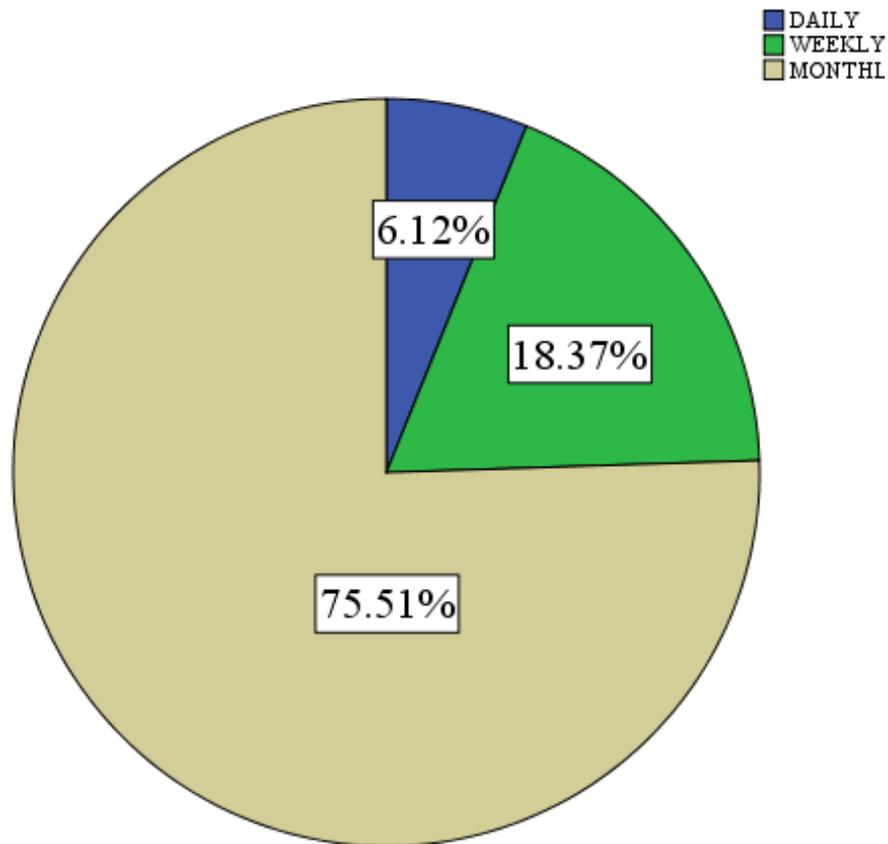


Figure 6

Source: Field Survey, 2013.

Comment: The chart above shows that 75.51% of respondents uses ATM monthly, 18.37% of the respondents uses their ATM weekly while 6.12% of respondents uses it daily..

4.

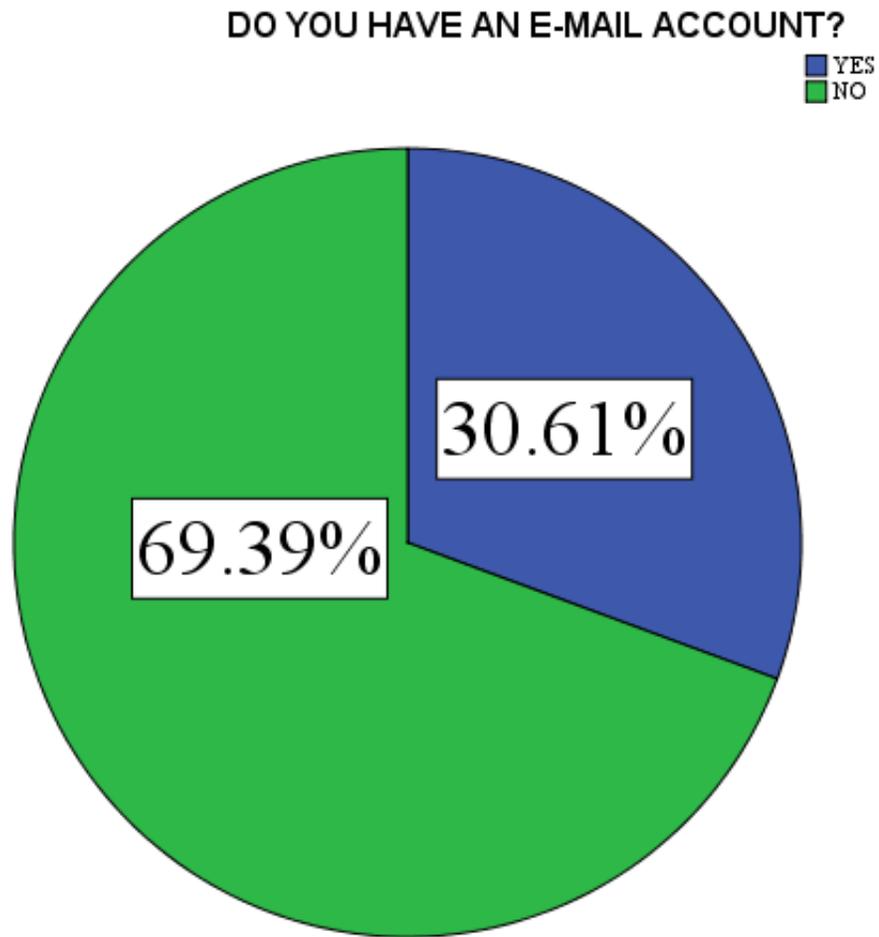


Figure 7

Source: Field Survey, 2013.

Comment: The chart above shows that 30.61% of respondents do have e-mail account while 69.39% respondents do not.

5.

HOW OFTEN DO YOU USE YOUR E-MAIL ACCOUNT?

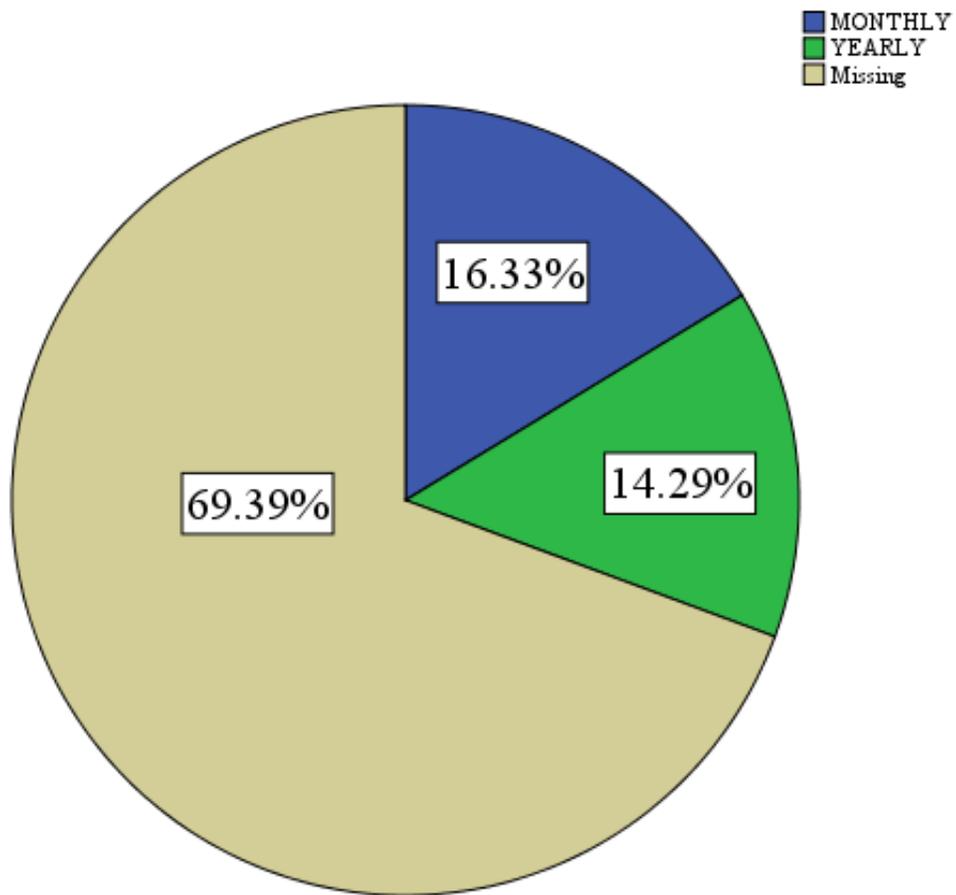


Figure 8

Source: Field Survey, 2013.

Comment: The chart above shows that 16.33% of respondents use e-mail account monthly, 14.29% of the respondents uses e-mail account yearly while 69.39% of respondents neither say yes or no to the stated question.

6.

HOW OFTEN DO YOU OPERATE YOUR BANK ACCOUNT?

