

## **Mediating Effect of Access to Electronic Payment System on Currency Redesign Policy and SMEs Performance in Northeast-Nigeria**

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### **Abstract**

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This paper investigated the mediating role of access to electronic payment system (APS) on the relationship between currency redesign policy (CRP) and the performance of SMEs (PERF) in selected states (Adamawa, Bauchi, Gombe, and Yobe) in north-eastern Nigeria. The study used quantitative research approach and a multi-stage sampling technique was used to generate 300 responses using a research questionnaire. The partial least square structural equation modeling (PLS-SEM) technique was used to analyze data while the research model was examined using the disjointed two-stages approach. The study found a positive and significant mediating effect between CRP and PERF through APS. Equally, the direct paths were all found to be positive and significantly related. Meaning that not only does CRP affect PERF directly, but it also has an indirect effect on PERF through APS. This provided support for linking CRP and PERF through APS, and CRP and PERF, which doubles for validating the research model on the reflective-formative basis. Therefore, businesses are encouraged to utilize the usefulness of APS for doing transactions, which will double for achieving better PERF under the current CRP regime. This will have implication as the government is reintroducing the CRP as one of the measures of addressing inflation in Nigeria. On this note, the study concluded that APS is the most crucial factor in the implementation of CRP. Although, this cannot be generalized due to the concentration of the study in one region of the country, but future studies are encouraged to extend the scope of research to establish a basis of generalization.

**Keywords:** *Currency Redesign Policy, Access to Electronic Payment System, Small and Medium Enterprises (SMEs), Performance of SMEs.*

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### **Background to the Study**

In Nigeria, the federal government is principally responsible for providing policy direction for any economic development in the country (Abdullahi, Abdulkadir & Yunusa, 2022). The cashless policy initiative of the Central Bank of Nigeria (CBN) has witnessed significant changes in the economic atmosphere. The new policy on currency/Naira redesign for denominations (e.g., ₦200, ₦500, ₦1000) and its immediate replacement with the existing notes in same values, was meant to accelerate the full implementation of the cashless policy, and this has raised a lot of turmoil in the country. According to Emejo (2023) for businesses, the policy will create faster transaction and access to capital, reduce revenue leakage, and cash handling costs. Some socio-economic factors driving the redesign of the Naira include lowering inflation, reducing counterfeiting, controlling the amount of money in circulation, and thwarting the payment of ransom for kidnapping and other forms of insecurities. It was believed that 85% of the country's cash is hidden away in houses outside of the conventional banking system, and this has severe consequences on the economy (Pillah, 2023). Nonetheless the policy initiative according to Emei- (2023) has helped to reduce the incidence of kidnapping and banditry because of the restrictions placed on cash withdrawals.

However, Small and Medium Enterprises (SMEs) performance has contributed to the establishment and sustainability of the nation's socio-economic development (Desiyanti, Husin, Kassim, & Elvira, 2022). The SMEs sub-sector absorbs more than 80 percent of job opportunities, facilitates primary production and value addition, enhances capacity utilization and improves capital per head (Ahmed & Ojong, 2014). Yet, SMEs were identified as the main victim of the currency redesign policy as they struggle with challenges such as poor infrastructure, internet connectivity failure, inflationary pressures, high transaction charges by the point of sales (POS) operators, and some failed transactions among others (Obi, 2023; Nwachukwu & Nwogu, 2022). The current stage of the policy has changed market operations for the SMEs. This has created both opportunities and challenges for the first movers and the laggards, respectively. One of the key features of the policy is the displacement of conventional money (Okoh, 2023). This process creates relevant obstacles that are derived from externalities and network effects. Even though there is a transformation of businesses from place to space, the dynamic and forward-looking SMEs must adjust to the system by upgrading and adopting the use of new technologies to enhance business performance.

Globally, electronic payment system have become the major gateway for financial transactions facilitating business transactions (Ogunmuyiwa & Amida, 2022). Emefiele (2022), opined that the federal government of Nigeria is enthusiastically investing in e-payment methods to meet the global trend. The new currency redesign policy strives to encourage more electronic-based transactions that provides transparent, secure, affordable and effective payment delivery for goods and services. Ogunmuyiwa and Amida (2022) opined that electronic payment instruments increased competition due to adopting new skills and technology thereby increasing profitability and growth of business. It emerged that access and use of electronic payment instruments among SMEs in Nigeria is still low and a major concern for achieving the currency redesign policy.

However, this transformation in the financial landscape has significant effects on individuals, households, businesses, and the nation in general (Giwa, 2023). The quick adoption of the currency redesign policy has harmed the public and mostly the micro-SMEs (MSMEs) sub-sectors. Studies have found that both individuals and businesses were expressing worries over the prevailing hardship caused by the policy. For instance, Obi (2023) found that the policy exacerbated hardship and suffering among the citizenry; undermines, and drastically reduced the performance of SMEs. For example, many SMEs in the manufacturing sector buy raw materials from rural areas that are under-banked, other issues includes high cost of living, high energy cost, multiplicity and regressive tax system, long queues in the banking halls, hyperinflation of commodities etc. This made the government reverse the initial redesigning initiative by allowing the old note to recycle concurrently with the new notes. On this note, understanding the impact of the suspended currency redesign policy on SMEs is important because it will offer empirical evidence that will not only influence scholarly debate but will inform policies and programmes on how to re-strategize and come up with the best policy roadmap to achieve the full implementation of the cashless and naira redesign policy in Nigeria.

### **Problem Statement**

The CBN in line with the federal government's information and communication technology (ICT) reform policies initiated the cashless policy in 2011, which took effect on 1st January 2012 to curtail the problems and challenges of Nigeria's cash-based economy. However, the rate of its adoption by the public was very slow. The country's payment infrastructural system, illiteracy, cyber security etc., were identified to have delayed the full implementation of the policy. Until recently in December 2022, the CBN Governor, Godwin Emefiele, announced that the payment system in Nigeria has significantly improved and is now among the best six in the world (Emejo, 2023). Thus, to ensure full implementation of the cashless policy, the CBN introduced new naira notes to change the existing high denominations of the currency, and fixed January 31, 2023 as the last date for such being a legal tender. In addition, it reduced the cash withdrawal limit of N500,000.00 for individuals and N3,000,000.00 for corporate customers to N20,000.00 and N100,000.00 respectively (Emefiele, 2022). This to enabled people to deposit the entire cash at their disposal in bank and begin to access them electronically.

