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# EMERGING TREND OF ELECTRONIC PAYMENT SYSTEM IN NIGERIA

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## Abstract
*This study investigated the economic benefits, challenges and evaluation of electronic payment system in the Nigeria economy. The study is quantitative by its nature and the study utilizes secondary data from various scholarly articles, journals, government report and periodic of similar researches conducted in the recent past. The study reveals that e-payment system makes our life better and has significant impact on the overall economic growth and individual living standard in Nigeria. The study also reveals that e-payment system in Nigeria is characterized by couple of challenges such as security, poor infrastructures, legal and regulatory issues and other socio-economic issues. The study recommends that the Nigerian Government should provide much needed support for e-payment system to be effective and convenient in order to make economic activities in the country safe and reliable to consumers, firms, enterprises and government establishments.*

**Key Words:** *Automated Teller Machine, Electronic Banking, Electronic Internet and Network. Payment System, Point of Sales.*

## Introduction
A payment system is an operational network governed by laws, rules and standards that links bank accounts and provides the functionality of monetary exchange using bank deposits (Moody's Analytics, 2022). A payment system is the infrastructure consisting of institutions, instruments, rules, procedures, standards and technical means established to effect the transfer of monetary value between parties discharging mutual obligations. Its technical efficiency determine the efficiency with which transaction of money is used in the economy and risk associated with its use (Massimo & Garcia, 2021). Payment system employs cash substitutes with the use of electronic money and other ICT related equipment in its operations. Traditional payment system are negotiable instruments such as draft-cheque and documentary credits such as letter of credits (Osibote, 2020). With advent of computer and electronic communications a large number of alternative electronic payment system have emerged. These includes debit cards, credit cards, electronic funds transfers, direct credits, direct debits, internet banking and e-commerce payment system (Delali, 2023). Some payment include credit mechanisms, but that is essentially a different aspects of payments. Payment system are used in lieu of tendering cash in domestic and international transactions and consist of a major service provided by banks and other financial institutions (Worku, 2022).

Payment system may be physical or electronic and each has its own procedures. Standardization has allowed some of these systems and network to grow at a global scale but there are still many countries and their specific system. Example of payment system that have become globally available are credit cards and automated teller machine networks. Specific form of payment system are also used to settle financial transactions for products in the equity markets, bonds markets, currency markets and to transfer funds between financial institutions both domestically using clearing and Real Time Gross Settlement (RTGS) system and internationally using the Society for Worldwide Interbank Financial Telecommunications (SWIFT) network (Ayodele, 2020). According to Moody's Analytics (2022) states that "electronic payment system apart from its conveniences and safety has a significant number of economic benefits which include mobilizing savings and ensuring most of the cash available in the country are with banks. This will make funds available to borrowers both business and individuals". Furthermore, an electronic payment system has ability to track individual spending and to facilitate the design of products by the banks. This information is also useful to the government when making decisions. Electronic payment system also have ability to reduce cash handling and printing cost by the government of a country (Osibote, 2020). Real global GDP grew an extra 0.2% a year on average beyond what it would have without card usage. Simply put card usage increases a country's GDP by 0.2% annually (Moody's Analytics, 2022). Moving from a society where 90% of cash is held outside of a bank to a cashless society is a big challenge. It is therefore an enormous for the government, financial institutions, individuals and other stakeholders responsible to make the system achieve its economic benefits. There likely operational, financial, economic and marketing challenges that need to be addressed properly (Delali, 2023).

Since the overcoming barter in the history of mankind, trade usually involve the exchange of goods and services on equivalent abstract value such as money. Asaolu, Ayoola and Akinkoye, (2021) noted that since money was invented as an abstract way of representing value, system for making payment have been in place. In the course of time, new an increasingly abstract representations of value were introduced. A corresponding progression of value transfer system, starting from barter, through bank notes, payment orders, cheque and credit cards has finally culminated in electronic payment system (Asaolu, Ayoola & Akinkoye, 2021). As a transition to electronic payment system take place, the stock of currency hold outside the banking system which constitutes a potential source of unproductive economic resources have drastically reduced Massimo and Garcia (2021). Nigerian payment system has been predominantly cash based for both positive and negative reasons because of its instant convertibility to other forms of value without intermediation of any financial institutions. The Federal government through its treasury circular reference No: TRY/A8 and B8/2008 of 22nd October, 2008 directed that payments from all funds from it be made electronically as from 1st January, 2009. The policy has been condemned by all and sundry for lack of planning, inefficiency and delay in the payment for goods and services (Asaolu, Ayoola & Akinkoye, 2021).

