



REALISING THE BENEFITS AND CHALLENGES OF CASHLESS ECONOMY IN NIGERIA: IT PERSPECTIVE

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ABSTRACT

In an attempt for Nigeria to have sound economy as projected in vision 20:2020, the Central Bank of Nigeria embarked on cashless economy policy. It is universally agreed that a safe and efficient national cashless system is essential for sound banking. This paper dwelt on the meaning of a cashless system, explain information technology and internet banking techniques, and highlighted the benefits of cashless economy and that electronic payment systems have the potential to reduce if not eliminate the problems consumers face in the payment and settlement system. The paper also revealed that consumers are ready to embrace the new cashless economy policy despite the glaring bottlenecks and cashless risks. The authors suggested some recommendations for proper implementation of the cashless economy policy by the Central Bank of Nigeria.

Keywords: ATM, Cashless, Electronic payment systems, Internet Banking

1. INTRODUCTION

All things being equal, by January 1, 2012, the cashless economy policy of the Central Bank of Nigeria kicked off. It was, however, practically operational in banks and businesses from the third day of January, being the first working day after the holiday.

By now, the question of whether the economic initiative would ever take off would have been answered; though there remains a myriad of other questions begging for answers. The implementation of the policy has generated sundry reactions from individuals and organisations, especially because of the anticipated e-payment challenges.

A cashless economy is one where purchases and transactions are done mainly by electronic means and seldom by cash. The policy, introduced by the CBN in April 2011, states that individual and corporate customers are restricted to a daily cash withdrawal and lodgement of ₦500,000 and ₦3m respectively. By implication, individuals, who

make cash withdrawals above the limit will be charged ₦100 on every ₦ 1,000, while a corporate organisation that exceeds the limit will be charged ₦200 on every ₦1,000. Apparently relying on its commercial stamina as Nigeria's business hub, the CBN commenced the pilot scheme in Lagos State. But as sophisticated as the residents of the metropolis are perceived to be, the level of awareness about this policy, checks have shown, is still very low^[9].

Subsequently in June, the policy will commence in other major cities in Nigeria such as Aba, Port Harcourt, Abuja and Kano. According to the CBN and the Bankers Committee, the economy will be the better off with the policy. For instance, it will reduce the dominance of cash in the system, thereby reducing cases of armed robbery and cash-related crimes. It will moderate the cost of cash management; encourage the use of electronic payment channels and reduce lending rates to further make credit accessible to big and small businesses. The committee's findings showed that running a cashless economy could save the CBN about ₦ 192bn, which is the projected direct cost of managing cash for 2012. While Nigerians could not deny the need to prevent too much cash in circulation among other benefits of the scheme; many still believe that the cash limit is too low and query how the CBN arrived at the benchmark. Some also express the need for a gradual transition to the new policy order; while others think that Nigeria is not even ripe for it. As laudable as the cashless idea is, an assessment of the usual inconsistencies in the operation of the Automated Teller Machine leaves many stakeholders wondering if the same system could produce a better result.

Realising this potential threat, the CBN recently directed banks and independent service providers to deploy more ATMs and ensure their efficiency to ensure a smooth implementation of the policy. It stressed that all ATMs (off-site and on-site) shall

have a minimum uptime of 95 per cent going forward. The directive prescribed sanctions for failure to comply. Resolute about seeing the scheme succeed, the CBN had projected the deployment of 40,000 point of sale devices in Lagos and plans to increase the number to 150,000 by the end of next year^[9].

2. A CASHLESS SYSTEM

Essentially, mobile money payment system allows users make payments with their GSM phones. It is a savings and transfer system that turns GSM phones into a savings account platform, allowing the owner save money in it and from which withdrawals or transfers could be made. Under the payment system, customers could do their normal basic financial transactions on a daily basis by making payments for goods and services or by engaging in person-to-person transfer directly on their GSM phones. For instance, the system also allows for payment to be made through a mobile phone after purchases have been made at a grocery store. The shop owner in turn, receives instant payment electronically. Through the system, users can also pay utility bills, school fees, hotel bookings, and house rents, among other transactions, using a mobile phone device. One important thing about mobile money is the fact that it thrives on agency network, thereby taking traditional banking and its cumbersome processes in the cities to the streets in sub-urban areas where accredited mobile money agents also operate.

A cashless system is the ability to store money in an electronic purse on a card and is fast becoming standard practice throughout the workplace. The electronic purse is then used to purchase products at a vending machine, the till in the colleague restaurant or at any point of sale terminal located within the business premises. Since its formation in 1991, VMC has built-up a proven track record for quality and reliability. VMC is an independently owned British Company whose customer base now extends to over 400 sites throughout Europe, within many different market sectors for example Business and Industry, Education and Government, Banking and Finance, Hotel and Leisure, Retail and Hospitals. VMC's flagship system is **Metro** – a third generation smartcard cashless payment system combining electronic purse, hospitality, loyalty and subsidy management capabilities in one system. **Metro** is the latest in a line of category leading innovations from VMC. **Metro** extends and improves the functionality of the first VMC cashless systems Change Card / Change Key. Leading the market for the past 12 years these

products quickly became the industry benchmark for innovation and reliability.