However, many individuals and businesses, especially SMEs expressed worries over the prevailing hardship caused by the policy (Obi, 2023). The new naira notes were grossly short in supply and not all citizens have ease of access to these funds. The currency redesign policy has denied SMEs and their customers enough cash to make purchases. For example, many SMEs dealing in local food markets and livestock buy their commodities from rural areas that are under-banked. This pauses challenge for conducting transactions between depositors of money in the banks and the merchants that trade conventionally using cash at hand. Moreover, some businesses are skeptical of using the e-payment platforms to boycott chances of becoming victims of cybercrime. This also pauses challenge to the effective implementation of the policy, considering that the system requires effective and secured payment infrastructures, which should be accompanied with a good knowledge of using ICT

and the internet among the SMEs operators. Therefore, it is on this note that this study was designed to assess the relation between currency redesign policy (CRP) and SMEs performance (PERF) through the indirect effect of access to electronic payment system (APS).

### **Objectives of the Study**

Specifically, the study would:

- 1) Determine the relationship between currency redesign policy and performance of SMEs in Northeast Nigeria.
- 2) Examine the relationship between currency redesign policy and access to electronic payment system in Northeast Nigeria.
- 3) Analyze the relationship between access to electronic payment system and performance of SMEs in Northeast Nigeria.
- 4) Investigate the mediating effect of access to electronic payment system on the relationship between currency redesign policy and performance of SMEs in Northeast Nigeria.

### **Literature Review**

#### **Currency Redesign Policy**

The Currency Redesign Policy is a method of suspending the use of old currency notes with an immediate swap to a new currency note by the monetary authorities of a country. From the literature, the term “currency redesign” can also be referred to as demonetization that is the process where governments are stripping a currency unit or the real money as a legal tender, usually by replacing it with a new currency (Panah & Muniraju, 2020). The cash withdrawal limit is an integral part of currency redesign meant to reduce the amount of currency circulating outside the banking system.

According to Mohammed and Abdulmajeed (2022) Naira redesign policy was typically carried out to prevent naira counterfeiting and control the amount of money in circulation by lowering inflation. In a newspaper article Usim et al. (2023) reported “that the apex bank said the redesigned naira notes would be rationed to encourage the public, regardless of location and social ranking, to use digital platforms for transactions”. Nwachukwu and Nwogu (2022) opined that currency redesign will make money available for business transactions, and the availability of money will encourage consumers' patronage of goods and services offered by businesses, the increase in patronage will result to sales growth and customer's ease of patronage encourages business profitability. However, studies by Panah and Muniraju (2022) found that currency redesign does not have impact on controlling evasion of tax and illegal investments of counterfeit money and the policy adversely affects regular businesses in the country. Similarly, the result of Olujobi (2022) showed that policy on Naira redesign is inflationary induced and causes deviation of actual inflation and money supply from targeted levels to excessive supply of money. This showed that there is a relationship between currency redesign policy and business performance, and thus, the following hypothesis (H1) is stated “there is a relationship between currency redesign policy and performance of SMEs in North Eastern Nigeria.

### **Access to Electronic Payment System**

According to Osazevbaru and Yomere (2015), they described electronic payment as a system that allows users to make payment using devices that are embedded with the Global System of Mobile communication (GSM). Thus, e-payment system is described as a financial platform that pairs the customer and the trader through an electronic medium (Chemtai, 2016). The payment system can be used for various purposes, including digital transactions, bank transfers, internet banking, POS transfers and credit/debit cards (Adu, 2016). Although, access to electronic payment systems is a critical factor for the success of the currency redesign and SMEs performance. Access to e-payment system has enabled organizations to improve efficiency, reduce costs, improve customer service, and innovate business processes (Pillah, 2023). Studies have indicated that access to these e-payments could influence business creation and thus improve SMEs' performance. Zango (2019) revealed that entrepreneurs could use software to transform customer service by utilizing call routing systems or payment automation. According to Xena and Rahadi (2019), the extent to which electronic payment is adopted will be determined as to how far it is on supporting SME payment system. Electronic transactions can also improve business productivity by empowering businesses to track all transactions faster. With the high number of SMEs as much as 85 percent of Nigeria's population and contributing around 60% of GDP, this will undoubtedly encourage Nigerians economic growth. This shows that there is a relationship between currency redesign policy and access to electronic payment system. Therefore, the following hypothesis (H2) was stated "there is a relationship between currency redesign policy and access to electronic payment system in Northeastern Nigeria.

### **Performance of SMEs**

Small and Medium Industries Enterprises Investment Scheme (SMIEIS) describes SME as an enterprise with a maximum asset base of N200 million, excluding land and working capital, and a workforce of 10 to 300 people. SMEs play a key role in industrial economies around the world, generating employment and value added and contributing to innovation (Abdullahi, *et al.*, 2022). This segment is an integral part of Nigerian economy in terms of size of the enterprise, varieties of product, service produced, and its contribution to national growth indices. SMEs not only provide jobs, but they also aid in industrializing rural and underdeveloped regions, minimize regional disparities, and ensure a more equitable distribution of national income (Singh, *et al.*, 2023).

