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The Influence of the Cashless Policy on Economic Growth and Development

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Abstract. The study investigates the correlation between the cashless policy and economic growth and development in Nigeria. Ordinary regression analysis was applied to assess the impact of the cashless policy on economic growth and development. Data were gathered from participants using a structured questionnaire. The study's results demonstrated that the independent variables (EBS, ETS, P2P) exert a significant influence on the dependent variable (EGD). The notably high R-squared value indicates a strong alignment of the model with the data. Conclusively, the study asserts that the cashless policy exhibits a substantial positive impact on economic growth and development in Nigeria. Consequently, it suggests that governmental bodies and those in authoritative positions should implement initiatives aimed at enhancing digital financial literacy among the populace, fostering effective utilization of electronic banking systems, electronic transfer systems, and peer-to-peer payment platforms.

Keywords: Economic Growth and Development; Electronic Banking System; Electronic Transfer System; Peer-To-Peer (P2P) Payments

1. Introduction

Having a fundamental objective is crucial for the longevity of a policy. Policies are designed to tackle current, perceived, and potential challenges. This prompted the introduction of the cashless policy in Nigeria, aiming to address existing issues (Fasua, 2024). "The Central Bank of Nigeria" (CBN) has played a pivotal role in driving the transition to a cashless economy by implementing various policy initiatives, including the Cashless Policy, electronic payment channels, mobile money services, and a national switching system. Nigeria initiated the Cashless Policy in 2012 to promote the use of electronic payment systems and reduce reliance on physical cash (Tee & Ong, 2016). The promotion of electronic payment channels such as mobile banking, internet banking, and Point of Sale (POS) terminals has been actively pursued (Maverick, 2021), leading to improved financial inclusion, especially in remote areas. The implementation of a national switching system likes the "Nigeria Inter-Bank Settlement System "(NIBSS)" has facilitated streamlined electronic transactions among banks (Onwe, 2018).

Effective March 30, 2012, the CBN cash policy introduced daily cumulative limits for free cash withdrawals and lodgments in Lagos State. Individuals and corporate entities surpassing these limits are subject to service fees. Moreover, over-the-counter encashment of third-party cheques exceeding N150,000 became ineligible starting January 1, 2012. Leveraging advanced information technology, the policy enables swift fund transfers, reducing wait times in banks (Omotunde et al., 2013). Beyond Nigeria, the cashless policy has transcended borders, exemplified by initiatives like Wizzit in South Africa, serving over three hundred thousand customers, and M-PESA in Kenya, embraced by nine million customers (Onwe, 2018; Omotunde et al., 2013). It is believed that the effective utilization of mobile phones and other technologies will support the cashless policy and foster the expansion of a cashless economy in Nigeria (Fasua, 2024).

Implemented in Lagos State, which accounts for 85% of POS and 66% of cheque transactions in Nigeria, the cashless economy seeks to reduce physical cash circulation and encourage more electronic-based transactions, with an anticipated 90% reduction in costs associated with maintaining a cash-based economy upon full implementation (Omotunde et al., 2013). The CBN policy on retail cash collection and lodgment implies reduced transaction costs, expanded vault cash, increased credit creation, and greater

involvement of the informal sector in banking (CBN, 2011). The CBN envisions the cashless policy empowering a previously large populace to open accounts and conduct e-transactions across the nation without visiting bank branches. Divergent views exist on the scheme's implementation, Nigerians' readiness to embrace it, effectiveness of sensitization campaigns, and the protection of interests in the informal sector. Some argue that the Point of Sale (POS) terminals render the policy useless, while others highlight the need for the apex bank to proactively address security and technological challenges associated with e-transactions.

Hence, there is a necessity for research to examine the influence of the cashless policy on economic growth and development. This study seeks to address inquiries regarding the impact of the cashless policy on economic growth and development, along with the ramifications of Electronic Banking System, Electronic Transfer System, and Peer-To-Peer (P2P) Payments on economic growth and development in Nigeria. The study is organized into conceptual, theoretical, and empirical reviews, methodology, data analysis, conclusion, and recommendations sections.

2. Literature

2.1 Conceptual Review

2.1.1 Cashless Economy and Cashless Policy

A cashless economy does not signify the complete absence of cash; rather, it denotes an economic environment where goods and services are purchased and paid for using electronic means (Onwe, 2018). Woodford (2003) defines a cashless economy as one in which there are presumed to be no transaction frictions that can be alleviated through the utilization of money balances, thereby providing a rationale for holding such balances even when they yield a rate of return. Various facets of the operation of a cashless economy are facilitated by e-finance, e-money, e-brokering, and exchanges, all of which pertain to how transactions and payments are conducted in a cashless economy (Onwe, 2018).