How does it work? Users are issued with a card. The electronic purse is topped up using revaluation terminals. A range of terminals are now available including coin & note, credit card or payroll deduction terminal. Simply by inserting the card into a revaluation terminal and following the instructions given, money is added onto the electronic purse on the card. The card then replaces your wallet or purse when paying for goods at both vending and catering facilities. Card readers are installed at all Points of Sale (e.g. vending machines, restaurant tills, coffee bar till, staff shops). Instead of juggling with cash at the Point of Sale, the card is inserted into the reader and the total sum of the purchase is quickly and accurately deducted from the card.

3. INFORMATION TECHNOLOGY AND INTERNET BANKING TECHNIQUES

Information in its most restricted technical sense is a message (utterance or expression) or collection of messages that consists of an ordered sequence of symbols, or it is the meaning that can be interpreted from such a message or collection of messages. Information can be recorded or transmitted. It can be recorded as signs, or conveyed as signals by waves. Information is any kind of event that affects the state of a dynamic system. The concept has numerous other meanings in different contexts. Moreover, the concept of information is closely related to notions of constraint, communication, control, data, form, instruction, knowledge, meaning, mental stimulus, pattern, perception, representation, and especially entropy. In fact, information can be defined as processed data^[10]

Communication is the activity of conveying meaningful information. Communication requires a sender, a message, and an intended recipient, although the receiver need not be present or aware of the sender's intent to communicate at the time of communication; thus communication can occur across vast distances in time and space. Communication requires that the communicating parties share an area of communicative commonality. The communication process is complete once the receiver has understood the message of the sender,^[11]

Information technology (IT) is the use of computers and software to manage information. In some companies, this is referred to as Management Information Services (or MIS) or simply as Information Services (or IS). The information technology department of a large company such as bank would be responsible for storing information,

protecting information, processing the information, transmitting the information as necessary, and later retrieving information as necessary.

Information technology (IT) is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a microelectronics-based combination of computing and telecommunications. The term in its modern sense first appeared in a 1958 article published in the Harvard Business Review, in which authors Leavitt and Whisler commented that "the new technology does not yet have a single established name. We shall call it information technology (IT)." Some of the modern and emerging fields of Information technology are next generation web technologies, bioinformatics, cloud computing, global information systems, large scale know ledges, and so on^[14].

IT is the area of managing technology and spans wide variety of areas that include but not limited to things such as processes, computer software, information systems, computer hardware, programming languages and data constructs. In short, anything that renders data, information or perceived knowledge in any visual format whatsoever, via any multimedia distribution mechanism, is considered part of the IT domain.

The Nigeria Information Technology profile received a boost recently with the opening of the Nigeria Office of GOOGLE. As we are all aware, GOOGLE is the number one search engine and its presence in Nigeria will go a long way to boost internet activities in the country. According to statement released by GOOGLE, the primary goal of GOOGLE Nigeria is to make the internet an integral part of everyday life for the people of Nigeria.

The National Policy on information technology (IT),^[7] envisaged the integration of ICT at every level of educational institutions in order to play a leading role in the actualization of the goals of education as enshrined in the National Policy on education which includes the contribution to National development through high level manpower training, development of the individual intellectual capacities so as to understand their immediate and local environment, provision of opportunities for the acquisition of physical and intellectual skills necessary for individuals to be self reliant, and be useful members of society among others,^[7].

Information and communications technology or information and communication technology, usually abbreviated as ICT, is often used as an extended synonym for information technology (IT),

but is usually a more general term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computers, middleware as well as necessary software, storage- and audio-visual systems, which enable users to create, access, store, transmit, and manipulate information. In other words, ICT consists of IT as well as telecommunication, broadcast media, all types of audio and video processing and transmission and network based control and monitoring functions. The expression was first used in 1997 in a report by Dennis Stevenson to the UK government and promoted by the new National Curriculum documents for the UK in 2000. The term ICT is now also used to refer to the merging (convergence) of audio-visual and telephone networks with computer networks through a single cabling or link system. There are large economic incentives (huge cost savings due to elimination of the telephone network) to merge the audio-visual, building management and telephone network with the computer network system using a single unified system of cabling, signal distribution and management. This in turn has spurred the growth of organizations with the term ICT in their names to indicate their specialization in the process of merging the different network systems.