Thrikawala (2011), defines SMEs' performance as an outcome of SMEs' activities or investment in one term. SMEs performance also refers to the ability of an entity/business/company to produce results within a predetermined dimension in relation to a target. This performance is also the result of the company's activities to gain market and financial-oriented profits (Harash, Al-timimi, & Alsaadi, 2014). Achieving an optimum level of performance is essential for the survival and growth of SMEs. There are several concepts that are used in measuring firm performance, i.e., operational performance and financial performance (Minna, 2014; Popa, Soto-Acosta, & Conesa, 2017). Operational performance is usually measured as a set of several dimensions that reflect the internal operations of an organization in terms of the elements of the product, process quality, efficiency, and

productivity. While financial performance is measured through measures that include profitability, return on investment, and share price (Minna, 2014). Sampe (2022) found that a positive performance of SMEs in an area will certainly have implications for the availability of jobs and of course will reduce the number of existing unemployed. In this study, SMEs performance will be measured through sales growth, customer satisfaction and financial performance based on profitability. This shows that there is a relationship between access to electronic payment systems and the performance of SMEs. Thus, the following hypothesis (3) was stated “there is a relationship between access to electronic payment system and performance of SMEs in Northeastern Nigeria”.

### **Currency Redesign policy, access to electronic payment system and SMEs Performance**

The Nigerian business environment is becoming increasingly tougher for small businesses as they struggle for survival. High cost of foreign exchange, taxation, shortage power supply, and insecurity have forced many SMEs to shut down operations. According to the chief executive officer (CEO) of the Centre for Promotion of Private Enterprise (CPPE) Dr. Muda Yusuf, confirms that regulatory pressures, harsh operating environment, and foreign exchange volatility have forced over 1.9 million SMEs to exit the Nigerian business landscape between 2018 and 2020. Recently, over 41.4 million SMEs are struggling financially to survive the headwinds of inflation, surging food prices, and dwindling income have invariably affected SMEs performance (Okoh, 2023). Nonetheless, SMEs are businesses that can survive shocks, as evidenced by the time of the Covid-19 crisis where many large-scale firms were drastically affected, but to some extent, some SMEs were able to survive and could even be said to be a savior belt from the impact of the crisis (Sampe, 2022).

One of the key features and effects of the currency redesign policy and cash swap is the shortage of cash in circulation. The cash shortage was having a devastating effect on businesses, as many entrepreneurs are finding it increasingly difficult to access cash to purchase goods, pay workers and transact business (Okoh, 2023). The situation has stopped local SMEs farmers even to pay transporters to move their farm goods and products from the farm to the town as transporters need to be paid in cash. Usim et al. (2023) reported that the situation has threatened the economy as businesses were not thriving.

The Nigerian government has given the public a limited period to bring their old notes and deposit them in the banks without exchanging them with the new currency. This has denied many SMEs access to their funds. Ibrahim and Zameer (2018) opined that MSMEs prefer to do all its transactions with conventional mode; sudden move by the currency redesign policy severely affected the MSME sector. Economic reform without considering MSMEs will result in negative impacts, hence, they act as a mediating role in economic growth (Ibrahim & Zameer, 2018). This contributed some of the reasons Singh et al. (2023) opined economic changes would have a detrimental impact on the economy if SMEs were not present. Therefore, to achieve targeted economic development, the SME segment should be developed and supported accordingly.

Okoh (2023), affirmed that the crippling of business transactions at the distributive trade end amid the currency swap crisis would not only undermine the trade and agricultural sectors but would have a knock-on effect on the manufacturing value chain and the services sectors. According to the president and chairman of governing council of the Nigerian Association of Small and Medium Enterprises, (NASME), Abdulrashid Yarima said, the manufacturing world has not yet recovered from COVID-19, and the rising cost of inflation has caused an increase in the cost of input which also have a multiplier effect on the manufacturers' cost of output.

Similarly, foreign exchange (FX) volatility is another factor that has continued to limit the progress of SMEs as many are importers of either finished products or inputs. Okoh (2023) opined that SMEs in Nigeria were already facing existential threats from a struggling economy but have plummeted with the ripple effects of the new currency redesign policy and cash crunch crisis. Succinctly, the unbanked SMEs in Nigeria did not foresee the current paradigm shift of the CBN, which, therefore, has largely exposed the unbanked SMEs to uncertain situations (Okoh, 2023). The policy has hitherto brought to fore the awareness and need for the SMEs who are yet unbanked to now see reason to open bank accounts, access to e-payment (e.g. online/mobile banking) and be able to perform transactions online.

It is also worth noting that SMEs in the northeast region are not immune to the challenges in their day-to-day operations; thus, a study into the influence of currency redesign policy on the performance of SMEs in northeast Nigeria is required to address the SMEs adjustment to this shift. This showed that there is a relationship between currency redesign policy and performance of SMEs through access to electronic payment system. Therefore, the hypothesis is stated as “there is a mediating effect of access to electronic payment system on the relationship between currency redesign policy and performance of SMEs in Northeastern Nigeria”.

### **Theoretical Review**

The theories that informed the study are classical monetary theory, financial inclusion theory and technological acceptance model.

#### **Classical Monetary Theory**

The classical monetary theory was suggested by Keynes in 1936 to explain the relationship between monetary policy and economic variables. The theory was established on the foundation of the Fisher equation, which has elements such as money supply, the velocity of money, average price level and volume of transactions in an economy (Friedman, 1956). Therefore, the classical monetary theory states that money supply in an economy will significantly impact the velocity of money (the rate at which money changes hands in an economy), and this will in turn affect the average price level and, eventually, the volume of transactions in an economy (Keynes, 1936).

Keynesian theory also serves an explanation of the monetary theory of production. According to this view, money has a significant influence on the economy's production

choices. Money not only promotes trading but also controls all aspects of the economy (Pandev & Yadav, 2023). The Nigerian economic structure is said to have been somewhat disrupted following the currency redesign policy (Okoh, 2023; Usim et al., 2023). If the policy alters people's behavior in holding or spending money, it can impact the velocity of money. Changes in the velocity of money could affect the frequency of transactions in the economy, influencing SMEs' cash flows and overall business performance.

In the Nigerian context, majority of SMEs are from the unorganized sector and were more impacted than the organized. Unorganized consist of consumers and firms that are mostly unconnected and do not transact through formal credit markets or electronic payment systems and major part of their transactions are done through cash, facing severe fall in demand for their produce and supply of labor due to the currency redesign policy (Pillah, 2023; Usim et al., 2023). It was also reported that many of the SMEs were forced to shut down due to severe lack of currency crisis. The businesses and units that closed either migrated to another industry where transactions were more convenient or stayed closed, forcing those business owners to sell their services on the job market (Pandev & Yadav, 2023). Classical economists often consider the long-run equilibrium of the economy. If the currency redesign policy leads to short-term disruptions, classical theory would analyze whether the economy is expected to return to a stable, long-term equilibrium. Understanding the long-term effects on SMEs and the overall economic structure is crucial for policymakers.

