ASSESSING THE EFFECT OF EXCHANGE RATE FLUCTUATIONS ON SMALL AND MEDIUM ENTERPRISES (SMES) IN KADUNA STATE

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Abstract

This paper investigates the impact of exchange Rate fluctuations on small and medium enterprises (SMEs) in Kaduna North Local Government Area, Kaduna State, Nigeria. The study encompasses a population of 1,000 SMEs, from which a sample of 278 businesses was selected using Krejcie and Morgan's formula to ensure a statistically valid representation. The Data were collected through structured questionnaires administered to SME owners, capturing key demographic and business-related information, including exposure to foreign exchange fluctuations which were analyzed using descriptive and inferential statistical methods, including a chi-square tests, facilitated by SPSS software, to achieve the outlined objectives. The findings reveal that exchange rate fluctuations significantly affect SME performance, impacting aspects such as sales revenue, credit collection, and supply chain management, and that the development of indigenous small and medium sized businesses in Kaduna North Local government depends largely on exchange rate stability. The results suggest the need for more robust foreign exchange management strategies and supportive policies to mitigate the adverse effects of exchange rate fluctuations on SMEs.

Keywords: Exchange Rate, Small and Medium Enterprises (SMEs), Fluctuations, Kaduna North

JEL Code: F31, D2

1. Introduction

In today's globalized economy, both large and small companies are increasingly exposed to macroeconomic variables such as exchange rate fluctuations due to the rapid globalization of national economies. The rapid globalization of national economies has amplified the exposure of small companies, making unexpected changes in foreign exchange rates a critical factor that can influence a company's market value, operating cash flows, investment decisions, returns, and overall financial management. Even businesses with minimal or no direct foreign transactions may be indirectly impacted by sharp currency movements, indicating the far-reaching consequences of exchange rate instability. With the widespread adoption of flexible exchange rate regimes, the risk associated with currency movements has become a significant concern for both domestic and multinational enterprises.

Small and Medium-sized Enterprises (SMEs) have long been recognized as the backbone and engine of industrial growth, job creation, technological advancement, and domestic investment key elements of economic development. For instance, SMEs contribute approximately 33% of

exports and nearly 39% of industrial output in many developing economies. Data from the United Nations Economic Commission for Africa (UNECA, 2020) further emphasize the sector's importance: SMEs account for over 90% of businesses, more than 50% of the continent's GDP, and around 63% of employment. Globally, SMEs contribute more than 90% of all economic activities, provide over 50% of employment, and account for over 40% of GDP in developing nations. In this context, the SME sub-sector in Nigeria, much like its counterparts globally, plays a pivotal role in national economic development.

However, foreign exchange rate movements have become a critical external factor influencing the operations and sustainability of SMEs. Changes in exchange rates significantly affect profitability, competitiveness, and overall business operations, particularly for SMEs that often operate with limited resources and are exposed to global markets. Despite their potential to generate higher revenue, foster innovation, and create jobs, internationally oriented SMEs remain vulnerable to currency fluctuations due to their dealings in foreign currencies. It has been projected that Nigeria could attain the status of a developed economy by 2050. A key strategy toward achieving this goal is the implementation of a stable and well-managed exchange rate policy, as it would foster sustainable economic growth and development. Conversely, poorly managed exchange rate policies can hinder economic progress and disproportionately affect SMEs, whose operations are closely tied to the broader macroeconomic environment. Exchange rate management, as a fundamental tool for macroeconomic stability, influences the flow of capital, goods, and services within the economy.

The effect of exchange rate fluctuations on SMEs in Kaduna State is therefore a pressing concern. In situations of exchange rate instability, SMEs face challenges in pricing their products and services competitively in both local and international markets. Cost management becomes difficult, especially in areas related to imports and exports, thereby affecting profitability and long-term sustainability. The consistent depreciation of the naira since the introduction of the flexible exchange rate system in 1986 has significantly impacted small businesses, which often lack the capacity to absorb or hedge against currency risks.