Automated Teller Machine (ATM): ATM is a combined computer terminal, with cash vault and record-keeping system in one unit, permitting customers to enter the bank's book keeping system with a plastic card containing a Personal Identification Number (PIN). It can also be accessed by punching a special code number into the computer terminal linked to the bank's computerized records,^[1]. It is cash dispensing machines, deposits, funds transfer between two or more accounts and bill payments.

Electronic Purses/Wallets: E-wallets that store card numbers and cash. This is a virtual wallet that can store credit card, debit card and other information.

Electronic Funds Transfer at Point of Sale (EFT/POS): EFT/POS is an online system that involves the use of plastic cards in terminal on merchants' premises and enables customers to transfer funds instantaneously from their bank accounts to merchant accounts when making purchases.

Credit Cards: This is a plastic card for payment for the goods or items delivered.

Debit Cards: These were a new form of value-transfer, where the card holder after keying of a

PIN, uses a terminal and network to authorize the transfer of value from their account to that of a merchant.

Smart Cards: A smart card is a plastic card with a computer chip inserted into it and that store and transacts data between users.

Mobile: A mobile payment is an electronic payment made through a mobile device (e.g., a cell phone or a PDA). This uses a mobile device to initiate and confirm electronic payment.

Telephone Banking: Telephone banking or telebanking is a form of virtual banking that deliver financial services through telecommunication devices.

Personal Computer Banking (Home Banking): This term is used for a variety of related methods whereby a payer uses an electronic device in the home or workplace to initiate payment to a payee.

Online/Internet Payments: This is the means by which customers transact business with a bank through the use of the Internet network. Customers can access their bank accounts and make transfers through a website provided by the bank and complying with some rigorous security checks.

Electronic Cheque: Electronic cheques are used in the same way as paper cheque – the clearing between payer and payee is based on existing and well known banking settlement system.

Digitized 'E-Cash' Systems: E-cash payment system takes the form of encoded messages and representing the encrypted equivalent of digitized money.

Digital P2P Payments: Bank-based P2P3 system allows users to send money from bank accounts and credit cards electronically. It employs e-mail services to notify recipients of an impending funds transfer.

4. BENEFITS OF CASHLESS SYSTEM

Below are the benefits of cashless system, according to [5]:

Faster transactions: It has been proven time after time that queuing at point of sale terminals and vending machines is greatly reduced; typically three times more people can be served using a cashless system than could have been if they were paying cash. This leaves employees more time to enjoy their break. Improving the speed of service

may also offer the benefit of reducing staff levels at off peak times.

Improves hygiene on site: The handling of coins and notes provide an easy way for bacteria to spread quickly from one individual to another. A recent study of coins and notes revealed the presence of bacteria on 87% of the notes!! With a cashless system, the catering staffs no longer have to handle cash, at the same time as serving food.

Managing staff entitlements: Free Vends, corporate cash, loyalty and hospitality spend are all entitlements which can be programmed on to the card, this can be refreshed, daily, weekly or monthly, whilst the cards can be configured so that any unused allowance is lost or accumulated, dependent on the client's requirements. In some instances it may be necessary to charge different tariffs for visitors and staff, the VMC Metro system manages tariffs and entitlements automatically.

Increased Sales: It has been demonstrated that with the introduction of a cashless system can increase sales by as much 20%. Vending and Catering purchases are often dictated by the amount of loose change we have in our pockets. With the introduction of a cashless system this is never a problem; the value on the card is available 24 hours a day, 7 days a week. 70% of vending machine vaults are coin related! Often vending machines require the exact change to be inserted in order to make a purchase. This can be frustrating and many times, people decide not to bother. Removing coins from your machines improves reliability, and overcomes the exact change problem. All this adds up to more sales and happier customers.

Cash collection – made simple! : Time spent collecting, counting and sorting cash costs money. The cashless system offers a choice of top-up options including Payroll deduction, Credit & Debit card and Coin & Note. Removing all the cash from your site removes the security issues relating to cash handling significantly and reduces the risk of vandalism and theft from your vending and catering points of sale. A payroll loader, where money is transferred from your salary to your smartcard, or a Credit Card loader, where money can be loaded from your Access, Visa or MasterCard directly to your smartcard offers you and your customers a truly 'cashless' system. Sites where it's not practical to remove cash can still achieve major benefits from using coin and note loaders to top-up cards. These terminals can be sited in central locations where security risk is low. All money is safely locked away in alarmed cashboxes that are fully auditable. Since the money

collected from coin and note loaders is high value denominations, less time is spent on counting and reconciling the cash, saving time and money to the operator.