## Literature Review

### Electronic Payment System

Delali (2023) defined electronic payment system as a form of financial exchange that take place between buyer and seller facilitated by means of electronic communication. According to Cobb (2019) states that "the value of electronic payment system goes beyond the immediate convenience and safety of cards to a greater sphere of contribution to the overall economic development". The term electronic payment can be referred as narrowly to e-commerce which is a payment of buying and selling of goods and services offered through internet or broadly to any type of electronic funds transfer (Massimo & Garcia, 2021). Ayodele (2020) defined electronic payment as electronic transfer of cash via online transactions for business to business (B2B), business to consumer (B2C), person to person (P2P), and most recently administration to consumer (A2C) which is known as payment of taxes toward the government. Humphrey, Kim and Vale (2021) defined electronic payment as cash and associated transactions implemented using electronic means. Typically, this involved the use of computer network such as the internet and digital stored value system. This system allows bills to be paid directly from bank and without the use of writing and mailing cheque.

Guttman (2023) defined electronic payment "as credit details, or some other electronic means as opposed to payment by cheque and cash". It is also referred as a payer's transfer of monetary claim on a party acceptable to the beneficiary (Worku, 2022). Electronic payment can also be defined as convenient, safe and secure methods for payment of bills and other transactions by electronic means such as card, telephone, internet, electronic funds transfer and so on. Electronic payment gives consumers an alternative to paying bills and debts by cash, cheque, money order etc. Its main purpose is to reduce cash and cheque transaction (Worku, 2022). In Nigerian, electronic payment is effective payment from one end to another and through the medium of the computer without manual intervention beyond inputting the payment data. It is the ability to pay the suppliers, vendors and staff salaries electronically at the touch of a computer button (Agba, 2023).

### Types of Electronic Payment System

There are many forms of e-payments that include cards, internet mobile payments, financial service kiosks, biometric payments, electronic payment networks (Osibote, 2020; Asaolu, Ayoola & Akinkoye, 2021). In the Nigerian context, there are two types of e-payment namely:

a. **End to End processing:** Here, all the processes from approvals to the receipt of value by the beneficiary are done electronically.
b. **Manual e-payment or Use of Mandate:** This is the mixture of manual and electronic process where the available infrastructure cannot support the end to end processing.

**Benefits of E-Payment System in Nigeria**

Delali (2023) states that "the arrival of internet has taken electronic payments and transactions to an exponential growth level. Consumers could purchase goods from the internet and send unencrypted credit card numbers across the network, which did not provide much security and privacy. But a wide variety of secure network payments schemes have been developed as consumers became more aware of their privacy and security". Digital money has significant benefits for financial institutions, banks and merchants (Fiallos & Wu, 2021). Digital money is an electronic payment technology which can provide anonymous flexible electronic payment like paper cash but with added security requirements needed for internet transactions. In a related study by Lee, Choi and Rhee (2023) reveals that a secured electronic system can guarantee anonymity of legitimate users but also provides traceability about illegal issued cash or laundered money. Where illegal activity take place, it can cancel anonymity of the digital cash in order to protect the bank. Electronic payment as argued by Taddesse and Kidan, (2022), has a significant number of economic benefits apart from their convenience and safety. These benefits when maximized can go a long way in contributing immensely to economic development of a nation. Automated electronic payments helps deepen bank deposits thereby increasing funds available for commercial loans as driver of overall economic activity. According to Fiallos and Wu (2021) states that efficient, safe and convenient electronic payments contains significant range of macro-economic benefits. The impact of introducing electronic payments is akin to using the gears on a bicycle. Add an efficient electronic payments system to an economy and you kick it into a higher gear. Add better controlled consumer and business credit and you notch up economic velocity even further (Taddese & Kidan, 2022). While the high level of cash transaction create an opportunity for the electronic payment industry, it also imposes a cost in local economics. Cash has to be minted, securely transported, counted and reconciled, kept secure and maintained for re-used. The payment cost is high and will always remain high whereas the costs of electronic system are fixed. Once the infrastructure has been built, the cost per transaction is very low (Lee, Choi & Rhee, 2023).