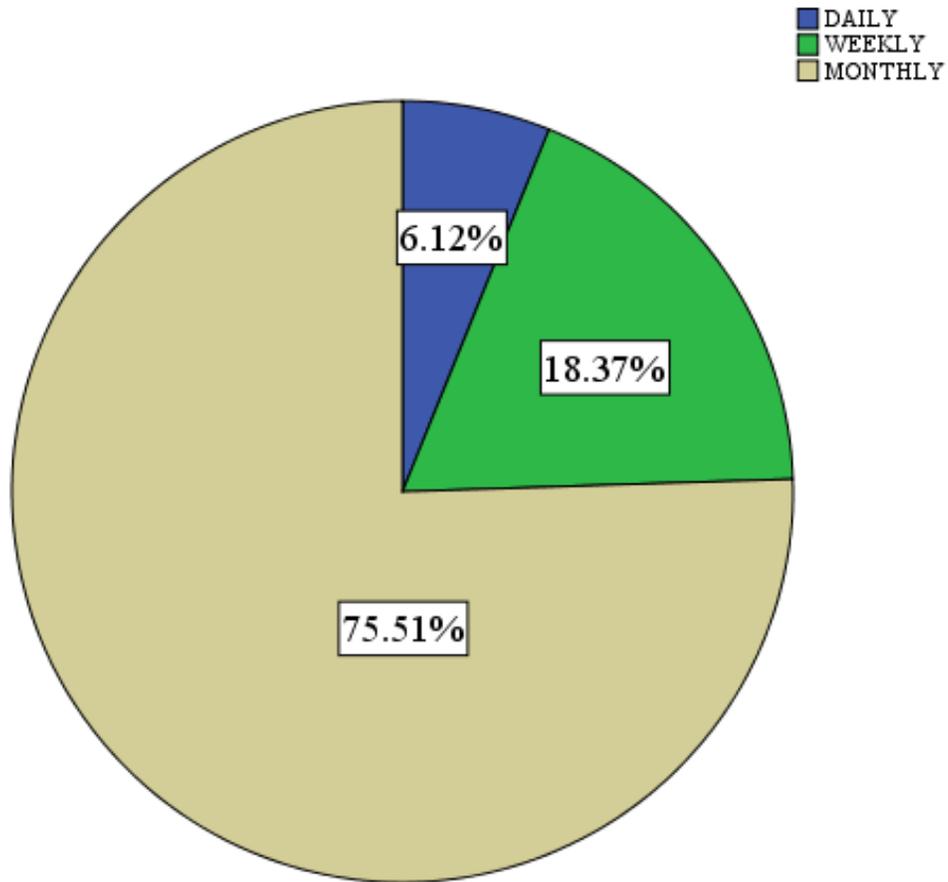


Figure 9

Source: Field Survey, 2013.

Comment: The chart above shows that 75.51% of respondents operates their bank account monthly, 18.37% of the respondents uses their bank account weekly while 6.12% of respondents operates their bank account daily.

7.

THE ATM ENCOURAGES CASHLESS TRANSACTION

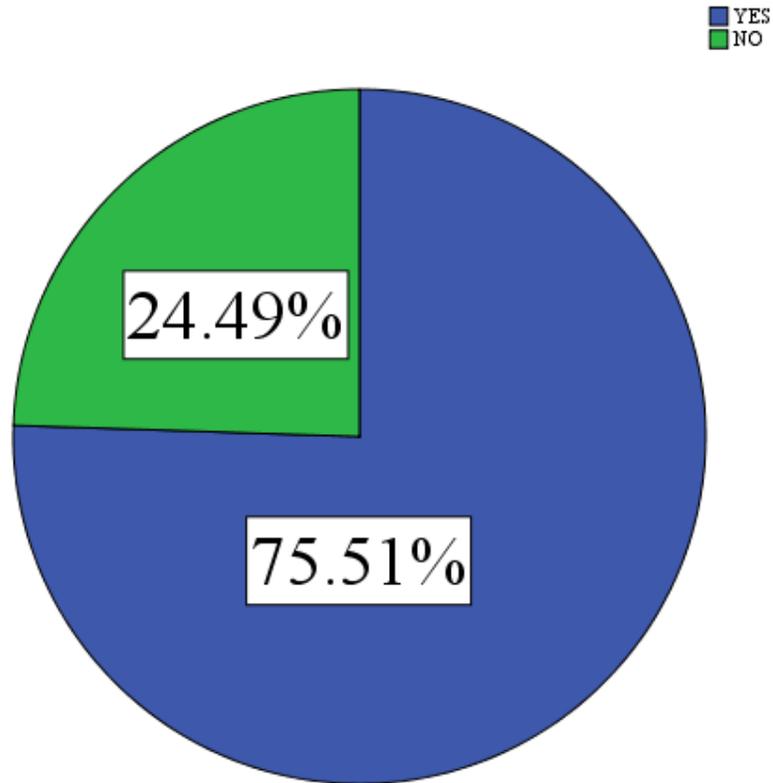


Figure 10

Source: Field Survey, 2013.

Comment: The chart above shows that 75.51% of respondents say yes that ATM, encourages cashless transaction while 24.49% of the respondents say no.

SECTION B ii

C. PRESENTATION OF DATA IN BAR CHART DISTRIBUTIONS 1.

ARE YOU AWARE OF THE CASHLESS PROJECT IN NIGERIA?

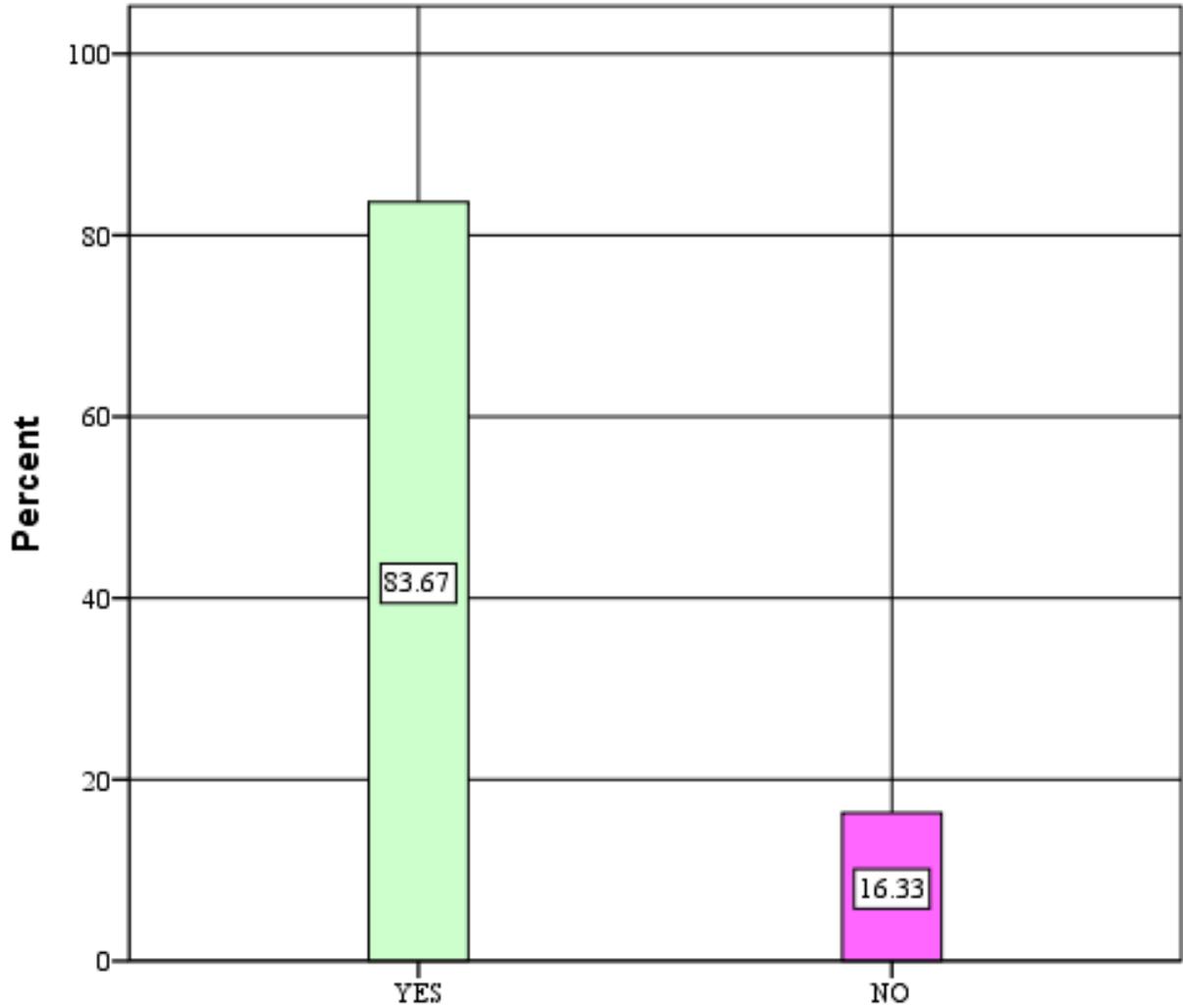


Figure 11

Source: Field Survey, 2013.

Comment: The chart above shows that 83.67% of respondents are aware of the cashless project while 16.33% of respondents were not.

2.