It's important to note that while the provided information emphasizes the Keynesian perspective and critiques the currency redesign policy, incorporating classical monetary theory provides a more comprehensive understanding. A holistic analysis, considering both Keynesian and classical viewpoints, can offer insights into the multifaceted effects of the policy on SMEs and the broader economy in Nigeria.

### **Technological Acceptance Model**

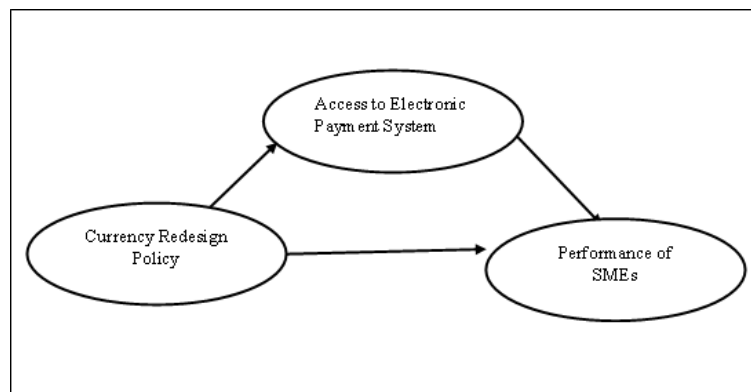
The technological acceptance model was propounded by Fred Davis in 1993. The theory explains how individuals accept new technology and its relevance to the economy. In essence, it shows how a user of a proposed technology welcomes and adapts to a new technology. According to the theory, two beliefs determine the complete acceptance of a technology, i.e., perceived usefulness and perceived ease of use. Perceived usefulness is a factor that affects user's acceptance because it is based on how capable the new technology will help improve job performance. The technology must be capable of producing better result and must also be able to generate a positive performance. As for perceived ease of use, Davis (1989) defined it as how easy it is for users to make use of new technology. It means that the ability to employ the new technology should be effortless. Prior to the implementation of the cashless policy, Nigeria was a huge cash-based economy. In order to increase the effect of the policy on citizens, the people have to believe that the policy will be easy to use and also result in positive performance thereby, leading to economic growth.



### Conceptual Framework

Sekaran (2003) defined conceptual framework as a conceptual model of how one theorizes or makes logical sense of the relationships among the several factors that have been identified as important to the problem. Figure 1 presents the conceptual framework of the study showing the relationship between the Performance of SMEs as the dependent variable, currency redesign policy as the independent variable and access to electronic payment as the mediating variable.

**Figure 1:** Conceptual framework



### Empirical Review

Aroghene and Akpoyibo (2023) investigates three objectives of Naira swap and their impact on the performance of SMEs in Delta state. The study adopted descriptive statistics tools using tables, simple percentage, frequency count and correlation to analyze his data. The study found that the naira swap objectives of curbing naira hoarding and restraining counterfeiting had a strong positive significant impact on the performance of SMEs while the objective of curtailing inflationary pressure appeared to have weak negative impact on the performance of SMEs in Delta State.

Ogbonne (2023), examined the impact of CBN cash withdrawal limit and currency redesign monetary policies on the operation of young Point of Sale (POS) merchants in Enugu State, Nigeria. The study was based on descriptive survey using percentages, mean and standard deviation and multiple regression method. It was found that both cash withdrawal limit and currency redesign policies significantly impact POS operations, the currency redesign impact more on their operations.

Mohammed and Abdulmajeed (2022), investigated impact of naira redesign and monetary policy on Nigeria economy. The method of analysis applied are summary statistics (such as mean and standard deviation), regression model, unit root test and cointegration analysis. The regression model demonstrates a significant relationship between GDP and monetary policy. The model also demonstrates that the exchange rate and interest rate coefficients have a positive and significant impact on Nigeria's GDP, whereas the inflation rate coefficient has a negative and significant impact.

Nwachukwu and Nwogu (2022) investigated the marketing implication of the policy of Naira redesign on businesses in Port Harcourt. The study utilized a quantitative research design method under which the cross sectional survey method was adopted. The study found that Naira redesign will make money available for business transactions, and the availability of money will encourage consumers' patronage of goods and services offered by businesses, the increase in patronage will result to sales growth and customers' ease of patronage encourages business profitability.

Kwabena et al. (2019) examined the effect of the digital payment system on SME's performance. The study used a technology organizational environmental framework to investigate the effects of the digital payment system. This study used a closed-ended self-administered questionnaire to collect data. Data collected from September 2019 to November 2019. The respondents of the study were executives and owners of SMEs. PLS-SEM approach was utilized to analyze the data. Findings of the study include significant effects of technology, organizational, environmental, and use of digital payment systems on SME's performance. This study helps the owner of SME's to execute the digital payment system to foster trade and relationship with stakeholders.

Frimpong, Gloria, and Agyapong (2022) examined the mediating influence of access to digital finance on SMEs' financial literacy and performance. The study employed the quantitative research approach. Using the PLS-SEM analytical technique. The study found a positive and significant link between financial literacy, access to digital finance, and SME performance. Result show that the relationship between financial literacy and SMEs' performance is mediated by access to digital finance. Findings from these results show that having access to digital finance can improve the relationship between financial literacy and SMEs performance when adopted. Obi (2023) examined e-payment administration and the growth of small and medium enterprises (SMEs) in Southeast Nigeria. Descriptive survey design in pursuit of central tendencies, mean, and deviations was used for the research. Results from the study from that inadequate supply of e-payment facilities and lack of IT skills for managing e-payment transactions among majority of the respondents. In addition, ineffectiveness of e-payment system in the management of SMEs with significant negative impact on the performances of SMEs in southeast Nigeria.