A cashless policy comprises a series of tactics and measures implemented by governments or financial authorities to encourage and bolster electronic or digital forms of payment while reducing dependency on physical cash. The objective of a cashless policy is to foster a more efficient, transparent, and secure financial environment. This policy promotes the utilization of electronic payment methods like credit/debit cards, mobile wallets, and online banking for transactions, instead of relying on physical cash. It encompasses the utilization of Electronic Banking System, Electronic Transfer System, and Peer-To-Peer (P2P) Payments.

2.1.1.1 Electronic Banking System

"Electronic Banking System" denotes a holistic and cohesive collection of technologies, procedures, and platforms facilitating diverse banking and financial transactions electronically for individuals, businesses, and financial institutions (Babatunde & Salawudeen, 2017). Electronic Banking Systems leverage digital technology to provide a wide range of services, offering customers the flexibility to manage their finances remotely, often through online channels. Online Banking allows customers to manage their bank accounts through the internet. They can check balances, transfer funds, pay bills, and conduct various banking activities securely on an online platform.

Mobile Banking expands banking services to mobile devices like smartphones and tablets. Through mobile banking apps, users can execute transactions, receive alerts, and access account details while on the move. Automated Teller Machines (ATMs) are part of the electronic banking system, providing customers with self-service options for cash withdrawals, deposits, and account inquiries. Electronic Funds Transfer (EFT) facilitates the electronic transfer of funds between different accounts, either within the same bank or across different financial institutions. The Electronic banking system plays a crucial role in modern banking, offering convenience, accessibility, and efficiency for both financial institutions and their customers. Its evolution continues to be influenced by advancements in technology and the changing preferences of consumers in an increasingly digital world.

2.1.1.2 Electronic Transfer System

An Electronic Transfer System (ETS) is a digital platform facilitating the transfer of funds without physical currency. It encompasses various electronic payment methods like electronic funds transfer (EFT), mobile banking, online banking, point of sale (POS) systems, automated clearing house (ACH), digital wallets, and cryptocurrencies (Aldaas, 2021; Maverick, 2021; Friedman & Johnson, 2019). EFT enables transactions such as direct deposits and wire transfers. Mobile and online banking allow users to manage accounts and conduct transactions electronically. POS systems enable electronic payments at physical retail locations, reducing reliance on cash (Isibor et al., 2018). ACH (Automated Clearing House) enables the electronic transfer of funds between bank accounts, typically utilized for

direct deposits and bill payments. Digital wallets securely store payment information for online and in-person purchases. Cryptocurrencies, operating on decentralized blockchain technology, are also part of some ETS for peer-to-peer transactions. Overall, ETS plays a crucial role in modernizing financial transactions and supporting the shift towards a cashless or digital economy (Maverick, 2021; Lee, 2019).

2.1.1.3 Peer-To-Peer (P2P) Payments

According to Belanche et al. (2022), peer-to-peer (P2P) payments involve transferring money directly from one individual or entity to another using digital platforms or mobile apps, can have several implications for the quality of financial reporting. P2P (Peer-to-Peer) payments are witnessing robust expansion because of the considerable surge in mobile payment popularity and the COVID-19 pandemic has influenced people's habits significantly. P2P payments frequently produce digital transaction records, simplifying users' ability to monitor their financial behaviors (Abdullah et al., 2021). This can enhance the accuracy and completeness of financial reporting, as individuals can readily access detailed information about their income and expenses. P2P payments are typically processed in real-time or within a short period. This can lead to more up-to-date financial reporting, as transactions are recorded promptly, providing users with a current view of their financial position (Borasi et al., 2021).

2.1.2 Economic Growth and Development

Economic growth denotes the positive alterations in material production within a specific short duration, typically a year, resulting in an annual augmentation in material production as evidenced by the escalation in the value of national income. However, economic growth, as delineated in economic theory, differs from economic development. While economic growth denotes a yearly expansion in material production and national income, economic development encompasses broader socio-economic advancements stemming from the impacts of both economic and non-economic factors (Fasua, 2021; Mladen, 2015).

Adebowale (2017) further elucidates economic growth as a comprehensive concept encompassing not only income and productivity growth but also job creation and economic diversification. Numerous policies play a pivotal role in influencing economic growth, spanning areas such as security, employment generation, agricultural production, and poverty reduction. Such growth engenders resources readily available for development across all facets, contributing to overall economic development, which unfolds over an extended period and involves a sequence of structural changes.