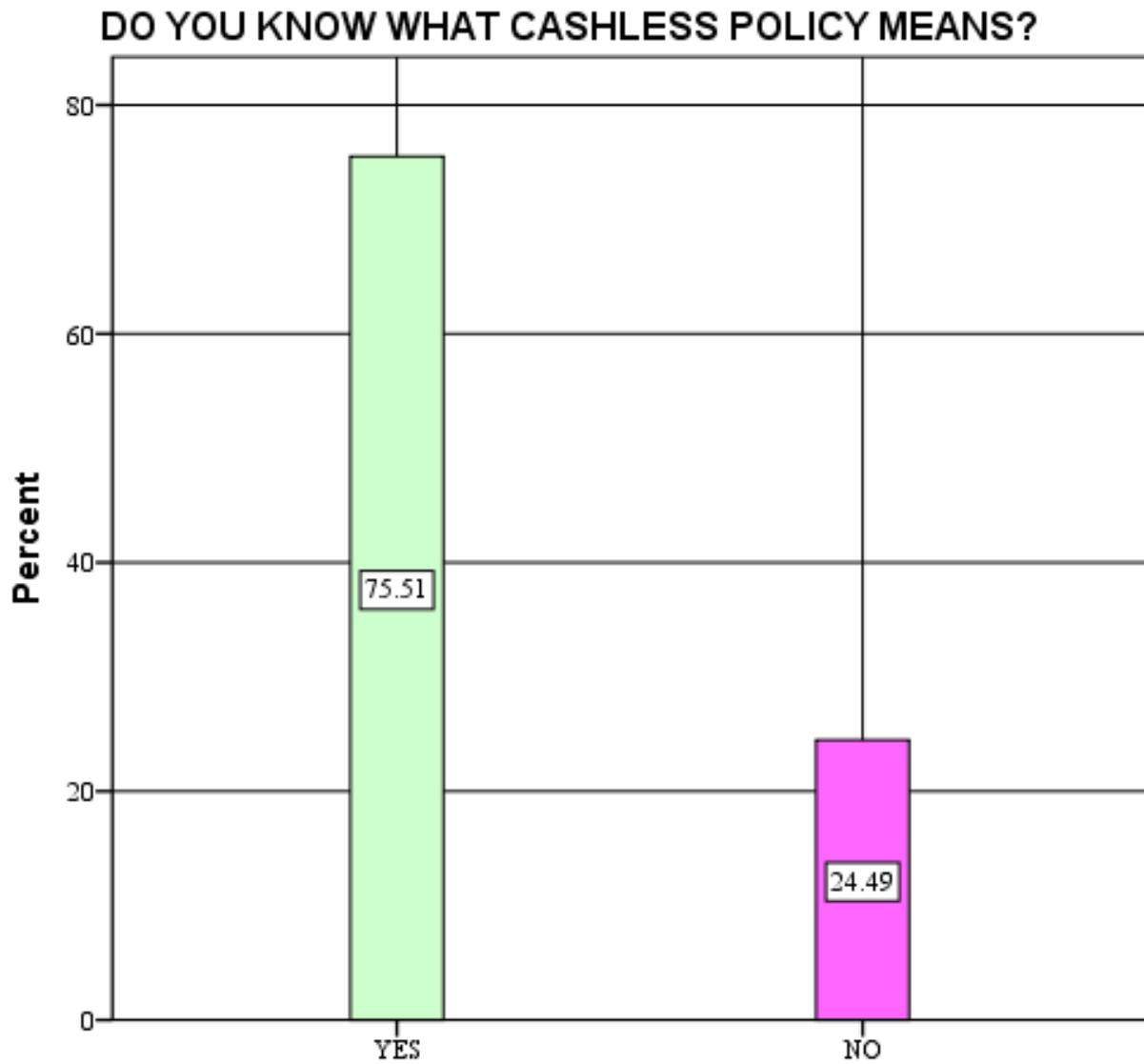


Figure 12

Source: Field Survey, 2013.

Comment: The chart above shows that 75.51% of respondents understood the concept of the cashless policy while 24.49 do not.

3.

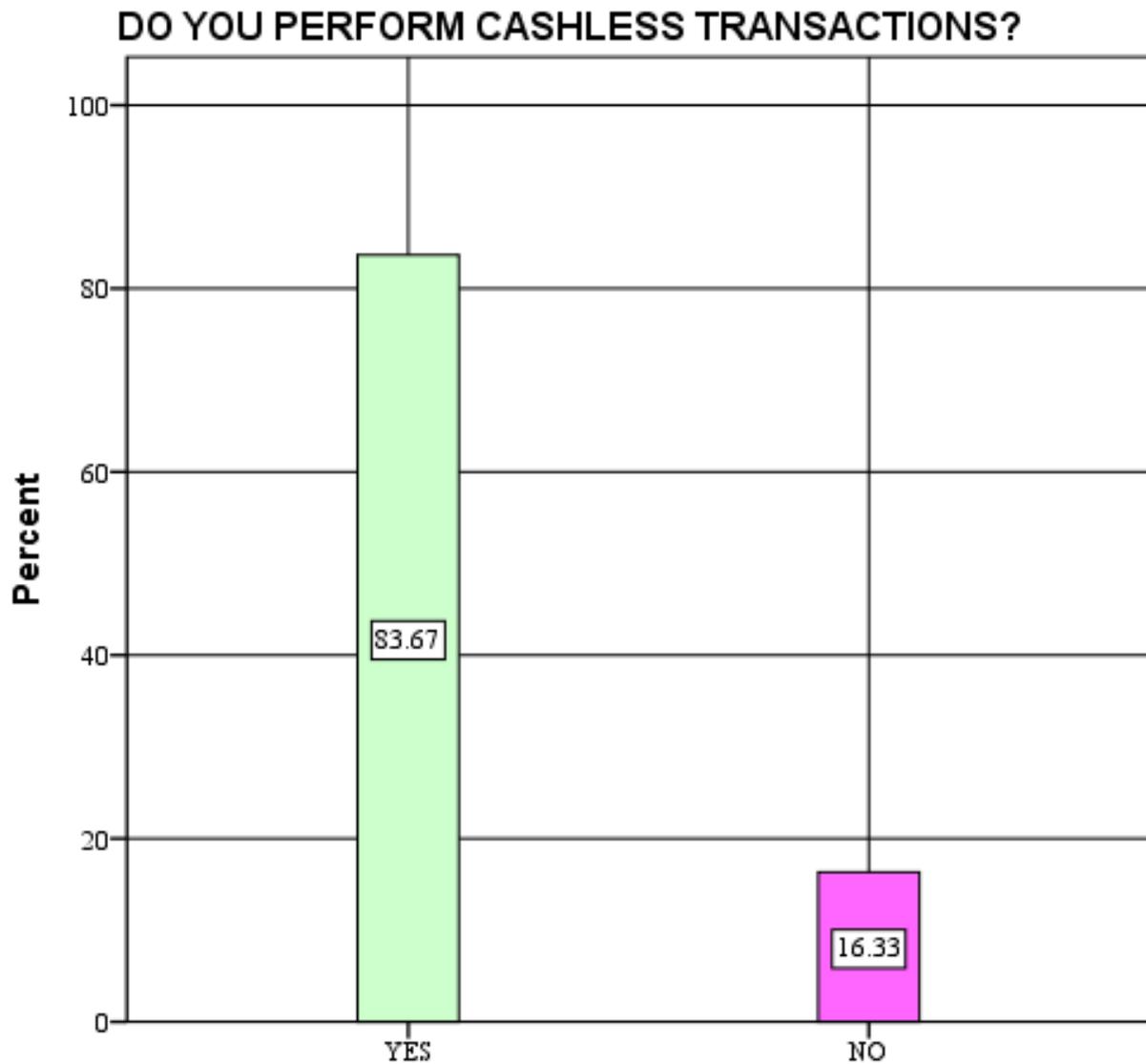


Figure 13

Source: Field Survey, 2013.

Comment: The chart above shows that 83.67% of respondents do perform cashless transaction while 16.33% do not.

4.