Panah and Muniraju (2021) an exploratory study on efficacy of demonetization in India policy rollout on demonetizing old currency. The study adopted descriptive statistics and ordinal regression analysis and found that there is not much impact of demonetization on controlling evasion of tax and illegal investments of black money, and the policy adversely affects regular business in the country. The study by Ogundupe (2022) examined the impact of CBN monetary policy on the survival SMEs in Nigeria. The findings indicates that lending interest rates are negatively correlated with SME growth, money supply, commercial bank loans and advances, and bank reserves are positively correlated with SME growth. The unit-root test, and descriptive statistics was used to analyze the data collected. Co-integration testing was done to confirm the outcome of the unit root test and to determine whether there was a long-term relationship between the variables. Majorly all the literature papers reviewed

were carried out in the southern part of Nigeria with few from other countries. The researchers observed that most of the literatures reviewed focused largely on investigating relationship between currency redesign policy and monetary policy with effects on the economy. Only few researches were conducted on investigating the effect of currency redesign policy on SMEs with different conclusions and results. Thus, this study seeks to improve on the past studies by the incorporation of access to electronic payment mechanisms as a mediating variable in the research model to determine the actual influence of currency redesign policy on the performance of SMEs in northeast, Nigeria.

### **Methodology**

The study used quantitative research approach based on a cross-sectional descriptive survey. The unit of analysis are SMEs operating in Adamawa, Bauchi, Gombe, and Yobe states in northeast Nigeria. The data collection was done through questionnaire survey. The questionnaire consists of four parts. The first part collected data through a semi-structured questions on the demographics characteristics such as gender, age, type of business, position in the business and use of e-payment platforms. The other three parts collected data on the study variables such as currency redesign policy (CRP), access to electronic payment system (APS), SMEs Performance (PERF) measured by sales growth, customer satisfaction, and increased profitability through closed-ended questions. A total of 500 questionnaires were printed and distributed among the various groups of respondents, out of which 300 questionnaires were generated through a multi-stage sampling technique. All the returned questionnaires were checked and considered appropriate responses for the study. The questionnaire administration was done through a personal approach (face to face) alongside three (3) well-trained research assistants who understood and could interpret the indigenous languages of the respondents. The study employed SPSS to assess the descriptive statistics for demographic data of the respondents while PLS-SEM technique was used to analyze data while the research model was examined using the disjointed two-stage approach.

### **Results of the Study**

The demographic information of the respondents was sorted using Statistical Package for Social Sciences (SPSS 26) software. The descriptive statistics showing the frequencies and percentages of the respondents are tabulated in Table 1. It was found that most of the respondents were male, and majority aged between 18 to 35 years old. However, these individuals who are mostly the owners were also found to be predominant using the e-payment platform for their trading activities. Further information on the respondents can also be seen in Table 1.

**Table 1:** Demographic Information

S/N	Variable	Frequency	Percentage
1.	<b>Age</b>		
	18 - 35 years	234	78
	36 - 50 years	55	18.3
	Above 50 years	10	3.3
2.	<b>Gender</b>		
	Male	240	80
	Female	60	20
3.	<b>Type of business undertaking</b>		
	Services	74	24.7
	Production	62	20.7
	Trading	147	49.0
	Arts and Craft	9	3.0
	Others	8	2.7
4.	<b>Position in the Business</b>		
	Supervisor	71	23.7
	Owner	101	33.7
	Manager	58	19.3
	Employee	66	22.0
5.	<b>Do your business uses e-payment platforms</b>		
	Yes	227	75.7
	No	71	23.7

**Source:** SPSS Output (2023)

### Assessing the Measurement Model

The measurement model was assessed using the recommended disjointed two-stages approach elucidated in Sarstedt et al. (2019). This includes checking the factor loadings, reliability, convergent validity, collinearity between indicators, significance of weight, and discriminant validity using the heterotrait-monotrait (HTMT) ratio. As presented in Table 2 all construct factor loading have met the criteria for loading (i.e.,  $\geq 0.708$ ) when using the criteria in "Hair et al. (2019)". The reliability of the indicators was also found above 0.7 and is considered acceptable when using the criteria in Ali et al. (2018). The convergent validities of the indicators assessed via the average variance extracted (AVE) was also found to be greater than 0.5 and is considered satisfactory when employing the criteria in "Hair et al. (2019)".

The HTMT ratios for assessing discriminant validity among indicators were found to be good and below 0.9 at a significant level of p-value less than 0.05 when using the technique in Henseler et al. (2015), Kock (2020). The collinearity between indicators assessed via the variance inflation factors (VIF) for CRP (VIF = 2.438), APS (VIF = 2.831), and PERF (VIF = 2.179) were all found below the ideal 3.3 and conservative value of 5.0 when using the criteria in Kock (2020). Based on these evidences, it can deduce that the research model has satisfied the measurement model criteria.

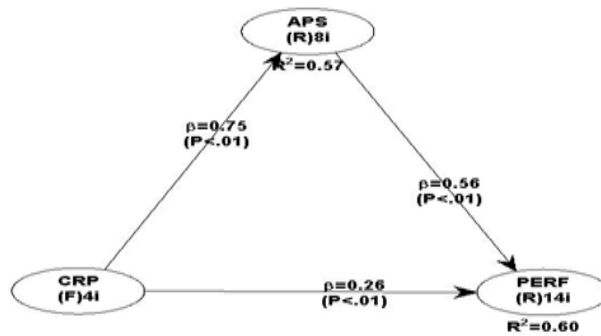
**Table 2:** Reliability and Convergent Validity