Appiah and Agyemang (2023) states that when card holders use their cards at the point of sales, they are helping to keep money in the banking system. Electronic payment system can help displace shadow economics, bring hidden transaction into the banking system and increase transparency, confidence and participation in the financial system. Taddese and Kidan, (2022) observed that there is correlation between increase in point of sales volume and rise in demand deposits. Automated electronic payment act as a gateway into the banking sector and as a powerful engine for growth. Such payments draw cash out of circulation and into the bank accounts, providing low cost funds that can be used to support bank lending for investment towards economic growth. The process creates greater transparency and accountability, leading to greater efficiency and better economic performance. Appiah and Agyemang (2023) states that electronic payment system is very convenient for the consumer. In most cases, you only need to enter your account information such as your credit card number and shipping address. The information is then stored in a database on the retailer's web server. When you come back to the website, you just log in with your username and password. Completing a transaction is as simple as clicking your mouse: all you have to do is to

confirm your purchase and you are done. Worku (2022) emphasized the fact that electronic payment lowers costs for business. The more payments that is processed electronically, the less money is spent on paper and postage. Offering electronic payment can help business improve customer retention. A customer is more likely to return to the e-commerce site where his or her information has already been entered and stored.

According to Taddese and Kidan, (2022) disclosed that electronic payments can lower transaction costs and stimulate higher consumption, increase GDP, boost financial intermediation, increase government efficiency and improve financial transparency. They further added that government play a critical important role in creating an environment in which these benefits can be achieve in a consistent way with their own economic development plans. Massimo and Garcia (2021) states that the introduction and use of electronic payment instruments holds the promise of broad benefits to business and consumers, greater convenience and more secure reliable means of payment and settlement for a potentially vast range of goods and services offered worldwide over the internet and other electronics networks. One such benefit is that electronic payments enable bank customers to handle their daily financial transactions without having to visit their local physical banking branch. Electronic payments products could save merchant time and expenses in handling cash (Appiah & Agyemang, 2023). It is obvious that the social cost of payment system could be considerably reduced if it is automated. Automating and streamlining electronic payments made from self-serve channels such as Automated Teller Machine (ATMs), branch office terminals and point of sales (POS) system can reduce paper-based errors and cost (Appiah & Agyemang, 2023). Nigeria is lagging behind most of the world countries to boost micro economic activity by reducing the role played by physical cash in daily transactions and by encouraging the implementation of cashless society (Dankwambo, 2020). Expert in financial sector have stressed that unless something radically innovative, functional and savvy is introduced, which accounts for attitudes as well as the huge unbanked population, the country's dream of building a functional cashless society in the shortest possible time could be elusive (Dankwambo, 2020).

**Challenges of E-Payment in Nigeria**

Electronic payments despites its numerous benefits come with its own challenges even in the developed world. The problems militating against electronic payments in Nigeria include:

**i. Lack of Uniform Platform of Banks and MDAs**

There is no compelling law mandating the banks to use common software platform. Every bank is left to use whatever platform of switches in effecting transfer from one bank to another. Interconnectivity has been a problem, no uniformity of account numbers since different banks use different numbering systems. According to Dankwambo (2020) states that the Federal Government through the office of Accountant General of the Federation will be rolling out of a common platform configuration.

**ii. Lack of Adequate Infrastructure**

The electronic payment system is being partially implemented. If it is to be fully implemented, a number of IT infrastructure will have to be put in place. These include but not limited to laptop, desktop, scanners, good internet connectivity, training, global software, the provision of basic Information Technology and infrastructure are some of the major challenges of electronic payments Ovia (2021).

**iii. Platform Security**

Atanbasi (2022) pointed out that "the major challenges of electronic payments in the country is security. Security in terms of platform, hackers and virus attacks. This will ensure that output from the system are reliable and accurate". The MDAs still carry their schedule(s) to the banks with compact disks (CDs), flash drives or email attachments.

**iv. Lack of Seriousness by Banks**

While a number of banks have deployed the necessary infrastructure in place to ensure effective implementation of electronic payments, it is sad to note that some banks are still not fully ready for this new payment system (Ogedebe and Babatunde, 2023).