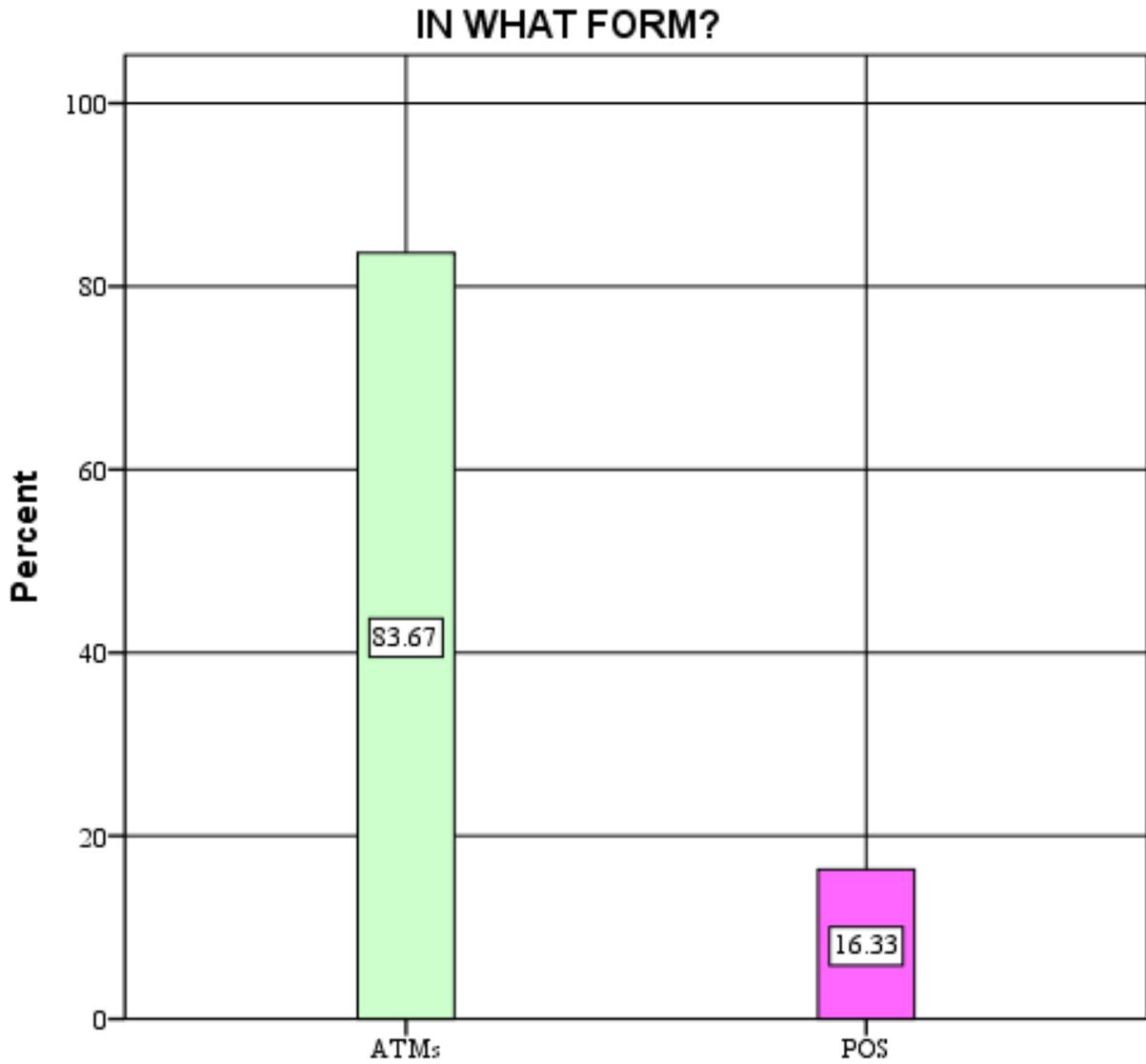


Figure 14

Source: Field Survey, 2013.

Comment: The chart above shows that 83.67% of respondents use ATM more than 16.33% of respondents who use POS.

7.

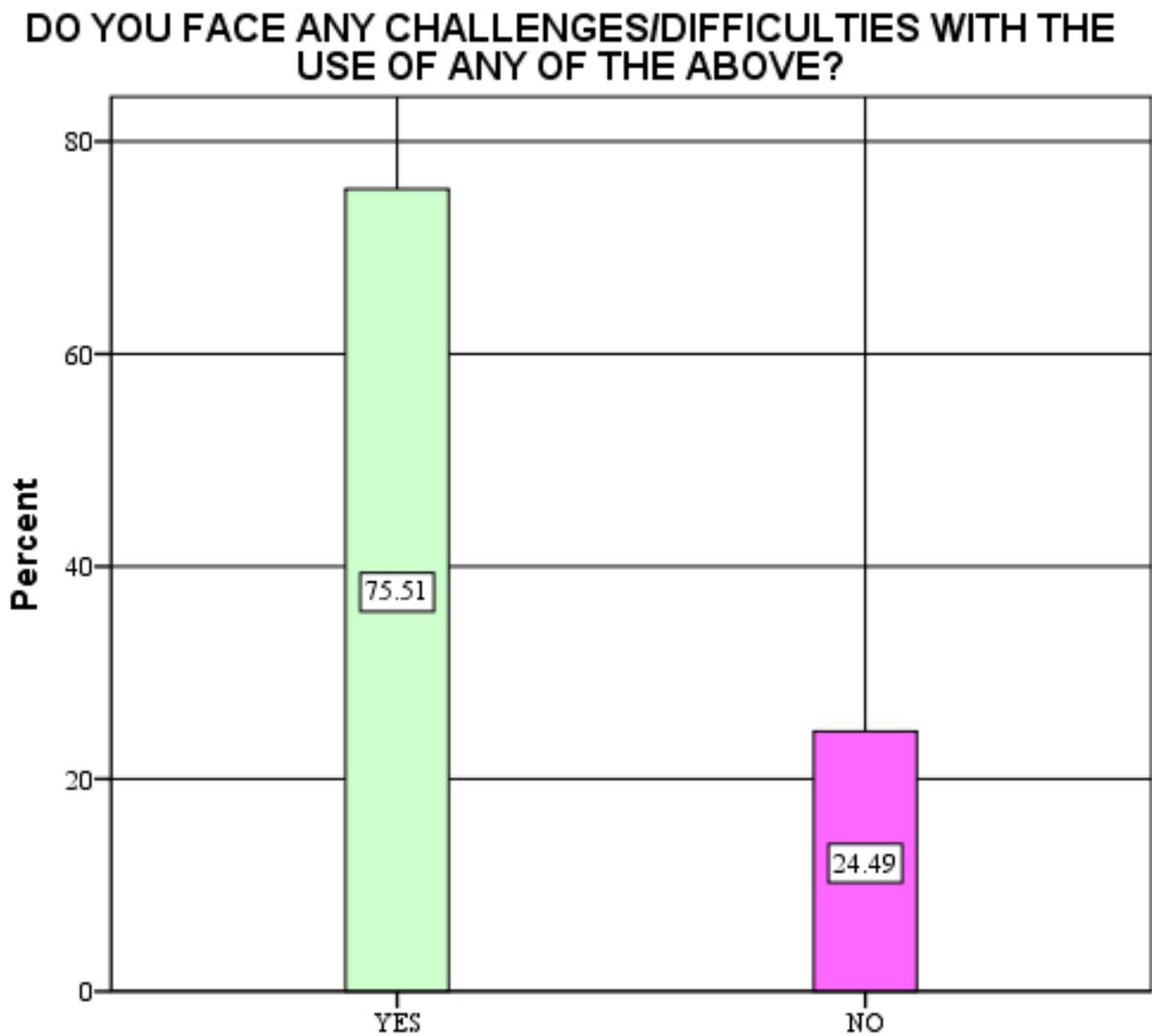


Figure 15

Source: Field Survey, 2013.

Comment: The chart above shows that 75.51% of respondents do face challenges/difficulties with the use of ATM, while 24.49% do not face any challenges.

8.

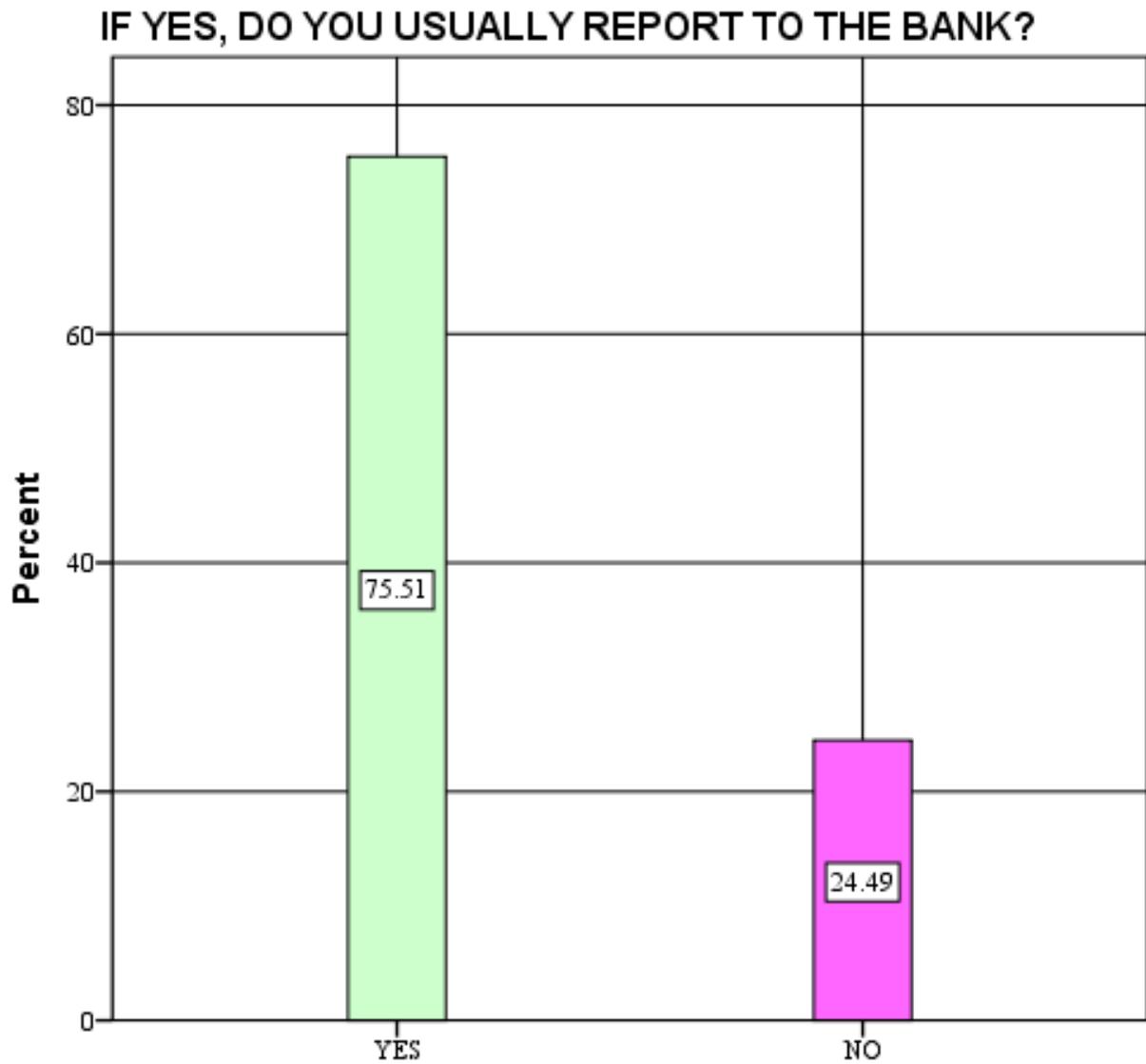


Figure 16

Source: Field Survey, 2013.

