Currency Redesign and Its Compliance in the Economy: Case Study of Nigeria Economy

Kparobo Gloria Aroghene ¹ and Aroghene Imene²

 1Department of Banking and Finance Delta State University, Abraka
 <u>kparobo-aroghene@delsu.edu.ng</u>
 2M.Sc. candidacy National Open University of Nigeria Imene.aroghene @delsu.edu.ng

Abstract: Inspite of the advantages in the redesigning of a country currency there still exist non-compliance by members of the society which sabotage the process. It is in this light this study explored currency redesign and its compliance in the economy case study of Nigeria. Government support and individual personal readiness for technology was used as independent variables while currency redesign compliance was used as dependent variable. To properly account for this, primary data was obtained through the administration of structured five Likert scale questionnaire to 133 persons resident in Abraka in Ethiope east local government area of Delta State for two months. Percentages, frequencies, tables, means and charts was used to analysed the data while PPMCC and coefficient of determination was used to test the hypothesis. From the estimated result the null hypothesis of no influence of the independent variables on the dependent variable was rejected. The study recommended that government should slab every channel especially from those within the governance that can deter the successful implementation of the issuance/redesign of the country currency. Equally the state of the economy should be considered first of all in the introduction of a new policy.

Keywords: Currency, Currency Redesign, Currency swap, Naira, Financial Technology, Compliance

INTRODUCTION

Countries around the world redesign and reissue their legal tender for several reasons. The prevention of counterfeit currency is a key motivation. A country's ability to limit counterfeiting to a minimum and remain ahead of counterfeiting threats is made possible by redesigning its national currency. According to best practice the issuance of new currency should be undertaken every five to eight years. Usually the issuance of legal tender of any economy is the duty of the apex bank. In Nigeria the central bank of Nigeria (CBN) Act of 2007 as amended vests in the bank the responsibility to issue and manage the country's legal tender currency (naira, kobo & enaira).

The introduction/redesign of a currency could be beneficial but not without consequences. In an effort to fight corruption and reduce the amount of money in circulation, the Indian government, led by Prime Minister Narendra Modi, withdrew and then reinstated the 500 and 1,000 Indian rupee notes in 2016. The disruption brought by the cash shortages affected consumer and corporate moods, according to a 2018 International Monetary Fund report titled "Article IV consultation report on India." The policy performed poorly since it was implemented abruptly and there was a shortage of funds as a result. Based on the outcome in India, a timeframe of six months was entirely short-sighted, ineffectual, and failed to accomplish any of its major goals. Plans for a currency re-issuance in the US have been in place since 2011, with the first currency to be used 15 years later, in 2026. Successful currency redesigns are systematic, and they typically have a policy document outlining the timetables and the actualization process in detail.. Additionally, the public's support helps successful currency redesign proposals come to fruition. Contrary to industrialized countries, carrying cash is still highly common for petty traders' activities and for residents of rural areas in developing nations like Nigeria. The alternative channels advocated for financial transactions during the period of the Naira transition are: eNaira, mobile apps, internet banking, point of sale and other cashless channels. The use of these cashless channels as alternative sequel to full availability of the new redesign note is still hinders financial transactions resultant in slowing economic activities. This is due to the traffic in network resulting in decline transaction, error messages, debit but not credit to the recipient to mention a few.

Despite the importance of the new series in curtailing counterfeiting, reduction in cash management expenditure, CBN visibility of money supply, financial inclusion and to strengthen the economy, the populace still find the policy unattractive and difficult to adapt. Hayat, Mamun, Salameh, Ali, Hussain & Zainol (2022) opined that future study is suggested to incorporate government support and individual personal readiness for technology adoption. The study aim to investigate the currency redesign and its compliance in the economy. The specific objectives are stated as:

- 1 to determine the extent government support influence currency redesign compliance.
- 2 to investigate if individual personal readiness for technology influence currency redesign compliance

STAGES IN THE INTRODUCTION OF A NEW CURRENCY

Currency reforms are typically complex and risky. Global experience indorses that a successful outcome might not be guaranteed. In order to ensure that the new currency is viewed as stable by the general public, businesses, and the international community, the apex bank and the government must make a firm commitment to taking the necessary actions. There are four stages to the introduction of a new currency. First, it is ideal if the required preconditions—sound macroeconomic policies and robust financial sector legislation—are already in place or being worked on. Also, cautious preparation is required, setting up the policies and processes behind the reform and drafting a detailed budget for the entire currency reform (including the cost of printing and minting the new cash currency). Afterward the production of the new currency, and lastly the most challenging phase: implementation.