The study contends that attaining the economic development of a nation necessitates heightened involvement in the processing capacity of industrial production, with a gradual transition towards dominance by the service sector at advanced stages. A comprehensive review of existing literature underscores a consensus in the delineations of economic growth and development across various studies. The collective comprehension underscores the multifaceted nature of these concepts and the interplay of diverse factors influencing their trajectories (Fasua et al., 2023).

2.1.3 Cashless Policy and Growth & Economic Development in Nigeria

The relationship between a cashless policy and economic growth and development in Nigeria is multifaceted, and various factors influence the outcomes. A cashless policy can enhance the efficiency of financial transactions, reduce transaction costs, and minimize the risks associated with handling physical cash. This can contribute to overall economic efficiency and productivity. However, if the infrastructure supporting cashless transactions is not robust or accessible to all segments of the population, it may lead to exclusion and hinder economic growth (Elechi & Rufus, 2016; Kumari & Khanna, 2017).

A well-implemented cashless policy can promote financial inclusion by providing access to banking services for previously unbanked or under-banked populations. Increased financial inclusion can lead to higher savings, investments, and economic participation. If the policy is not inclusive or if a significant portion of the population lacks access to digital financial services, it may exacerbate existing inequalities and limit the positive impact on economic development. A cashless policy can help reduce the size of the informal economy by bringing more economic activities into the formal sector. This can enhance tax collection, improve regulatory oversight, and contribute to government revenue (Fasua, 2024).

Rapid implementation without proper awareness or alternative solutions in place may disrupt businesses in the informal sector, impacting livelihoods and potentially slowing economic growth. Digital transactions in a cashless system can enhance security and transparency, reducing the risks of corruption and illicit financial activities. This can create a more

conducive environment for economic growth. Inadequate cybersecurity measures or a lack of trust in the digital system may lead to security concerns, hindering the adoption of cashless transactions. A cashless policy can enhance the effectiveness of monetary policy by providing better tools for central banks to implement policies such as interest rate adjustments and money supply control. If the transition to a cashless system is too rapid or poorly managed, it may create disruptions in monetary policy transmission mechanisms (Fasua, 2024; Srouji, 2020).

2.2 Theoretical Review

2.2.1 Innovation Diffusion Theory

The adopted core theory, Rogers' Diffusion of Innovation (DOI) theory (1976), is crucial for understanding the acceptance of new technologies by influencing relevant variables. DOI posits that reducing uncertainty is central to adopting innovations, with individuals gathering information to guide their decision-making. Five key adoption concepts (compatibility, comparative benefit, trialability, complexity, and observability) play a pivotal role in explaining individuals' preference for new technological modalities. This theory recognizes the spread of innovation within social systems through specific channels, progressing through knowledge, persuasion, decision, implementation, and confirmation stages (Isibor et al., 2018).
In the realm of internet banking, individuals and financial institutions strive to diminish uncertainty through understanding emerging technologies. The perceived superiority of an innovation, known as relative advantage, becomes a key driver in adoption, considering both economic and social benefits. Compatibility, which evaluates alignment with prevailing values and user demands, is contingent on socio-cultural norms and beliefs. The impact of perceived difficulty, reflected in complexity, and the testability on a small scale, assessed through trial ability, plays a role in adoption. Collectively, these factors, excluding observability, significantly shape decisions, especially within the context of internet banking.

Examining the four elements of innovation diffusion theory in internet banking, Baraghani's (2008) analysis excluded observability due to the private nature of transactions. These elements positively influence individuals' attitudes toward internet banking, impacting their intention to adopt the technology. The study recognizes innovation spreading over time in a social system, aligning with established economic frameworks. In this research, diffusion refers to the spread of cashless payment methods, influenced by consumer preferences for fast transactions and businesses' pursuit of additional revenue channels. According to Tee and Ong (2016), the diffusion of electronic payment results in cashless transactions, with differences observed among societies based on innovator adopters and decision-making processes.

2.2.2 Technology Acceptance Theory

Davis et al. (1989) introduced the Technology Acceptance Theory (TAT) as a framework aimed at understanding users' intention or acceptance level towards information systems or technology. TAT centers around two main constructs: perceived usefulness and perceived ease of use. Perceived usefulness refers to an individual's belief in the enhancement of job performance through the adoption of new technology, while perceived ease of use reflects the ease of learning and operating new technology. The theory posits that perceived ease of use positively influences perceived usefulness and considers exogenous variables, such as the environment, as antecedents influencing both factors. TAT has become widely employed in information technology research.