Comment: The chart above shows that 75.51% of respondents do report ATM and POS difficulties to their prospective banks while 24.49% do not report.

11.

ANY THREAT OF CASHLESS BANKING TO YOUR BUSINESS?

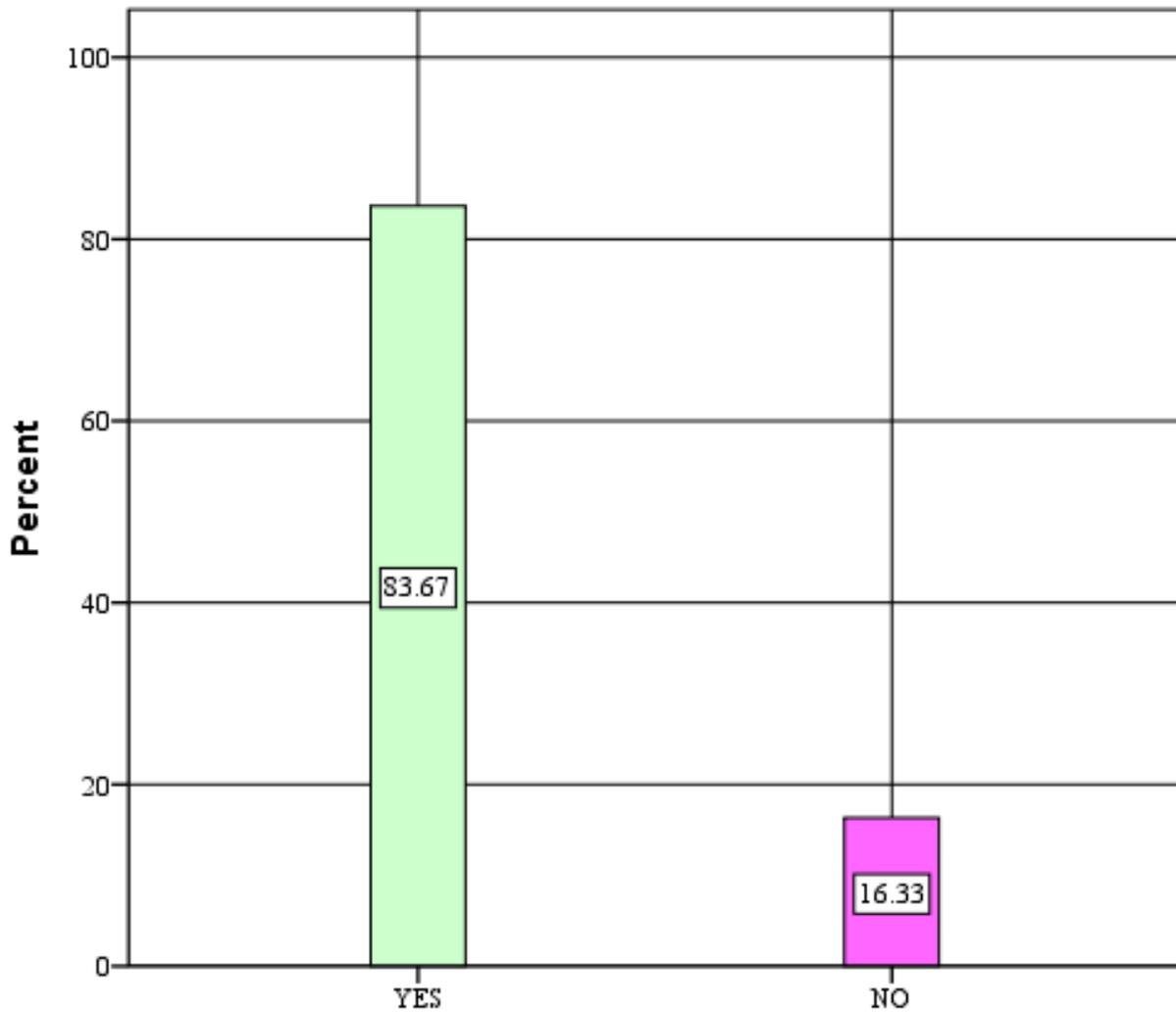


Figure 17

Source: Field Survey, 2013.

Comment: The chart above shows that 83.67% of respondents say yes to cashless banking as a threat to their business while 16.33% respondents says no.

12.

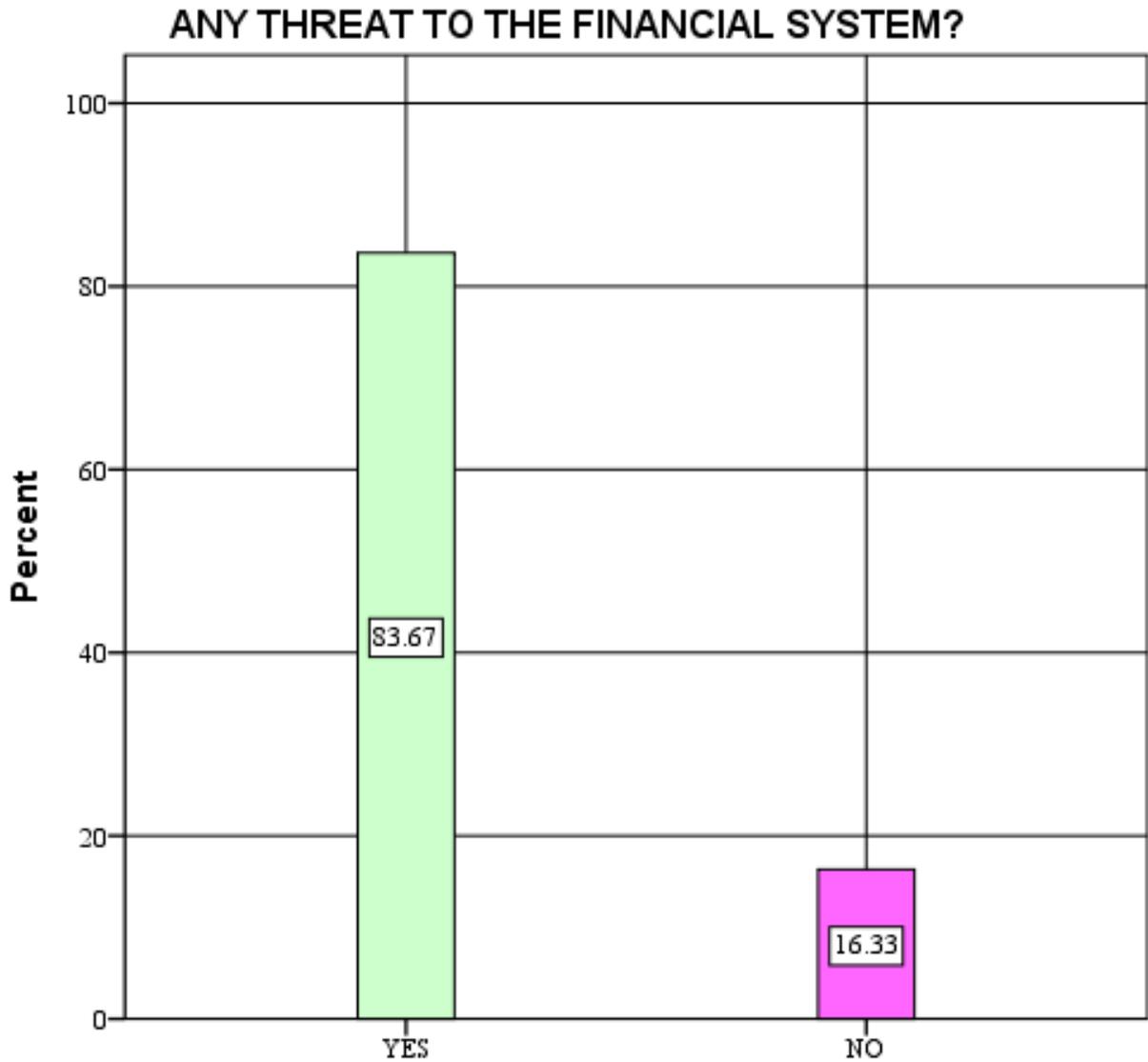


Figure 19

Source: Field Survey, 2013.

Comment: The chart above shows that 83.67% of respondents say yes to cashless banking as a threat to financial system while 16.33% respondents says no.

13.