THE HISTORY OF THE INTRODUCTION AND REDESIGN OF NIGERIAN CURRENCY

The first major currency issue in Nigeria was undertaken following the colonial ordinance of 1880 which introduced the Shillings and Pence as the legal tender currency in British West Africa. The first set of banknotes and coins were printed in Nigeria, Ghana, Sierra Leone, and the Gambia from 1912 and 1959 by the West African Currency Board (WACB). The WACB-issued banknotes and coins were withdrawn on July 1, 1959, and new notes in Nigerian currency were produced by the Central Bank of Nigeria. The currency was altered to reflect the nation's republican status on July 1, 1962. Federal Republic of Nigeria was now written at the top of the banknotes that formerly read "Federation of Nigeria." One naira, which was equal to ten shillings, replaced the primary unit of currency known as the £1 in January 1973. The minor unit was known as the kobo, and one hundred of them made up one Naira. A new twenty naira (\aleph 20) banknote was introduced on February 11th, 1977. A new currency banknotes in the amounts of \aleph 1, \aleph 5, and \aleph 10 were launched on July 2nd, 1979. The \aleph 100, \aleph 200, \aleph 500, and \aleph 1000 banknotes were launched in December 1999, November 2000, April 2001, and October 2005, respectively. These denominations were established in response to the expansion of economic activity and to promote an effective payment system. As part of the economic reforms. The \aleph 20 banknote, the redesigned \aleph 5, \aleph 10 banknotes were switched to polymer substrate on September 30, 2009. Finally, the CBN issued the \aleph 100 Commemorative banknote on December 19, 2014, and the \aleph 50 Commemorative polymer banknote on September 29, 2010, respectively, as part of its contribution to the nation's celebration of her 50th anniversary of independence and 100 years of existence.

LITERATURE REVIEW

Concept of Naira Redesign

Redesigning of a currency is the changing of the features of an existing currency to a better one aim at achieving certain objectives. Based on the history of currency issuance and design in Nigeria, the last was conducted in 2014. In October 26, 2022, the Central Bank of Nigeria (CBN), announced that it will redesign some new naira notes. CBN governor, stated that the move to introduce newly designed notes became imperative following the abnormalities bedevilling Nigerian financial, monetary and security systems. The CBN started distributing the new notes at December 15, 2022, and the public were be able to withdraw the notes (200, 500, and 1000 naira) from commercial banks on that date. The circulation of the new designs started on that date. Before January 31st, the old notes was legally recognized and utilized for transactions; after that date, only the new notes will be. The CBN therefore has fewer than three months to redesign, produce, and distribute the new currencies, and four months to recall the current notes.

The redesign and introduction of these said currencies seem not to go well with the citizenry partly because they still need to struggle to get these notes from the banks not to talk of assessing other informal financial service agents with huge cost involvement.

Concept of Compliance

For the purpose of this study, compliance is the adaptableness and adherence of the general public to the introduction of the redesign currency. Despite worldwide practice for the redesign /issuance of a new currency to be 5 to 8 years there are still some form of resistance to the issuance of the redesign currency.