Liu and Arnett (2000) extended TAT's application by identifying variables crucial for the development of successful websites. Gefen et al. (2003) further expanded TAT by integrating it with trust to elucidate online consumer behavior. Additionally, Pavlou (2003) proposed an e-commerce acceptance model for online consumers, utilizing experimental designs and surveys. This study combined TAT factors with public experiences and perceived risk to analyze e-government principles. Empirical findings revealed that trust in government organizations and a strong identification with information technology play pivotal roles in e-government success. These studies collectively suggest that TAT is not limited to examining the acceptance of new information technology but also holds relevance for understanding online user behavior (Liu & Arnett, 2000; Gefen et al., 2003; Pavlou, 2003).

2.2.3 The Quantity Theory of Money

The origins of monetary policy can be traced back to the seminal work of Irving Fisher (1996), who laid the foundation for the quantity theory of money with his equation of exchange. Fisher's theory posited that money primarily impacts prices rather than broader economic aggregates. However, the role of money in an economy extends beyond direct price effects and

has an indirect influence on various economic variables, particularly through its impact on interest rates. Changes in interest rates, in turn, affect investment decisions and the cash holdings of economic agents.

Monetary policy operates through several transmission channels that shape economic activities. Monetarists argue that adjustments in the money supply directly influence the real value of money. Tight monetary policies, characterized by constraints on liquidity and banks' lending capacity, result in reduced lending to prime borrowers and business firms, excluding mortgages and consumption spending. This constriction of effective demand and investment stems from the curtailment of lending activities, thereby influencing economic dynamics.

The relationship between a cashless policy and monetary policy, as outlined by Irving Fisher's quantity theory of money, can be understood through the lens of the impact of cashless transactions on the various channels through which monetary policy influences the economy.

In Fisher's quantity theory, the velocity of money is a key determinant of the overall price level in an economy. he velocity of money refers to the speed at which money circulates within an economy as it is exchanged for goods and services. A well-implemented cashless policy may affect the velocity of money by promoting faster and more frequent transactions. This dynamic can affect the total money supply and influence the efficacy of monetary policy in managing inflation. Fisher highlighted the role of money in influencing interest rates, which in turn affects investment decisions. Changes in interest rates impact borrowing costs and, consequently, investment levels. The shift to cashless transactions can influence interest rates by altering the demand for money. Increased efficiency in financial transactions through cashless means may affect interest rates, influencing investment dynamics as perceived in Fisher's analysis.

Fisher's analysis suggests that tight monetary policies can impact liquidity and banks' ability to lend, restricting loans to specific sectors and affecting overall economic demand. A successful cashless policy may enhance liquidity in the financial system, potentially mitigating some of the constraints posed by tight monetary policies. This, in turn, can influence lending capacity and impact economic dynamics, aligning with Fisher's insights. Fisher's quantity theory emphasizes the transmission channels through which changes in the money supply affect real economic variables.

The adoption of cashless transactions can be considered a modern evolution of these transmission channels. Electronic transactions may affect money supply dynamics, influencing economic activities and validating Fisher's conceptual framework. In essence, the implementation of a cashless policy can have implications for the key variables and channels through which monetary policy traditionally operates. The increased efficiency, altered velocity of money, and changes in interest rate dynamics resulting from a cashless system may influence the broader economic aggregates in line with Fisher's foundational insights into the quantity theory of money and monetary policy.

Having reviewed pertinent theories regarding the relationship between cashless policies and economic growth and development in Nigeria, this study adopts the innovation diffusion theory as its theoretical framework. The rationale for this choice lies in the acknowledgment of innovation spreading gradually through a social system, aligning with established economic frameworks. In the context of this study, diffusion specifically refers to the proliferation of cashless payment methods, spurred by consumer demand for swift transactions and businesses exploring novel revenue avenues. Furthermore, it can be contended that the diffusion of electronic payment methods ultimately results in varying degrees of cashless transactions within societies, influenced by the characteristics of innovation adopters and the decision-making processes involved.

2.3 Empirical Review

In a study conducted by Nwala et al. (2023), the examination of electronic payment systems' impact on economic growth in Nigeria was undertaken. Utilizing pre-estimation tests, the researchers employed the Johansen cointegration test to ascertain the existence of a long-run relationship. Once cointegration was established, a Vector Error Correction Model (VECM) was utilized for further analysis. Dynamic Ordinary Least Square regression was applied to evaluate the influence of electronic payment systems on Nigeria's economic growth. The results revealed that point of sale and mobile payment channels significantly contributed to economic growth, whereas web pay channels had an insignificant effect.