Guests: When a guest arrives at an office how do they buy lunch? Simple.... As well as the revaluation terminals already installed on site, it is possible to install guest or visitor card terminals, providing 24 hour card dispensing facilities. Cards returned to the terminal are collected and any remaining balances are refunded. The terminal can also manage a card deposit to provide an incentive to return the card.

Simple Solutions: A cashless system provides a wide range of benefits which ensure a smooth running operation for businesses both big and small.

Reduces Cash in Circulation: A cashless system prevent too much of cash in the circulation thereby curb armed robbery cases and cash related crime.

Job Creation: the licensing and establishment of payment agencies will create jobs and new business opportunities.

5. CHALLENGES OF A CASHLESS SYSTEM IN NIGERIA

A cashless system in Nigeria has a lot of short comings due to the following reasons stated in ^[8]:

High Cost of Access: Before users can engage in electronic retail payments, they must invest in devices that give access, and then purchase that access to the networks that constitute the Internet.

Confidence and Security: There is lack of adequate security with the use certain electronic payment devices like ATM card payments. Internet fraud is on ascendancy in Nigeria.

Infrastructure: The Point of Sale terminals (PoS), Telecommunication networks and internet facilities are still inadequate.

Lack of Knowledge and Skill: Both consumers and business enterprises have limited knowledge of what services exist, how they operate and what benefits to be derived from cashless economy.

Operational Disruptions: There are risks such as operational disruption that affect the stability of electronic payment system. Numerous examples exists that is caused by failure of operations – for instance, the computer problem that caused the Bank of New York a whopping \$22 billion overdraft in 1985; a roof collapse after a heavy

snow, resulting in a shutdown of an Electronic Data System facility for processing ATM transactions, affecting more than 5000 ATMs in the US in 1993; the disruption of the operations of the Internet as a result of the “worm” virus in 1987; and a host of other disruptions. ^[1] :

Supply of Power: The epileptic nature of power supply in Nigeria will make it difficult to really utilize even the available facilities.

Lack of fund: To establish a good cashless system is capital intensive. The relevant agency should pump enough money for the success of the cashless economy policy.

Urban/Rural Areas Coverage: The major problem is that the use of computer, access to Internet and Other tools of ICT are limited greatly to the urban areas, and the challenges faced by the ICT sector in the country include particularly the fact that the people in the rural areas are yet to know how to use the computer or IT facilities.

6. CASHLESS RISKS

Payment Channels introduced by the cashless initiative have witnessed increase in systems attacks worldwide and breaches will continue to grow: – The attacks are becoming more sophisticated – More breaches are targeted by system components – Criminals target the easiest opportunities.

Internet Banking also referred to as Electronic Banking (E-banking) is gradually gaining ground, especially by the working class individuals, small and medium enterprises (SME's), because of its convenience, availability (24x7) and typically incurs far less bank fees than going in to a branch to do banking. However, the risks associated with E-banking are real. They include but not limited to: Identity theft, Virus attack, Phishing and Pharming, unauthorised access, key loggers, over the shoulder looking especially at the cyber café, ^[13].

7. CONCLUSION

The use of cash for frequent transactions apart from the problems enumerated in this paper, it is risky, costly and inefficient for consumers. The need therefore to migrate from the use of paper to cashless or electronic payment instruments cannot be overemphasized. Cashless society as a society where no one uses cash, all purchases being made by credit cards, charge cards, cheques or direct transfers from one account to another.

In other words, it refers to the widespread application of computer technology in the financial system. If transactions are carried out without physical cash being exchanged, this will greatly reduce cost, corruption and money laundering. In Nigeria today, it is the opposite - with the majority of transactions done with cash. The primary purpose of the policy is to reduce cost of cash management, cost of banking operations and enhance quick payment system. CBN said 99 percent of current banking activities are cash based rather than electronic as obtained in other economies. This has to stop, Nigeria should be technological up-to-date in Banking transactions.

8. RECOMMENDATIONS

The following section outlines recommendations to help Nigeria in working towards better integration and use of information technology to enhance bank transactions.

1. Government needs to ensure that the cost of telecommunications, hardware and software are made cheap, which will involve examining existing taxes and import duties.
2. The emergence of electronic payment systems raises a whole range of both legal and regulatory issues that needs to be taking a look at.
3. There is the need for banks to educate consumers about all of their cash-less system options and the pros and cons of the system.
4. Simply importing another country's electronic payment system or point of sale terminals without adjusting for geography, infrastructure, banking and legal structures, business practices, culture, and needs could lead to a suboptimal system.
5. Government should also provide the necessary social amenities, infrastructure and constant supply of electricity for easy take off of the cashless policy.
6. Central Bank of Nigeria and other commercial banks to take the security of customer transaction seriously.
7. The apex bank in conjunction with the corporate bodies should also embark on massive awareness campaign and operational education for proper acceptance of the new cashless economy policy.

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