**v. High Rate of Illiteracy**

Low literacy rate is a serious impediment for adoption of electronic payments as it hinders the accessibility of banking services. For citizens to fully enjoy the benefits of electronic payments, they should not only know how to read and write but also possess basic ICT literacy (Dankwambo, 2020).

**vi. High Cost of Internet**

The cost of internet access relative to per capital income is a critical factor. Compared to developed countries, there are higher costs of entry into the electronic payments and e-commerce market. These include high startup investments costs, high costs of computers, telecommunication and licensing requirements (Atanbasi, 2022).

**vii. Frequent Power Interruption and Poor ICT Services**

Lack of reliable power supply is a key challenge for smoothly running electronic payments and e-banking. According to Microfinance Nigeria (2021) urban dwellers are not accessible to the effort made in power supply and ICT services in the country. This make investors to migrate payment system through substantial investments in crucial infrastructure like Point of Sale (POS) terminal in thousands of supermarkets, fuel stations, hotels, recreational centers and many others.

**Evaluation of E-Payment System in Nigeria**

Electronic payment system in Nigeria can be evaluated from the following ways (Ogedebe & Babatunde, 2023):

a. Elimination of many risks involved in carrying large sum of money such as armed robbery, kidnapping, fraud, theft and others.
b. At least government organization no longer pay cash 'contractors and civil servants' salary.
c. Elimination of the use of cash to facilitate speedy payments for all transactions. But to a very large extent, the above objectives have not been fully met.
d. Fast tracking the implementation of government policies through the elimination of delays in government payment system. There are instances of delay in payment to contractors who are not ready to offer bribe. There has been

a complaint from some contractors handling projects in the rural areas over difficulties associated with e-payment system.

e. Achievement of economy and efficiency in government financial transactions. For as long as corruption remains within the polity, there can be no efficiency in the system. The EFCC and the judiciary will have to find a common ground to tackle this cankerworm that has defiled all solution. China's example could be the best solution but for tribal and religious sentiment among some Nigerians.
f. Enhancement of real time reporting and improve quality of financial reporting system in the public sector has been observed that since the implementation of the policy, there have been late returns or no response in respect of unapplied funds. The existing system cannot guarantee real time reporting of finance. As result, there can be no good financial reporting.

**Methodology**

The study is quantitative by its nature and utilized secondary data from various scholarly articles, academic journals, government and private institution reports and periodic relevant to the study that dwelled on benefits, challenges and evaluations of electronic payment system in Nigeria.

**Result and Discussion**

Technology has unarguably made our lives easier. It has cut across distance, space and even time. One of the technological innovation in banking, finance and commerce is the electronic payment system. Electronic payment system provides greater freedom to individuals in paying their taxes, licenses, fee, bills, fines and purchases at unconventional locations and at whichever time of the day. Electronic payment system has ability to track individual spending and to facilitate the design of products by the banks. This information is also useful to the government when making decisions. Electronic payment system also have ability to reduce cash handling and printing cost by the government of a country. The success of the e-commerce payment system is largely dependent on consumer preferences, ease of use, cost, industry, agreement, authorization, security, non-reputability and acceptability.

**Conclusion and Recommendations**

Despite the numerous benefits that electronic payments brings to the nation, banks and individuals that includes efficiency, safety, fast, conveniences, reduce transaction and travel costs, control the level of hard currency in circulation, and promote ease of doing business. Electronic payments also has its challenges as discussed in the study can be categorized into four main group that is, security, infrastructure, legal and regulatory, as well as socio-cultural issues (Ayo, 2021; Delali, 2023).

a. There is a need to create more awareness to entice the unbanked people into the banking system.
b. The banks must perform more education and advertisement on electronic payment system so that the Nigeria population will appreciate and use electronic products available. The use of cash comes with its own disadvantages and problems that electronic payment system can eliminates.

c. The government of Nigeria can provide the much needed leadership and support for electronic payments.
d. Applicable regulations including those for electronic approval processes, consumer protection and e-transactions should be developed and standardized as needed.
e. Government and private organizations should systematically expand the necessary infrastructure by promoting the development of necessary technologies, recruiting experts and expanding high speed information network as this will foster a strong foundation for e-payment system.
f. In order to appreciate the benefits emanating from the use of new payment regime, there should be steady power supply in the country.
g. Security to CD's and flash drives measures should be taken to ensure that storage media be jealously guarded and delivered as intended.

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