Similarly, Andrea et al. (2022) conducted research on the impact of e-payment systems on Nigeria's gross domestic product (GDP). The study aimed to assess the effects of Automated Teller Machine (ATM), Point of Sale (POS), and mobile applications payment

systems on GDP. Employing an ex-post facto research design, the study focused on quoted telecommunication companies listed on the Nigeria Stock Market as of 2020, with a sample including MTN Nigeria, eTranzact, Chams Plc, Courteville Business Solutions Plc, and Omatek Plc. The Auto Regressive Distributed Lag Model (ARDL) served as the analytical technique, revealing significant effects of ATM, POS, and mobile application payment systems on economic growth in Nigeria.

Furthermore, Njoku et al. (2020) investigated the impact of electronic banking on Nigeria's economic growth spanning from 2009 to 2018 using quarterly data. The study relied on secondary data from the CBN Statistical Bulletin and the Nigerian Bureau of Statistics. The Vector Error Correction Model (VECM) was adopted, indicating that electronic banking significantly influenced the economic growth of Nigeria. The VECM results explained approximately 58.97% of the total variations in economic growth during the study period. The analysis revealed a significant relationship between electronic banking and Nigeria's economic growth. Notably, while Point of Sales, Internet Banking, and Mobile Banking individually had no significant effects, Automated Teller Machine exhibited a notable impact on economic growth during the considered period.

John (2019) conducted an analysis to assess the relationship between electronic payment systems and economic growth in Nigeria. Using monthly data spanning from 2012 to 2017, the Autoregressive Distributed Lagged regression (ARDL) method was employed to investigate the impact of various payment systems. The findings unveiled a significant positive correlation between electronic payment systems and economic growth, particularly in terms of real gross domestic product (GDP) growth. Notably, Automated Teller Machines were identified as having a positive and substantial impact on economic growth.

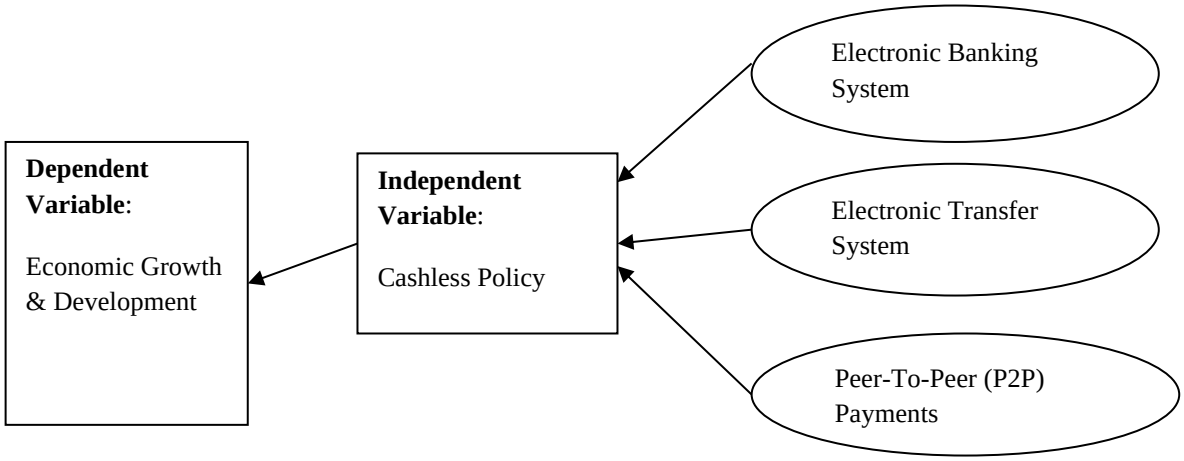
In a related study, Onwe (2018) examined the repercussions of Nigeria's cashless rural economy using a survey research approach and questionnaires as data collection instruments. Utilizing simple percentages, frequency tables, and the chi-square (X2) test to assess the hypothesis, the study discovered widespread acceptance and implementation of the CBN cashless policy in Ikwo Local government. The chi-square test further highlighted a robust and significant impact of the CBN cashless policy in the rural area of Ikwo Local government.

Additionally, Ogbeide et al. (2016) explored the influence of electronic banking on Nigerian economic growth, employing the Autoregressive Distributed Lag (ARDL) bond testing technique. Analyzing quarterly data from 2009 to 2014, the study examined economic growth (RGDP) in relation to various measures of e-banking, including Automated Teller Machines, Mobile Banking, Web Banking, Furthermore, the study by Ogbeide et al. (2016) explored the influence of electronic banking on Nigerian economic growth, incorporating the analysis of Point of Sales Terminal. Employing the Pairwise Granger Causality test to determine causality direction, the study unveiled a significant impact of e-banking on economic growth. Automated Teller Machines and Mobile Banking were found to positively influence growth, while Point of Sales and Web Banking had a negative impact. Moreover, a long-run relationship between e-banking and economic growth was identified, with e-banking Granger causing economic growth in Nigeria.