Construct	Item	Loadings	Cronbach's Alpha	Rho_A	Composite Reliability	AVE
CRP	CRP3	0.763	0.795	0.800	0.867	0.620
	CRP6	0.773				
	CRP7	0.818				
	CRP8	0.794				
APS	APS1	0.804	0.895	0.899	0.916	0.579
	APS2	0.727				
	APS3	0.732				
	APS4	0.806				
	APS5	0.718				
	APS6	0.733				
	APS7	0.818				
	APS9	0.740				
	PFSG	PERF1				
PERF2		0.808				
PERF3		0.850				
PERF4		0.804				
PERF5		0.819				
PFCS	PERF6	0.800	0.854	0.857	0.895	0.631
	PERF7	0.786				
	PERF8	0.789				
	PERF9	0.765				
	PERF10	0.831				
PFIP	PERF13	0.805	0.814	0.835	0.878	0.643
	PERF14	0.755				
	PERF15	0.848				
	PERF16	0.797				

**Source:** PLS-SEM Output

### Assessing the Structural Model

The structural model presented in Figure 2 was validated using the techniques recommended in "Hair et al. (2019) and Sarstedt et al. (2019)". This includes assessing collinearity between constructs, significance of the hypothesized paths, the explained variance using the coefficient of determination ( $R^2$ ), effect size ( $f^2$ ) for direct and indirect effects, and also, the predictive relevance ( $Q^2$ ) of the research model.



**Figure 2:** Structural model

**Note:** CRP = Currency redesign policy, APS = Access to electronic payment system, and PERF = Performance of SMEs.

Like in the measurement model, the structural model in Figure 2 was also found to be free from issues of multicollinearity because the average full collinearity (AFVIF = 2.619) was found below the conservative value of 5.0 when applying the criteria in "Hair et al. (2019). Equally, the hypothesized direct effect i.e., CRP APS ( $\beta = 0.75, p < 0.05$ ), APS PERF ( $\beta = 0.56, p < 0.05$ ), CRP PERF ( $\beta = 0.26, p < 0.05$ ) and the indirect effect i.e., CRP APS PERF ( $\beta = 0.42, p < 0.05$ ) were all found to be positive and significantly related. Implying that the mediating effect was a complementary type of mediation when applying the criteria of "Aguinis et al. (2017), and Zhao et al. (2014). Further information on the paths analysis can be seen in Table 4.

In addition, Table 3 presents the outcome of the inner model's prediction through the explained variance ( $R^2$ ) between the latent variables analyzed i.e., CRP APS ( $R^2 = 0.566$ ), CRP PERF ( $R^2 = 0.599$ ) and it was found that the research model has a moderate level of explained variance when applying the techniques in Cohen (1992). Similarly, the predictive relevance ( $Q^2 = 0.596$ ) of the research model can be considered large when applying the criteria in —Hair et al. (2017). Thus, implying that the model has a large predictive relevance of the PLS paths. More so, the effect size ( $f^2$ ) for the direct relationships between CRP APS ( $f^2 = 0.566$ ), CRP PERF ( $f^2 = 0.175$ ), and APS PERF ( $f^2 = 0.424$ ) was found to be large, medium, and large, respectively. While for mediation ( $f^2 = 0.286$ ), it was found to be a medium effect when using the criteria in Cohen (1992), Kock (2020).

**Table 3:** Coefficient of determination ( $R^2$ ) and predictive relevance ( $Q^2$ ) of the research model

Latent Variable	APS		PERF
	Coefficient		
CRP	$R^2$	0.566	0.599
	$Q^2$	0.564	0.596

**Source:** PLS-SEM Output

### Assessing the Mediating Effect

The indirect effect was analyzed using the recommended criteria in Hayes and Scharkow (2013). Table 4 presents the structural model's output and the estimated values showing the presence of mediation. It was discovered that the indirect path between CRP → APS → PERF was found to have a positive and significant relationship ( $\beta = 0.423, p < 0.05$ ). Therefore, with the understanding that the direct effects were also found to be positive and significant, which is the same result obtained in the indirect path, the mediation result is considered to be complementary when employing the techniques in —"Hair et al. (2017), Zhao et al. (2014). As an implication, the initial hypothesis that states there is a mediating effect of access to electronic payment system on the relationship between naira redesign policy and performance of SMEs will be accepted.

**Table 4:** Path analysis Result and Hypothesis Testing

Paths	Path Coefficients	Standard Error	t-value	p-value	95% Confidence Interval	Effect Size	Decision
CRP → APS	0.752	0.028	15.723	< 0.001	[0.659 0.846]	0.566	Supported
CRP → PERF	0.258	0.051	5.024	< 0.001	[0.158 0.359]	0.175	Supported
APS → PERF	0.562	0.049	11.429	< 0.001	[0.466 0.659]	0.424	Supported
CRP → APS → PERF	0.423	0.035	8.014	< 0.001	[0.305 0.502]	0.286	Supported

**Source:** PLS-SEM Output

**Note:** p-values are one tailed

### Discussion

This study investigated the mediating effect of access to electronic payment system (APS) on the relationship between currency redesign policy (CRP) and the performance of SMEs (PERF) in some selected states in northeast Nigeria. The study adopted the reflective-formative type II approach for specifying, modeling, and validating the research model using the disjointed two stages technique recommended in Ali et al. (2018), Sarstedt et al. (2019). The study has confirmed the causal relationship between the study variables such as CRP, PERF, and APS. The Model has divulged that CRP has a positive and significant effect on SMEs Performance. APS has been adjoined as a Mediating Variable between CRP and SMEs Performance.

On the first hypothesis that states “there is a relationship between CRP and PERF”. The CRP construct found relevant on the performance of SMEs ( $\beta = 0.26, p\text{-value} < 0.05$ ). In particular, most of the studies showed a positive association in CRP and performance of SMEs. This result finding is consistent with (Nwachukwu & Nwogu, 2022, Ogbonne, 2023). The results indicate that CRP has led to increase SMEs performance in Northeast Nigeria. Creating and promoting a flexible CRP would enable more SMEs growth, profitability and customer satisfaction.