Government Support and Influence on Compliance

Government support in this study is related to the level of awareness given by it to the masses ranging from the point of design, order, production and issuance. Governmental support would be well felt by the citizenry if the stages involve in the issuance/redesign of a currency is unambiguous and properly implemented. A three-month timeline to redesign, print, and distribute new money in a way that prevents counterfeiting, promotes a cashless society, discourages cash hoarding, promotes financial inclusion, and lowers kidnapping and terrorism across the board could be abrupt and discourage public support for the policy. In response to the foregoing, the following hypothesis was made:

H01: Government support does not influence currency redesign compliance

Individual Personal Readiness for New Technology

Technology is the application of scientific methods in industrialised acts. Individual personal readiness has to do with the state of the individuals (both corporate & non corporate) to which the technology is being introduced. Apart from the purpose of ensuring securing and curtailing of counterfeiting, the issuance of the policy is in order to promote a cashless economy. Redesiging currency and giving e-payment as an alternative till the currency is in full circulation in an economy characterised by retail traders, educated and uneducated who depend on physical cash for their transaction is tedious. Even the educated ones might still find adherence difficult because of the traffic involve in electronic transactions. The issue of : illiteracy of the populace, e-traffic and ambiguity in the alternatives given would not have constituted a problem if appropriate modalities have been put in place. Based on this, the formulated the hypothesis thus:

Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) has been regarded as a reliable theory to investigate and comprehend technology adoption since its release in 2003. The UTAUT advocated the existence of the power to demonstrate over 70% of the variance in the intention and adoption of technologies (Dwivedi et al., 2019). According to Verma and Sinha (2018) trust and security are the essential attributes of technology adoption. Based on the opinion of verma and Sinha , it is the trust that people conceive that would make them feel safe about a new technology. Consumers' vulnerabilities are lessened by the trust, which also increases their comfort with using technology (Gumussoy et al., 2018; Karim et al., 2020). Additionally, when a new technology is compatible with an old system or technology, the user will feel more at ease (Suki and Suki, 2017).

Empirical Review

The perception of comfort and confidence in utilizing technology, such as smart wearable payment gadgets, is increased by lifestyle compatibility (He and Li, 2020). Modern technology that can facilitate financial transactions at COVID-19 has a huge impact on consumer behavior (Priem, 2021). Perceived ease of use means that the instructions provided for using the technology are simple and easy to understand (Dwivedi et al., 2019). According to Slade et al. (2015), social influence helps people have a favourable attitude toward adopting IoT for online payments. While internet-based technology adoption is still low, revolutionary financial technology adoption requires social acceptance (Dwivedi et al., 2019; Schinckus et al., 2021). The social environment fosters the adoption of fintech and fuels interest among new users (Andronie et al., 2021). The adoption of payment methods related to technology is encouraged by the perception of confidence (Chawla and Joshi, 2019). Technology provides high-level security features to safeguard customers' data and online transactions in order to encourage the use of internet-based payment devices (Priem, 2021). (Gu and Wei, 2020; Karim et al., 2020). While strong compatibility favorably affects the intention to use the technology, the average consumer tries to minimize the effort needed to use the revolutionary technology (Gumussoy et al., 2018). According to Lwoga and Lwoga (2017), users' perceptions of compatibility encourage them to adopt mobile payment.

RESEARCH METHODOLOGY

In other to account for currency redesign and compliance in the economy: case study of Nigeria, quantitative method was employed. The population for the study was set at 200 individuals comprising mainly retail traders (that are a bit enlightened), undergraduates and middle aged person within Abraka in Ethiope east local government area in Delta State. The population was purposively selected because these group of persons with their level of education are aquitted with what is prevalent in the economy and their location is resident where the researcher is located.so retrieving the questionnaires would not constitute much hurdle to the researcher. the Primary data was obtained through the administration of five (5) likert scale structured questionnaires to the said population. Upon the application of Yamane (1967) formular the sample size stood at 133. At such 133 structured questionnaire was distributed. frequency tables, percentages, means and charts was used to analysed the data while Pearson product moment correlation co-efficient (PPMCC) denoted by "r" and coefficient of determination r^2 was used to test the hypothesis. PPMCC can be obtained by a less complicated equation using the deviations of the variables from their means (Agbada & Osuji, 2020). The formular is stated thus as:

PPMCC (r^{xy)}

equation (1)

Where:

H02: Individual Personal Readiness for New Technology does not influence currency redesign Compliance.

x = X - X (Deviation of weighted answer options from their mean)