Siyanbola (2013) delved into the effect of cashless banking on the Nigerian economy, utilizing a descriptive research design and questionnaires for data collection. Employing the nonparametric chi-square tool for data analysis, the study revealed the dynamism in the financial system, as evidenced by the nature and quality of payment products. Similarly, Olorunse (2010) examined the impact of electronic banking in the Nigerian banking system, utilizing both primary data from questionnaires and secondary data from the CBN electronic banking guidelines and Unity Bank Plc's annual report. The study employed descriptive and inferential statistics, indicating that the electronic banking system in Nigeria has enhanced banking transactions by bringing services closer to customers.

Additionally, Marco and Bandiera (2004) argued that increased usage of cashless banking instruments enhances the effectiveness of monetary policy and asserted that the current level of e-money usage does not pose a threat to the stability of the financial system.

2.3 Conceptual Framework



Source: *Author's concept (2024)*

Conceptual framework on cashless policy and economic growth and development in Nigeria

3. Research Method

The study's research design is ex-post facto, selected to address the research questions outlined in the introduction section. Data collection involved the meticulous development and distribution of a structured questionnaire among respondents specifically chosen for this study. The target population consisted of ten selected deposit money banks located within the South West Zone. Purposive sampling methods were employed to select participants, resulting in a sample size of 200 consumers. Each of the ten banks received 20 questionnaires, and a total of 181 completed questionnaires were retrieved. This sampling technique was chosen due to the accessibility of data from the specified population.

The questionnaire was strategically crafted in a Likert-scale rating format, ranging from strongly agreed (4-point) to strongly disagreed (1-point). This format facilitates quantitative analysis by allowing researchers to assign numerical values to responses, thereby streamlining the process of data interpretation and analysis.

In specifying the model for the study, the independent variables were grouped into three namely: Electronic Banking System (EBS), Electronic Transfer System (ETS) and Peer-To-Peer (P2P) Payments. Economic Growth and Development (EGD) is assumed to be a function of Electronic Banking System, Electronic Transfer System and Peer-To-Peer (P2P) Payments. as formulated the following model.

$EGD = f(CP)$

This can be expressed clearly in equations 1 and 2.

$EGD = f(EBS, ETS, P2P)$……*Eq.* (1)

Equation (1) is expressed explicitly as:

$EGD = \beta_{0it} + \beta_1 EBS + \beta_2 ETS + \beta_3 P2P + \mu$……*Eq.* (2)

Where: EGD= Economic Growth and Development"; β_0= Intercept of the regression line; $\beta_{1\text{-}3}$ = Coefficient or slope of the regression line or independent variables; "Electronic Banking System" (EBS), Electronic Transfer System (ETS) and Peer-To-Peer (P2P) Payments; μ =Error term that represents other independent variables that affect the model but not captured.

4. Descriptive Statistics of Respondents

Table 4.1 Descriptive Statistics of Respondents

	EGD	EBS	ETS	P2P
Mean	3.500000	3.420000	3.200000	3.410000
Median	4.000000	4.000000	4.000000	4.000000
Maximum	4.000000	4.000000	4.000000	4.000000
Minimum	3.000000	3.000000	2.000000	2.000000
Std. Dev.	2.117373	0.754380	0.90034	1.009931
Skewness	0.093828	0.036356	0.474550	0.161745
Kurtosis	2.595522	3.326104	3.090308	2.617868
Jarque-Bera	19.98646	19.27289	41.01148	22.52231
Probability	0.143046	0.070065	0.056210	0.057323
Sum	6070.000	447.0000	440.0000	431.0000
Sum Sq. Dev.	45651.00	60.91000	86.00000	103.3900
Observations	181	181	181	181

Source: *Researcher's Compilations (2024)*

Table 4.1 furnishes descriptive statistics for four variables: Economic Growth and Development (EGD), Electronic Banking System (EBS), Electronic Transfer System (ETS), and Peer-To-Peer (P2P) Payments. The mean scores indicate a consistent level as they fall within the range defined by the minimum and maximum scores. EGD, with a mean value of 3.50, stands out as the variable with the highest average, surpassing EBS (mean: 3.42), ETS (mean: 3.20), and P2P (mean: 3.41).