The second hypothesis states that “there is relationship between CRP and APS system”. The study examined CRP construct and found a positive and significant effect on APS ( $\beta = 0.75$ ,  $p$ -value  $< 0.05$ ). Though there is little construct available in the current literature related to the associations of CRP and APS. Thus, the adoption of CRP provides an effective e-payment system for SMEs' activities. The third hypothesis states that “there is a relationship between APS and PERF”. Based on the result APS found a positive and significant effect on PERF ( $\beta = 0.56$ ,  $p$ -value  $< 0.05$ ), thus, APS improved performances of SMEs. Additionally, result of the study found consistent with previous studies of (Pillah, 2023, Frimpong, et al. 2022; Kwabena, et al. 2019). However, studies by Panah and Munirajun (2021) and Obi (2023) found a significant negative impact of APS on the performances of SMEs. Thus, recognizing the influence of APS on SMEs performances could led to adaptation of new technologies that increases access to e-payment for more effective and efficient business transactions.

For the mediating effect, the structural output showed that the indirect association between CRP APS PERF was also found to be positive and significantly related ( $\beta = 0.42$ ,  $p < 0.05$ ). This implies that the type of mediation found in this research is a complementary mediating effect when applying the criteria in —Hair et al. (2017). This is because the directions and the signs are both in the same direction. As an implication, the initial hypothesis that states “there is a mediating effect of APS on the relationship between CRP and PERF” will be accepted. Other previous studies that found similar result includes Kwabena et al. (2019), Frimpong et al. (2022).

### **Conclusion and Recommendations**

This study analyzed the mediating role of access to electronic payment system (APS) on the relationship between currency redesign policy (CRP) and the performance of small and medium enterprises (PERF) across selected states in northeast Nigeria. A reflective-formative criteria of specification, modeling, and validation of research model was used, and the study found that APS mediates the positive association between CRP and PERF. Implying that the study found support for linking the indirect relationship between CRP and PERF through APS, and the direct relationship between CRP and PERF. Therefore, businesses are encouraged to maintain and enhance the use of e-payment platforms (APS) during transaction services, which will double for achieving better PERF under the current CRP regime. In addition, this will also have policy implication especially as the government is reintroducing the cashless policy as one of the media of containing inflation problems in Nigeria.

Based on the results, it can be argued that SMEs in Northeast Nigeria tend to be law abiding and highly focused on every opportunity deemed to increase their business performance. They also understand the implication of the CRP as a tool for monetary policy. APS is seen as a very important dimension in increasing the overall SMEs performance. Therefore, businesses are encouraged to utilize the usefulness of APS for doing transactions, which will double for achieving better PERF under the current CRP regime. This will have implication as the government is reintroducing the CRP as one of the measures of addressing inflation in Nigeria. However, the researchers could not draw generalization because the units of analysis



are not a full reflection of the population elements. This is because they were drawn from some selected states in northeastern Nigeria. Therefore, future research should extend the scope of study to advance understanding of the subject from a larger population spectrum that will encourage generalization of findings.

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### **References**

- Abdullahi, M. U., Abdulkadir, A., & Yunusa, M. (2022). Effect of public policies on micro, small-and medium-sized enterprises development in Nigeria: A case study of Gombe State, *CEDS Journal of Entrepreneurship and Innovation Research*, 1(1), 95-108.
- Ahmed, A. I., & Ojong, C. M. (2014). The role of government in the development of MSMEs in Nigeria between 1991 and 2012, *International Journal of Business and Social Research*, 4(12), 14-25.
- Adu, C. A. (2016). Cashless policy and its effects on the Nigerian economy, *European Journal of Business, Economics and Accountancy*, 4(2), 81-88.
- Akuezuilo, E. O. (1993). *Research methodology and statistics (NUC/NBTE/NCCE Minimum standard edition)*, Awka: NUEL.
- Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling ( PLS-SEM ) in hospitality research, *International Journal of Contemporary Hospitality Management*, 30(1), 514–538.
- Aroghene, K. G., & Akpoyibo, G. A. (2023). Naira Swap Objectives and Impact on the Performance of Small and Medium Scale Enterprise SMEs, *International Journal of Management & Entrepreneurship Research*, 5(4), 233-243.
- Chemtai, F. (2016). The effects of electronic plastic cards on the firm's competitive advantage: A case of selected commercial banks in Eldoret town, Kenya. *International Journal of Science Educational Study*, 2(2), 29-39.
- Cohen, J. (1992). A Power Primer, *Psychological Bulletin*, 112(1), 1–8.
- Cresswell, J. W. (2009). *Research design: qualitative, quantitative and mixed methods approach (3rd Ed.)*. Thousand Oaks, CA: Sage

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly*, 319-340.
- Desiyanti, R., Husin, N. A., Kassim, A. A., & Elvira, R. (2022). The impact of payment systems and Peer-to-Peer lending on the performance of SMEs in Indonesia” in The second economics, law, *Education and Humanities International Conference, KnE Social Sciences*, 48–58.
- Emefiele, G. (2022). CBN update: Emefiele Unveils policy focus for 2023. ISSN No: 2695-23944(12) December, 2022.
- Emejo, J. (2023). Cashless Policy as Economic Enabler. Thisday Online News Paper
- Friedman, M. (1956). *The quantity theory of money – A restatement, studies in the quantity theory of money*, (Ed.) Milton Friedman, The University of Chicago Press, 3-21.
- Gali, J. (2008). *Monetary policy, inflation and business cycle: An introduction to the New Keynesian framework*, Oxfordshire: Princeton University Press.
- Giwa, A. (2023). *Nigeria's cashless policy: A significant opportunity for growth*, Business Day online news Weekender, February 25, 2023.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (K. DeRosa (ed.); Second). SAGE Publications Ltd.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM, *European Business Review*, 31(1), 2–24.
- Harash, E., Al-timimi, S., & Alsaadi, J. (2014). The influence of finance on performance of small and medium enterprises (SMEs). *International Journal of Engineering and Innovative Technology*, 4(3), 161-7.
- Hayes, A. F., & Scharkow, M. (2013). The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis: Does method really matter?, *Psychological Science*, 1–10.
- Henseler, Jörg, Ringle, C. M., & Sarstedt, M. (2015). *A new criterion for assessing discriminant validity in variance-based structural equation modeling*. Springer.
- Ibrahim P. A., & Zameer, N. (2018). Effect of Cashless Economy on Micro Small and Medium Enterprises: A Study from Indian Perspective. *Journal of Entrepreneurship and Management*, 7(1), 17-23.