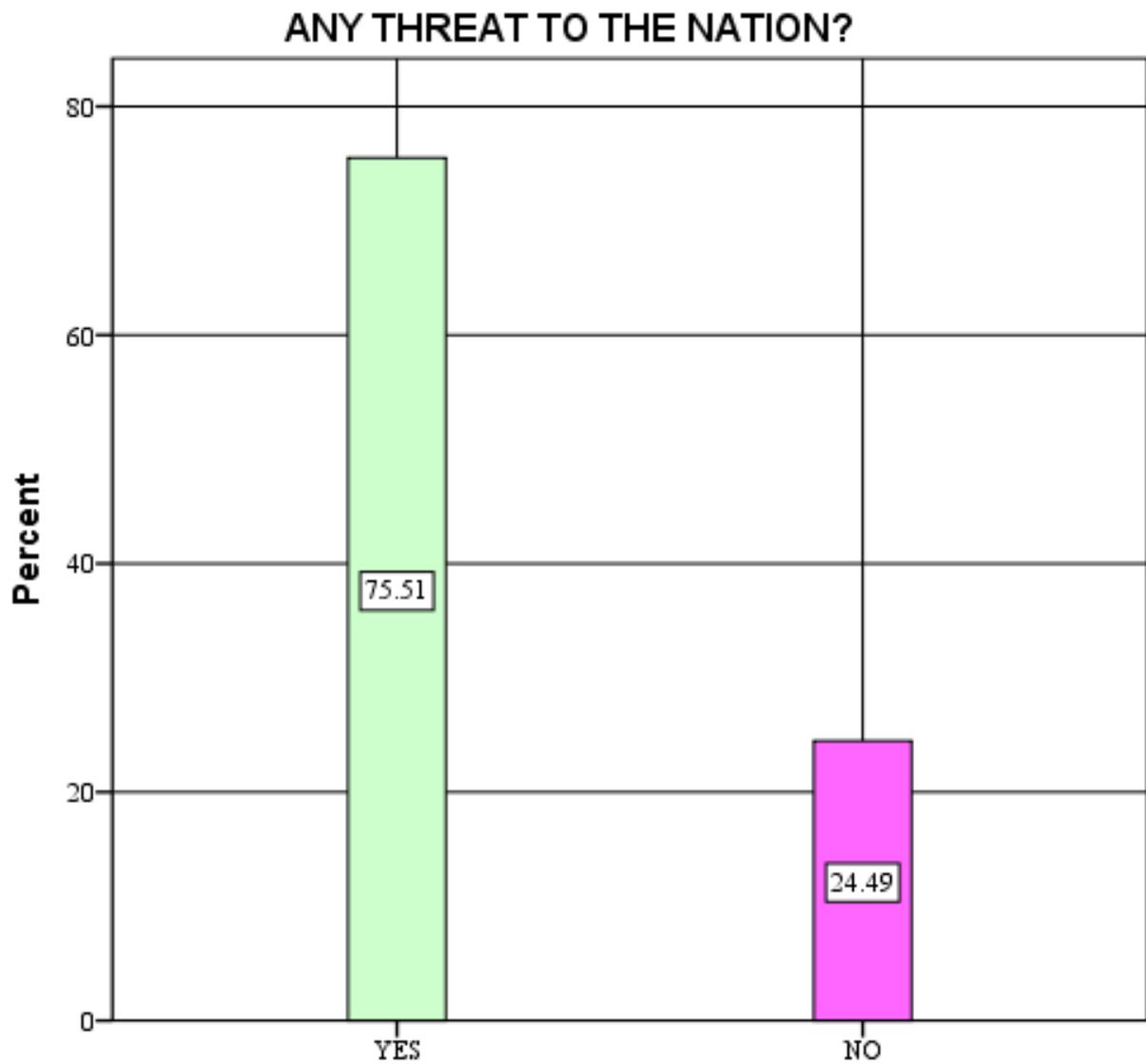


Figure 20

Source: Field Survey, 2013.

Comment: The chart above shows that 75.51% of respondents do say yes that cashless banking is a threat to the nation while 24.49% do not report.

14.

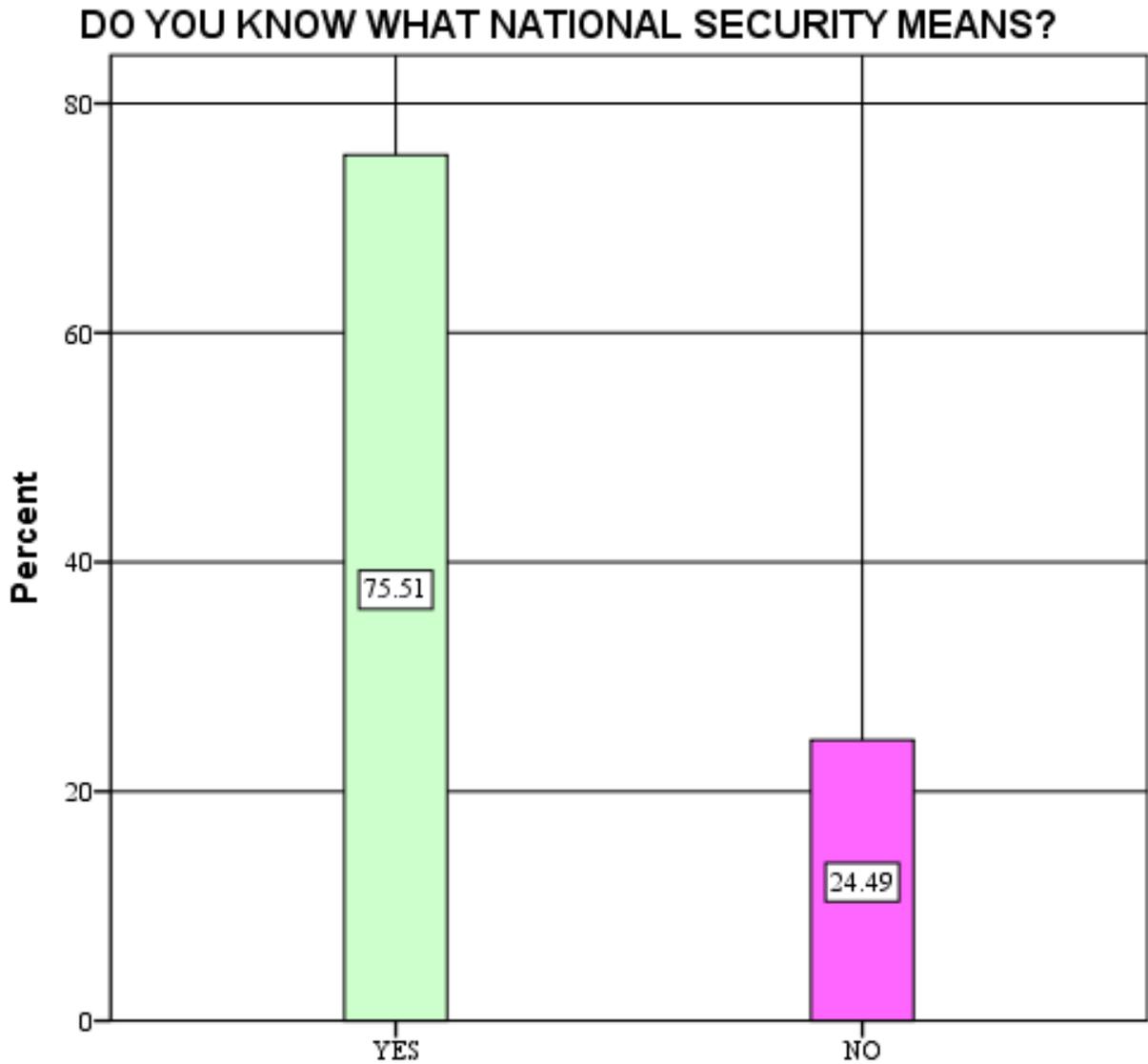


Figure 21

Source: Field Survey, 2013.

Comment: The chart above shows that 75.51% of respondents do understand the meaning of national security, while 24.49% do not.

15.

IS CASHLESS POLICY RELEVANT TO NATIONAL SECURITY?