 $y = Y - \overline{Y}$ (Deviation of response frequencies from their mean)

while coefficient of determination(
$$r^2$$
) = $\sum x y$ 2 equation (2)
 $\sqrt{\sum x^2 \sum y^2}$

Hayat, Mamun, Salameh, Ali, Hussain and Zainol (2022) model was adopted and modified to suit this study. This study model stated thus:

COM = F(GS, IR)

The model is presented in the econometric form as:

$$COM = a_0 + a_1GS + a_2IR + u$$

Where:

a_1	= Intercept
COM	= Compliance
GS	= Government Support
IR	= Individual personal readiness for new technology
a_1 and a_2	= Coefficient
DATA PRE	SENTATION AND ANALYSIS

Data obtained from field survey were presented in tables in order to properly comprehend the distinguishing features of the frequency of response options for questions adopted for the study. Due to proximity to the respondent, the 133 structured questionnaire that was distributed was equally retrieved amounting to 100% response rate.

Data for Hypothesis one (H01)

Table 1: frequency table for Response to Hypothesis One

Five Likert Scaling	Frequency	Percentage (%)	Cumulative Percentage
Strongly Agreed (SA)	77	58	58
Agreed (A)	27	20	78
Undecided (U)	5	4	82
Strongly Disagreed (SD)	15	11	93
Disagreed (D)	9	7	100
Total (∑)	133	100	

Source: Reseacher's computation from field survey, 2023.

Table 1 exposed that 78% of the respondents agrees that government support influences new naira redesign compliance. However, 4% of the responses fall within the neutral group while the rest 18% of our respondents refutes such assertions.

Diagrammatic Representation of Table 1

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Source: Researcher's computation using excel, 2023.

Data for Hypothesis one (H0₂)

Table 2: frequency table for Response to Hypothesis Two

Five Likert Scaling	Frequency	Percentage (%)	Cumulative Percentage
Strongly Agreed (SA)	34	26	26
Agreed (A)	70	53	79
Undecided (U)	3	2	81
Strongly Disagreed (SD)	12	9	90
Disagreed (D)	14	10	100
Total (∑)	133	100	

Source: Researcher's computation from field survey, 2023.

Table 2 uncovered that 79% of the respondents agrees that individual personal readiness for new technology influences new naira redesign compliance. However, 3% of the responses fall within the neutral group while the rest 26% of our respondents counters such assertions.

Diagrammatic Representation of Table 2



Source: Researcher's computation using excel, 2023.

Model Estimation

Table 3: Derivation of PPMCC (r) and Coefficient of Determination (r²) for Hypothesis One

Scale	X	Y	$\mathbf{x} = \mathbf{X} - \mathbf{\ddot{X}}$	$\mathbf{y} = \mathbf{Y} - \bar{\mathbf{Y}}$	ху	X ²	y ²
Strongly Agreed (SA)	5	77	2	50.4	100.8	4	2540.16
Agreed (A)	4	27	1	0.4	0.4	1	0.16
Undecided (U)	3	5	0	-21.6	0	0	466.56
Strongly Disagreed (SD)	2	15	-1	-11.6	11.6	1	134.56
Disagreed (D)	1	9	-2	-17.6	35.2	4	309.76
Total (∑)		133	0	0	148	10	3451.2

Source: Researcher's Computation, 2023.

Mean of weighted answer options: $X = \sum X_{n} = \frac{15}{n} = 3_{n}$

Mean of frequency response options: $Y = \sum Y = \frac{133}{5} = 26.6$

From table 3, the PPMCC can be derived by substituting values into equation one as stated in the methodology. Therefore :

From equation, PPMCC (
$$\mathbf{r}^{xy}$$
) = $\sum_{\sqrt{\sum x^2 \sum y^2}} \frac{148}{\sqrt{10x3451.2}} = \frac{148}{185.77} = 0.7967$

Thus, coefficient of determination (r^2) equals $(0.7967)^2 = 0.6347 = 63\%$

Table 4: Derivation of PPMCC (r) and Coefficient of Determination (r ²) for Hypothesis Tw	Table 4: Derivation	of PPMCC (r) an	d Coefficient	of Determination	(r ²) for	Hypothesis Two
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Scale	х	Y	x = X - X	$y = Y - \overline{Y}$	Ху	X ²	y^2
Strongly Agreed (SA)	5	34	2	7.4	14.8	4	54.76

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Agreed (A)	4	70	1	43.4	43.4	1	1883.56
Undecided (U)	3	3	0	-23.6	0	0	556.96
Strongly Disagreed (SD)	2	12	-1	-14.6	14.6	1	213.16
Disagreed (D)	1	14	-2	-12.6	25.2	4	158.76
Total (∑)		133	0	0	98	10	2867.2

Source: Researcher's Computation, 2023.