The standard deviation, a measure of variation or dispersion, reveals values of 2.12, 0.75, 0.90, and 1.01 for EGD, EBS, ETS, and P2P, respectively. EGD exhibits the highest standard deviation, indicating greater variability in its values compared to the other variables. Skewness, which gauges the distribution's asymmetry, and Kurtosis, reflecting the "tailedness," affirm normal distribution for the variables. The skewness values, closely approximating zero, and kurtosis values within ±3 indicate normal distribution characteristics. The Jarque-Bera statistics stand at 19.98646, 19.27289, 41.01148, and 22.52231 for EGD, EBS, ETS, and P2P, respectively. Despite suggesting deviation from a normal distribution, the p-values exceeding 0.05 imply insufficient evidence to reject the null hypothesis of normality, affirming the variables' normality.

All variables share a common observation count of 181, providing a consistent and comprehensive dataset for analysis. Overall, the descriptive statistics underscore the central tendencies, variabilities, and distribution characteristics of the variables in preparation for further analysis.

4.2 Correlation Analysis

Table 4.2: Correlation Analysis

	EBS	EBS	ETS	P2P
EGD	1.000000			
EBS	0.073785	1.000000		
ETS	0.099453	0.088487	1.000000	
P2P	0.133615	0.060518	0.060815	1.000000

Source: *Researcher's Compilations (2024)*

Table 4.2 displays the Pearson correlation matrix for variables analyzed in the study, providing insight into the relationships between "Economic Growth and Development" "(EGD) and three key variables: Electronic Banking System (EBS), Electronic Transfer System (ETS), and Peer-To-Peer (P2P) Payments.

The correlation coefficient between EGD and EBS is 0.0738, indicating a positive but weak relationship. This suggests that as EBS increases, EGD tends to increase slightly. Similarly, the correlation coefficient between EGD and ETS is 0.0995, indicating a positive but still weak relationship. The mild positive association suggests that EGD and ETS tend to increase together, though the relationship is not very strong. The correlation coefficient between EGD and P2P is 0.1336, reflecting a slightly stronger positive relationship compared to EGD and EBS or EGD and ETS.
Moving on to the relationships between the independent variables, the correlation coefficient between EBS and ETS is 0.0885, indicating a positive but weak relationship. This suggests that EBS and ETS tend to increase together, but the relationship is not very strong. The correlation coefficient between EBS and P2P is 0.0605, signifying a positive and very weak relationship. The correlation between ETS and P2P is 0.0608, similar to the relationship between EBS and P2P. These coefficients indicate a very mild positive relationship between ETS and P2P.

In conclusion, all correlation coefficients are positive, indicating a tendency for variables to increase together. However, the coefficients are below 0.8, suggesting no significant problem with correlation. Nonetheless, the presence of multicollinearity, characterized by the existence of a linear relationship between two or more independent variables, should be considered. This underscores the need for careful interpretation and consideration of potential multicollinearity effects in the regression analysis.

4.3 Ordinary least square regression method

Ordinary least square regression method was employed to test the research objective one to three. The regression analysis was engaged to examine the relationship between cashless policy and economic growth and development in Nigeria.

Table 4.3: Estimation of Ordinary Least Square Results

Dependent Variable: EGD
Method: Least Squares
Date: 01/29/24 Time: 08:18
Sample: 1 181
Included observations: 181

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EBS	12.85575	2.971306	4.326634	0.0000
ETS	8.003040	2.001424	3.998672	0.0002
P2P	8.852025	3.055446	2.897130	0.0047
C	41.88069	5.066495	8.266206	0.0000

R-squared	0.774264	Mean dependent var	3.500000
Adjusted R-squared	0.770959	S.D. dependent var	2.147373
S.E. of regression	7.030910	Akaike info criterion	6.794682
Sum squared resid	4823.977	Schwarz criterion	6.898889
Log likelihood	-338.7341	Hannan-Quinn criter.	6.836857
F-statistic	270.6391	Durbin-Watson stat	2.009819
Prob(F-statistic)	0.000000		

Source: *Researcher's Compilations (2024)*

Table 4.3 provides the outcomes of an Ordinary Least Squares (OLS) regression analysis, where Economic Growth and Development (EGD) serves as the dependent variable, while Electronic Banking System (EBS), Electronic Transfer System (ETS), Peer-To-Peer (P2P), and a constant term (C) are independent variables.