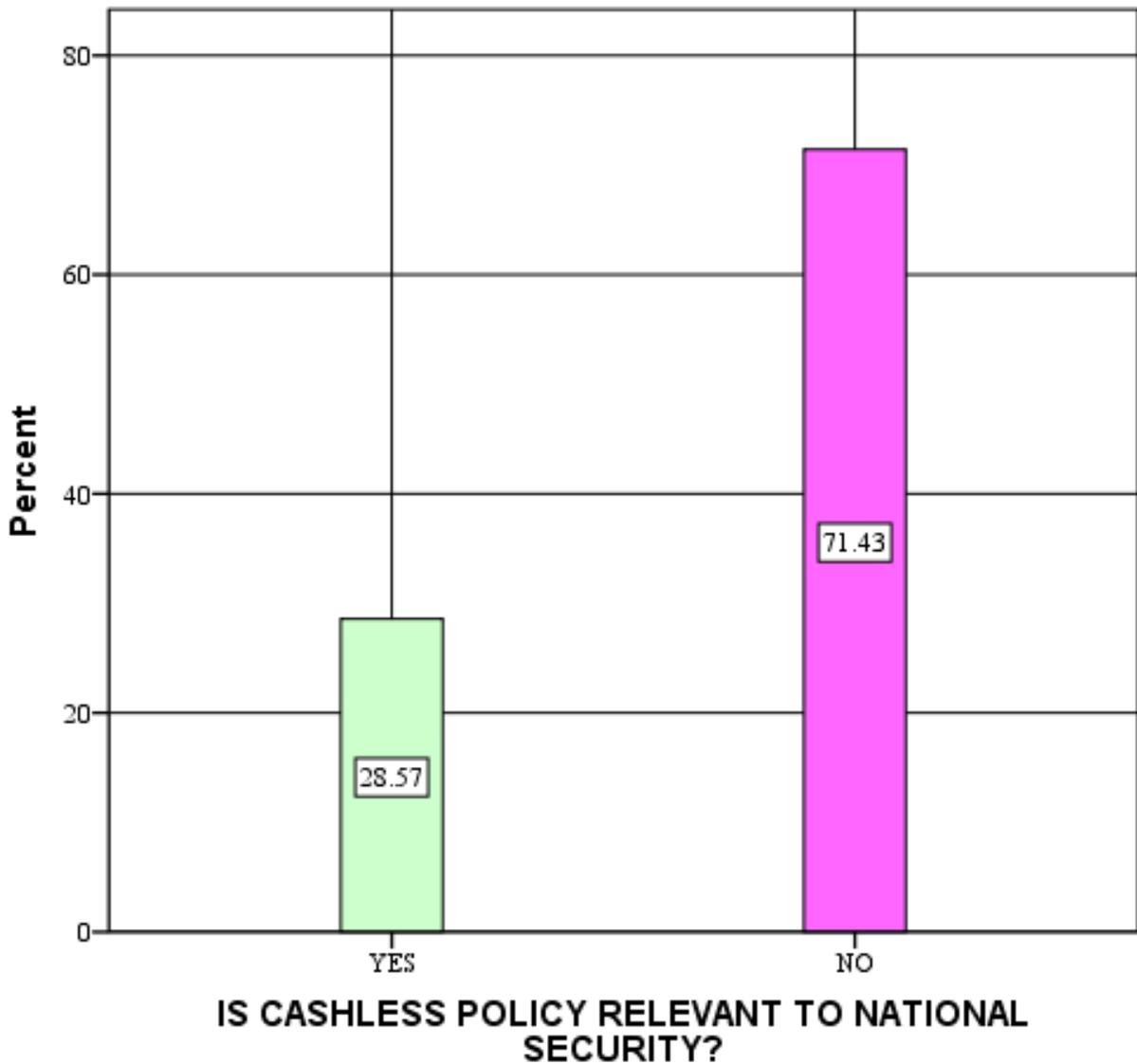


Figure 22

Source: Field Survey, 2013.

Comment: The chart above shows that 71.43% of respondents do say that cashless policy is irrelevant to the national security while 28.579% do say it is relevant.

3 TEST OF HYPOTHESIS

Hypothesis 1

Ho: The CBN and the people are not prepared and ready for the rational implementation of the cashless Nigeria project.

H1: The CBN and the people are prepared for the rational implementation of the cashless Nigeria project.

Chi-Square Test

Using Question 5(sec C): Experts and opinion leaders have said that the cashless Nigeria project can make customers close their account from the banks, because of the punitive measures imposed by the Central Bank of Nigeria.

	Observed N	Expected N	Residual
SD	5	12.3	-7.3
D	37	12.3	24.8
N	1	12.3	-11.3
A	6	12.3	-6.3
Total	49		

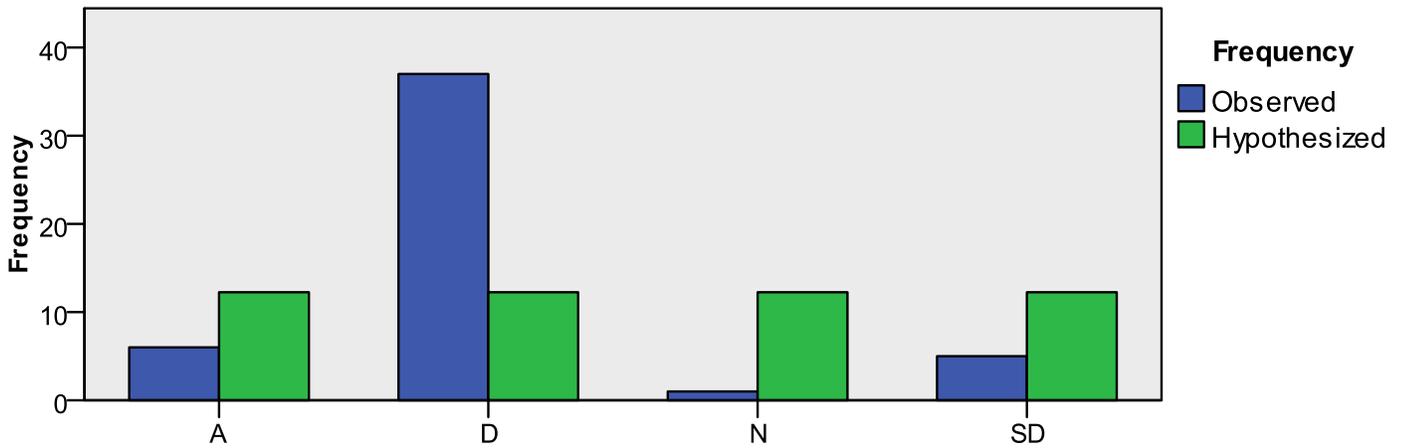
Source: SPSS version 20, 2013.

Test Statistics

	Experts and opinion leaders have said that the cashless Nigeria project can make customers close their account from the banks, because of the punitive measures imposed by the Central Bank of Nigeria
Chi-Square	67.816 ^a
Df	3
Asymp. Sig.	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.3.

One-Sample Chi-Square Test



Hypothesis Test Summary

		Test	Sig.	Decision
Q.5	The categories of Experts and opinion leaders have said that the cashless Nigeria project can make customers close their account from the banks, because of the punitive measures imposed by the Central Bank of Nigeria occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis. Chi-square calculated (67.816) > Chi-square table value (7.815)

Asymptotic significances are displayed. The significance level is .05.

Source: SPSS version 20, 2013.

Conclusion: The test is significant at 0.001 which is less than the p-value (0.05), this depicts that the model is of goodness of fit and reliable for the test of hypothesis. Therefore, we reject the null hypothesis and accept the alternate

hypothesis as indicated in the hypothesis test summary. Thus, the CBN and the people are prepared for the rational implementation of the cashless Nigeria project.

Hypothesis 2:

H₀: The cashless policy will not reduce criminalities and economic sabotage which constitute an impediment to economic growth and development which are also critical factors of insecurity to the nation.

H₁: The cashless policy will reduce criminalities and economic sabotage which constitute an impediment to the economic growth and development which are also critical factors of insecurity to the nation.

ONE-WAY ANOVA TEST

ANOVA I

Question 1 (Sec C): With the cashless transaction, theft, fraud, and corruption can be controlled

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	50.141	4	12.535	63.580	.000
Within Groups	8.675	44	.197		
Total	58.816	48			

ANOVA II

Question 2: The cashless policy can stimulate economic growth and development

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	58.712	4	14.678	54.835	.000
Within Groups	11.778	44	.268		
Total	70.490	48			

Source: SPSS version 20, 2013.

Conclusion: The ANOVA results from the two tables above depict that the test statistics is significant at 0.0001 which is less than $p = 0.05$. This shows that the variances are closely significant and with the f-statistics 63.580 and 54.835 from ANOVA I and II respectively which is greater than the f-ratio or f-critical value

2.584 from the f-test distribution table, we reject the null hypothesis and accept the alternate hypothesis.

Therefore, we conclude that; the cashless policy will reduce criminalities, terrorism and economic sabotage which constitute an impediment to the economic growth and development which are also critical factors of insecurity to the nation.

SUMMARY

The cashless payment system present a veritable tool to tackle security challenges because it will help reduce the movement of illegal cash in the system and it will also help law enforcement agencies to easily track the movement of funds in the financial system, thereby making it easier to detect cyber related crimes and all other cash based crimes. With the new shift in the economy where emphasis is being placed on e-transactions, championed by the CBN through its cashless initiative, banks are highly susceptible to cyber attacks and threats.

CONCLUSION

Generally, the success of the cashless payment system policy will no doubt help resolve the national security challenges facing the nation. The national security is threatened by so many activities revealing information on economic, financial and monetary movement activities. Issues of national security that thrives on the use of cash for transaction are multivariant and multifunctional which has been discussed in this study.

The cashless payment system is very beneficial and appears to be the next best alternative for all Nigerians in order to accelerate the economic growth and development. Even though there is no system in the world that can guarantee a 100% security, all parties concerned should put measures in place to provide

reasonable assurance that the huge benefits of a cashless payment system will be realized in the shortest possible time and with minimal cost and casualties.

RECOMMENDATIONS

Based on the foregoing, the study hereby make the following recommendations to solve the problems confronting the implementation of cashless payment system in Nigeria, and if these issues are resolved then the cashless payment system would really help serve as a panacea for the national security challenges in Nigeria.

- i. Infrastructural position of the country is bad especially power/energy without which the IT infrastructure cannot work efficiently, so the government should put up a good infrastructural facility in the country.
- ii. A concerted effort should be made towards arresting the ever increasing level of corruption even with the advent of IT, through good and effective security system.
- iii. There is also the need for proper implementation of a risk based information security strategy for both financial and non-financial institutions.
- iv. There should be proper configuration of POS/ATMs and IT system to make the cashless policy more users friendly.
- v. There should be more aggressive enlightenment programme to enable end users to be educated and well informed about the system of cashless payment system.
- vi. There should be independent security experts to perform a security health check of IT infrastructure and POS/ATM devices, complying with baseline standards from the regulators and continuous security to cope with the dynamic nature of the online world.