- Jhinghan, M. L. (2016). *Macroeconomic theory* (13th Edition). Virnda India.
- Keynes, J. M. (1936). *The general theory of employment, interest, and money*, John Maynard Keynes.
- Kock, N. (2020). WarpPLS User manual: Version 7.0 (Patent No. WarpPLS User Manual: Version 7.0). In *ScriptWarp Systems* (WarpPLS User Manual: Version 7.0). Ned Knock.
- Mankiw, G. N., & Taylor, M. P. (2007). *Macroeconomics. (European edition ed.)*, Basingstoke: Palgrave Macmillan.
- Minna, S. (2014). Innovation capability for SME success: Perspectives of financial and operational performance, *Journal of Advance Management Resources*, 11(2).
- Mohamed, E. (2020). Velocity of money income and economic growth in Sudan: Cointegration and error correction analysis, *International Journal of Economics and Financial Issues*, 10(2), 87-98.
- Mohammed, A. B., & Abdulmajeed, A. T. (2022). Impact of naira redesign and monetary policy on Nigeria economy, *International Journal of Research in Finance and Management*, 5(2), 226-232.
- Nwachukwu, D., & Nwogu, C. U. K. (2022). Monetary policy and Marketing performance of businesses in Port Harcourt: A Case of Naira Redesign in 2022. *International Academy Journal of Management, Marketing & Entrepreneurial Studies*, 9(2), 191-213.
- Nwankwo, O. & Eze, O. R. (2013). Electronic payment in cashless economy of Nigeria: Problems and prospect. *Journal of Management Research*, 5 (1), 138-151.
- Obi, Y. M. V. (2023). E-payment administration and the growth of small and medium enterprises (SMEs) in Southeast Nigeria: An evaluation of cashless policy, *Global Journal of Political Science and Administration*, 1(2), 42-57.
- Ogbonne, I. P. (2023). Impact of CBN cash withdrawal limit and currency redesign monetary policies on the operation of young Point of Sale (POS) merchants in Enugu State, Nigeria, *Ianna Journal of Interdisciplinary Studies*, 5(1), 74-83.
- Ogundipe, M. S. (2022). *The impact of CBN Monetary Policy on the Survival SMEs in Nigeria*, Research Square, 1-12. University of Ibadan.

- Ogunmuyiwa, M. S., & Amida, O. A. (2022). The nexus between electronic payment system and entrepreneurial activities in rural areas of Ogun State, Nigeria. *Przedsiębiorczość – Edukacja [Entrepreneurship – Education]*, 18(1), 51-63.
- Okoh, K. (2023). *Naira scarcity, Cash Crunch disrupt business models of SMEs*, Leadership Online Newspaper Report, 18 June, 2023.
- Olujobi, O. (2022). *Macroeconomic implications of the new currency refurbishment and capital formation in Nigeria*, Munich Personal RePEc Archive MPRA Paper No. 115634, Online at <https://mpra.ub.uni-muenchen.de/115634/> posted 13 Dec 2022 08:10 UTC.
- Osazevaru, H. O., & Yomere, G. O. (2015). Benefits and challenges of Nigeria's cash-less policy, *Kuwait Chapter of Arabian Journal of Business and Management Review*, 4(9), 1-10.
- Pandey, K., & Yadav, U. (2023). Theory and practice of demonetization, *Humanities and Development*, 18(1), 149–152.
- Panah, A. M., & Muniraju, Y. (2020). Demonetization related factors in India: An exploratory study on perceptions and opinions of common man, *International Journal of Innovation and Research in Educational Sciences*, 7(5), 13.
- Panah, A. M. & Muniraju, Y. (2021). An exploratory study on efficacy of demonetization in India: Policy rollout on demonetizing old currency, *Australian Finance & Banking Review* 5(1), 15-28.
- Pillah, T. P. (2023). Implementing currency redesign policy of the Naira in Nigeria: Stratagems for reaching economic steadiness, *Journal of Public Administration, Policy and Governance Research (JPAPGR)*, 1(1), 49-58.
- Popa, S., Soto-Acosta, P., & Martinez-Conesa, I. (2017). Antecedents, moderators, and outcomes of innovation climate and open innovation: An empirical study in SMEs, *Technology Forecast Social Change*. 118, 134-142.
- Sampe, J. F. (2022). Micro, small and medium enterprises performance indicators – possible application in the 5.0 society, *Journal of Management, E-Business & Entrepreneurship Research*, 1(2), 1-11.
- Sarma, M., & Pais, J. (2011). Financial inclusion and development, *Journal of International Development*, 23(4), 613-628.

- Sarstedt, M., Hair, J. F., Cheah, J., Becker, J., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM, *Australasian Marketing Journal*, 27(3), 197–211.
- Sekaran, U. (2003). *Research Method for Business. A skill building approach: (4th Ed.)*, South Illinois University of Carbondale.
- Singh, *et al.*, (2023). The impact of demonetization on small and medium businesses in India. *European Journal of Molecular & Clinical Medicine*, 10(1), 636-644.
- Thrikawala S. (2011). The determinants of entrepreneurial intention among academics in Sri Lanka. *International Proceedings of Economics Development & Research*. 4(4) 64–68.
- Usim, U., Ibe, M., Imana, J., & Eniola, D. (2023). *Effect of cashless policy on small and medium business in Nigeria: CBN's new policies hurting our operations, SMEs cry out*” The sun online newspaper Feb, 18 2023.
- World Bank. (2008). *Financial sector assessment: Financial sector assessment program*, Washington D.C: World Bank.
- Xena, P., & Rahadi, R. A. (2019). Adoption of E-payment to support small medium enterprise payment system: A conceptualised model. *International Journal of Accounting, Finance and Business (IJAFB)*, 4(18), 32-41.
- Zango, G. A. (2019). Volume and value of e-payment system, Nigeria Banks in Perspective, 3, 190-201.
- Zhao, X., JR, L. J. G., & Chen, Q. (2014). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research, Inc.*, 37(2), 197–206.