The coefficients for EBS, ETS, and P2P are 12.85575, 8.003040, and 8.852025, respectively, with a constant term (C) of 41.88069. Notably, the coefficient for EBS (12.85575) implies that, on average, a one-unit increase in EBS correlates with an approximately 12.86-unit rise in EGD. The associated t-Statistics for EBS (4.33), ETS (3.99), and P2P (2.90) gauge the statistical significance of the estimated coefficients, with higher absolute t-statistic values indicating

stronger evidence against the null hypothesis (coefficients equal to zero). All p-values for the coefficients are very small (close to zero), signifying statistical significance. Consequently, the study rejects the null hypothesis regarding the coefficients being equal to zero.

The R-squared and Adjusted R-squared values stand at 0.7743 and 0.7710, respectively. These metrics denote the proportion of variance in the dependent variable (EGD) explained by the independent variables. In this context, approximately 77.43% of the variability in EGD is elucidated by the regression model. The F-statistic, with a value of 270.6391 and a Prob(F-statistic) of 0.0000, suggests that at least one independent variable is significantly related to the dependent variable. The Durbin-Watson statistic, at 2.009819, indicates the absence of significant autocorrelation.

In summary, the regression results affirm the statistical significance of the model, indicating that the included independent variables (EBS, ETS, P2P) significantly influence the dependent variable (EGD). The relatively high R-squared value underscores a good fit of the model to the data.

5. Discussion of Findings

The results of hypothesis one aligns with expectations, revealing a significant positive relationship between Electronic Banking System (EBS) and Economic Growth and Development (EGD). The obtained P-values (0.000) and T-statistic (4.33) were below the 5% significance level, leading to the rejection of the null hypothesis in favor of the alternate hypothesis. Consequently, an increase in EBS correlates with a 12.86-unit rise in EGD in Nigeria. This outcome concurs with the findings of Ogbeide et al. (2016) and is consistent with Njoku et al.'s (2020) research. The rationale behind this finding may stem from the fact that Electronic Banking Systems enhance the efficiency of financial transactions, resulting in faster and more secure fund transfers. This efficiency minimizes transaction costs for both businesses and individuals, thereby contributing to overall economic growth. Additionally, the shift from cash to electronic transactions promotes transparency, reduces reliance on the informal economy, and fosters economic development.

Moving to hypothesis two, the findings demonstrate a significant positive relationship between “Electronic Transfer System” (ETS) and “Economic Growth and Development” (EGD). With P-values (0.000) and T-statistic (3.99) below the 5% significance level, the alternate hypothesis is accepted, indicating that an increase in ETS leads to an 8.003-unit addition to EGD in Nigeria. This outcome is in line with the works of Nwala et al. (2023) and John (2019). The observed positive relationship can be attributed to the security features embedded in electronic transfer systems, which mitigate risks associated with cash transactions. This reduction in risks fosters confidence among businesses and consumers, encouraging greater economic activities and investments. Furthermore, the positive relationship may reflect technological advancements in the financial sector, making electronic transfer systems more user-friendly, secure, and efficient, thereby promoting greater adoption and usage.

For hypothesis three, the findings reveal a significant positive relationship between Peer-To-Peer (P2P) Payments and “Economic Growth and Development” (EGD)” in Nigeria. The P-values (0.005) and T-statistic (8.852) were below the 5% significance level, leading to the rejection of the null hypothesis. This implies that an increase in P2P payments results in an 8.852-unit rise in EGD in Nigeria. This finding is consistent with the works of Andrea et al. (2022) and Njoku et al. (2020) but contradicts the findings of Ogbeide et al. (2016). Possible reasons for this relationship include government policies and initiatives supporting the growth of digital payment systems. Regulatory frameworks that promote a secure P2P payment ecosystem can enhance confidence and adoption. Additionally, P2P payment systems can facilitate access to capital for small businesses and individuals, injecting additional capital into the economy and supporting economic development.

6. Conclusion and Recommendation

This study investigated cashless policy and economic growth and development in Nigeria. The study concluded that there are significant positive associations between cashless policy and “economic growth and development” in Nigeria. Based on the positive relationships observed between Electronic Banking System (EBS), “Electronic Transfer System” (ETS), Peer-To-Peer (P2P) Payments, and Economic Growth and Development (EGD) in Nigeria, it recommends that government should implement programs to enhance digital financial literacy among the population to ensure effective utilization of electronic banking systems, electronic transfer systems, and peer-to-peer payment platforms. It should invest in and improve digital infrastructure to support seamless and secure electronic transactions. Government should involve in enhancing internet connectivity, promoting the development of digital

payment platforms, and ensuring 'cybersecurity' measures are in place as well as continuously review and update regulatory frameworks to keep pace with technological advancements.

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