REFERENCES

- Humphrey et al, (1996): Cash, electronic payments: a cross-country analysis. Publisher: AEI Brookings joint center for Regulatory Studies, 2004(Retrieved on 5th December, 2012)
- Daniel D.G et al,(2006): The move toward a cashless society. Berkeley Electronic Press. (Retrieved on 5th January 2013)
- Nwankwo Odi (2013): Electronic payment in cashless economy of Nigeria. Journal of Management Research. Volume 5.Number 1(Retrieved on 5th January 2013)
- Hendrickson, Robert A (1923): The cashless society. Publisher: Dodd, Mead (1972). (Retrieved on 10th January, 2013)
- Ben Uzor, Jnr (2012). Cyber security issues on cashless policy. (Retrieved February 17, 2013)
www.businessdayonline.com/NG/index
- CPN (2012) Intelligence gathering and national security, Computer Professionals Registration Council of Nigeria (2012)
www.cpnigeria.com(retrieved February 2013)
- Berg, H., Hann, J. and Strum, J. (2006). Does money matter in the ECB strategy? Working paper
- John Obaro (2012) System specs, Information and Communication Technology (retrieved 20th December 2012)

- David Isiauwe (2012) E-payment legislation bill (retrieved 20thDecember)
- Daniel et al, (2004) History and legal variations of e-banking (retrieved December 2012)
- Boianovsky, M. and Trautwein, H Wicksel Woodford (2004). Paper presented at the History of Economics Society meeting at Toronto in June 2012.
- CBN, (2011) Questions and answers on the CBN policy on cash withdrawal /lodgment limit. Sourced from; <http://www.cenbank.org> CBN, (2011). Understanding Cashless Economy Extracted on 11th December 2012,
- Daniel, E. (1999). Provision of Electronic Banking in the UK and the Republic of Ireland *International Journal of Bank Marketing*, 17(2), 72-82.
- Davis, F.D. (1989). Can CBN achieve cashless banking system of payment in Nigeria? Daily Sun newspaper, pg.26 January, 2012
- David, S. N. (2012). Perceived usefulness, perceived ease of use and user acceptance of information technology *MIS Quarterly*, 13(3), 319-340. <http://dx.doi.org/10.2307/249008>

- Gikandi and Bloor (2009) a critical analysis on the influence of e-commerce (retrieved 5th January 201 3)
- Egwali, A. O. (2008). ‘Customers Perception of Security Indicators in Online Banking Sites in Nigeria’ *Journal of Internet Banking and Commerce*, 14(1), 5-8. Extracted on 12th June,
- Boglo Peter (2012) Nigeria’s cashless initiative (retrieved on the 14th of February 2013) www.businessdayonline.com
- Ezeoha, A. E. (2006). Regulating Internet Banking in Nigeria Problem and Challenges-Part 2 *Journal of Internet Banking and Commerce*, 11(1)
- Berger (1990) Money laundering using new payments methods sourced from: www.fatf-gafi.org/dataoecd/4/56/46705859.pdf
- Godschalk, D., & Krueger, S. (2000). Why e-money still fails; chances of e-money within a competitive payment instrument market. Paper presented for the 3rd Berlin Internet Economics Workshop, Berlin.
- Hogarth, J. M., Kolodinsky, J., & Gabor, T. (2008) ‘Consumer Payment Choices: Paper, Plastics or Electrons. *International Journal of Electronic Banking*, 1(1), 16-16.

<http://dx.doi.org/10.1504/IJEBANK.2008.020437>

- Ibrahim, D. (2009). Boosting payment solution with Visa Card. *Daily Champion*, pg. 12
- James, A. O. (2012). E-Payment and its challenges, (Retrieved on 5th July 2012) www.google.com
- ECB, (1998). The Acceptance of E-banking by Customers in Nigeria *World Review of Business Research*, 2(2), 6-8.
- Karjaluoto, H., Mattila, M., & Pento, T (2002) Factors Underlying Attitude Formation towards Online Banking in Finland. *The International Journal of Bank Marketing*, 20(6), 261-272. <http://dx.doi.org/10.1108/02652320210446724>. (Retrieved on 3rd December 2012)
- Lamikanra (2012) Electronic Fraud Management, a frame work of data and network security. (Retrieved February 17th 2013) www.businessdaywebteam.com
- Lassar, W. M., Manolis, C., & Lassar S. S. (2005).The Relationship between Consumer Innovativeness, Personal Characteristics, and Online Banking Adoption. *International Journal of Bank Marketing*, 23(2), 176-199.

<http://dx.doi.org/10.1108/02652320510584403> (Retrieved on 3rd December 2012)

Lee, E., Lee, J., & Schumann, D (2002) The influence of communication source and mode on consumer adoption of technological innovations. *Journal of Consumer Affairs*, 36(1), 1-28. <http://dx.doi.org/10.1111/j.1745-6606.2002.tb00418>.

Mary, P., Samson. A. A. & Akpeti. O. E. (2012). Capital market as a veritable source of development in Nigeria economy. *Journal of Accounting and Taxation*, 4(1), 7-18. Available online at <http://www.academicjournals.org/JAT>

Mathew, A. (2009). An empirical investigation of the level of user's acceptance of e-banking in Nigeria based, on technology acceptance model. Proceedings of first international conference on mobile e-service, LAUTECH Ogbomosho Nigeria (November 2009)

Mitchell Elegbe (2012) An article; Security data based certification (Retrieved 15th February 2013)

Morufu, O., & Taibat, A. (2012) Bankers' perceptions of electronic banking in Nigeria: A review of post consolidation

experience. *Research Journal of Finance and Accounting*, 3(2), 5-6.

National Drug Intelligence Centre (2008), Money laundering, US department.

Obodo, E. (2012). *What Nigerians think of the cash-less economy policy*, pp 1-4

Olawide, V. C. (2012). Cashless banking in Nigeria and its implications 1-8 (Retrieved online on 23/06/2012)

Olatokun, W. M., & Igbinedion, L. J. (2009) The Adoption of Automatic Teller Machines in Nigeria: An Application of the Theory of Diffusion of Innovation. *Issues in Informing Science and Information Technology*, 6(2), 373-393

Olorunsegun, S. (2010) The impact of Electronic Banking in Nigeria Banking System. MBA Research Project Submitted to the Department of Management Science, Faculty of Engineering and Technology, Ladoke Akintola University of Technology, Ogbomoso, Oyo State Nigeria. Pp 23-29. Unpublished Retrieved online on 20/06/2012 www.google.com

Palley, N. (2001). The e-money revolution; challenges and implications for monetary policy Sourced

- from: <http://www.thomaspalley.com> (5th December)
- Pikkarainen, T., Karjaluoto, H. Pahnila (2004) Consumer Acceptance of Online and Banking: an Extension of the Technology Acceptance Model *Internet Research*, 14(3), 224-235. <http://dx.doi.org/10.1108/10662240410542652> (retrieved 13th January, 2013)
- Okonji Emma (2012) Developing Human capacity in IT to tackle security challenges (retrieved 22nd January 2013)
- Putrevu, S. (2002). Exploring the origins and information processing, differences between men and women: Implications for advertisers. *Academy of Marketing Science Review*, 6(1), 23-25. (Extracted on 13th of January, 2013) www.amsreview.org
- Rogers, E. (2004). Doing without money; a critical assessment of Woodfords analysis. Working paper sourced from www.economics.adelaide.edu.au/research/papers/doc. (sourced 10th January 2013)
- Basel Committee (1998) Electronic money, technology assessment.

- Rasaq Olaegbe (2012) An expert in electronic payments.
www.google.com
- Rotchanakitumnuai, S., & Speece, M. (2004) Corporate Customer Perspectives on Business Value of Thai Internet Banking *Journal of Electronic Commerce Research*, 5(4), 270-286. (10th January 2013)
- Sanusi, L. S. (2011). Cashless economy in Nigeria *International Journal of Finance*, 34(2), pp 18-39 2013.
- Taylor, S., & Todd, P. (1995). Assessing IT usage: the role of prior experience *MIS Quarterly*, 561–568.<http://dx.doi.org/10.2307/249633>
- Wicksell, K. (1935). Interest and Prices, (tr.Richard Kahn, London, Macmillan, for the Royal Economic Society)
- Woda, S. (2006) Money laundering techniques with electronic payments systems, **Information and Security journal**, 18(2), 27-47 pages. (retrieved on 19/12/2012)
- Zeithaml, V. A., & Gilly, M. C. (1987) Characteristics affecting the acceptance of retailing technologies: a comparison of elderly and non-elderly consumers. *Journal of Retailing*, 63(1), 49-68.

Software in a Cash-less Economy(2012) Catalyst for Innovation, Local Content Development and Job creation” at the Nigeria Computer Society’s 24th National Conference in Uyo, Akwa-Ibom State.

Aborisade, F. (1997). Research Methods (A Student Handbook), Lagos: Multifirm Limited. Pp 11-13

Creswell J.W. (2008). Educational Research: planning, conducting and evaluating quantitative and qualitative research (3rd edition) pg 6. Upper Saddle River: Pearson.

Shuttleworth Martyn (2008). “Definition of research”. Experiment Resources.Experiment-Research.com.<http://www.merriam-Webster.com/definition-of-research.html> (Retrieved 20th February 2013).