Mean of weighted answer options: $X = \sum X_{-} = 1$

$$= \sum X = \frac{15}{n} = 3$$

Mean of frequency response options: $Y = \sum Y_{n} = \frac{133}{n} = \frac{26.6}{5}$

From table 3, the PPMCC can be derived by substituting values into equation one as stated in the methodology. Therefore :

From equation, PPMCC (
$$\mathbf{r}^{xy}$$
) = $\sum_{\sqrt{\sum x^2 \sum y^2}} \frac{98}{\sqrt{10x^{2867.2}}} = \frac{148}{169.33} = 0.8740$

Thus, coefficient of determination (r^2) equals $(0.8740)^2 = 0.7639 = 76\%$

Table 5: Summary of Model Estimation

Hypothesis	PPMC	Coefficient of
	(r)	Determination (r ²)
1. Government support does not influence currency	0.7967	63%
redesign compliance in Nigeria.		
2 Individual personal readiness for technology does	0.8740	76%
not influence currency redesign compliance in Nigeria.		

Source: Authors' Computation, 2023.

DISCUSSION OF RESULT

From the model estimated, the mean of weighted answer options is 3 while the mean of frequency response options stood at 26.6. In the derivation of the PPMCC and r^2 for hypothesis one, by application of equation 1 and equation two : the correlation was revealed as 0.7967. this value is an indication that indeed government support (GS) and currency redesign is Nigeria is strongly correlated and the relationship is also positive showing that when Government gives support to the populace in the introduction of a new policy the more compliance public authorities would get. Likewise the reverse holds were policies are out rightly and unambiguously imposed on the populace. furthermore, the coefficient of determination (r^2) of 63% shows that variation in currency redesign compliance is due to 63% variation in government support. The 27% remaining is due to the disturbance term. This finding agrees with the opinion of Andronie et al.(2021), With the help of social influence, new users' intentions are captured and Fintech is made more socially acceptable.

In the same vein, the pearson product moment correlation coefficient (PPMCC) for the second hypothesis stood at 0.8740. Again the coefficient is an indication of a strong and positive correlation between individual personal readiness for technology and currency redesign compliance in Nigeria. Based on the coefficient, it would be safe to insinuate that the level of preparedness of those that are expected to adhere to the redesign policy in the long run determine their compliance verse versa. By implication the level of existing sophistication has a good influence on level of compliance. In table 5, the r^2 (76%) for hypothesis 2 shows that variation in currency redesign compliance is as a result of 76% variation in individual personal readiness for technology. The rest 24% is held accountable to the error term. This result supports the claim made by Gumussoy et al. (2018) that the average consumer tries to minimize the effort needed to use innovative technology, while good compatibility has a favorable impact on the intention to use technology.

CONCLUSION AND RECOMMENDATION

In investigating currency redesign and its compliance in Nigeria primary data was obtained through the administration of structured questionnaire. The responses obtained from the survey were estimated. From estimation, the result revealed positive strong correlation between the dependent and independent variables used for the study as well as a meaningful coefficient of determination. Sequel to the findings, the study concluded that government support and individual readiness for technology jointly influence currency redesign compliance in Nigeria. Therefore the null hypothesis that government support and individual personal readiness for technology does not influence currency redesign compliance is rejected while the alternate hypothesis is accepted.

The study recommended that, efforts should be made by government to block every channel especially from those within the governance that can deter the successful implementation of the issuance/redesign of a country currency. Likewise the state of the economy should be considered first of all in the introduction of a new policy.

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