Although existing literature has explored SME financing and financial intermediation, there remains a gap in understanding how exchange rate fluctuations specifically affect SME performance. This study seeks to fill that gap by examining the impact of exchange rate instability on SMEs using primary data collected from business owners in Kaduna State. The findings are expected to inform policy recommendations that can help shield SMEs from adverse currency movements and promote inclusive economic growth. It is against this backdrop that this paper seeks to determine the extent of the impact of exchange rate fluctuations on the performance of SMEs in Kaduna North Local Government. Also evaluate the extent of the impact of exchange rate fluctuations on the development of indigenous small and medium-sized businesses in Kaduna North Local Government.

2. Literature Review

Conceptually, Small and Medium Enterprises (SMEs) have been described as the backbone of virtually all economies of the world because they have strong influence on the sustainable development process. Francis (2009) stated that in many respects, the meaning and concept of small businesses cannot be completely isolated from the operational environment. Thus, the perception and definition is highly dependent on the particular economy that provides the

environment of operation. In Nigeria, there seems to be no clear-cut definition or scope for determining small business enterprise. Oladimeji and Olaniyi (2020) asserted that Small and Medium-Scale Enterprises are generally privately owned organizations set-up for the purposes of producing goods or services for profit.

On the other hand, exchange rate is a rate at which one currency can be exchanged for another, and it is the price of one country's currency expressed in another country's currency. For example, the exchange rate between Nigerian naira and the U.S dollar is usually stated in naira per dollar (₦/$). Mordi (2006) defines exchange rate as the price of one currency vis-à-vis another and it is the number of units of a currency required to buy another currency. Generally, exchange rate policy in Nigeria has undergone extensive transformation since the immediate post-independence era when the country operated a fixed exchange rate system up to the early 1970s and then from 1986 when a market-based system was introduced in the context of structural adjustment programme.

Although the changes have been spanning around two major regimes; fixed exchange rate regime and flexible exchange rate regime, Sanni (2006). There is a transition from a fixed regime in the 1960s to a pegged regime between the 1970s and the mid-1980s and finally to a different floating regime starting form 1986 after the introduction and adoption of SAP. From 1986, a market-determined exchange rate was established whereby the exchange rate was left to be determined by the market forces of demand and supply although within the framework of market auction system of foreign exchange.

The empirical literature on exchange rate effects on SMEs is divided into micro-level and macro-level studies. Micro-Level Studies include Okwara and Uzoamaka (2024) who conducted a focused study on 204 manufacturing SMEs in Enugu State, establishing that exchange rate fluctuations substantially influence cost-based pricing strategies. Their linear regression analysis showed that currency volatility directly affects input costs and profit margins for import-dependent SMEs. Chikwira (2023) employed advanced econometric techniques (VECM) to analyze time-series data, uncovering an important directional relationship: while no long-term equilibrium exists between SME growth and exchange rate policies, unidirectional causality runs from exchange rate mechanisms to SME performance. This suggests that currency management approaches indirectly shape business outcomes.

Further reinforcing these findings, Osazevbaru (2021) demonstrated a cointegrating relationship between interest/exchange rate volatility and SME performance in Nigeria's informal sector. The research confirmed that currency instability creates sustained challenges for small businesses, particularly those with limited financial buffers. Uchechukwu and Adeyemo (2020) examined Delta State SMEs, revealing that exchange rate stability positively correlates with SME development. Their survey of 477 businesses showed that currency depreciation increases operational costs, particularly for firms reliant on imported materials.

However, not all research agrees on the magnitude of these effects. Akanbi and Kamaldeen (2020) conducted a longitudinal study (1981-2018) using ARDL methodology, finding that while inflation and interest rates significantly impact SMEs, exchange rate fluctuations show insignificant long-term effects when using wholesale/retail trade GDP contributions as performance proxies. Contrasting perspectives emerge from Oladimeji and Olaniyi (2020), who identified strong negative correlations between currency depreciation and SME growth.

Their analysis suggests exchange rate reductions significantly enhance SME performance, highlighting the sector's sensitivity to currency values.

This aligns with Atayi and Bosede (2020)'s finding that a 1% increase in exchange rate volatility corresponds to a 0.96% SME performance decline in the short term. On the other hand, Macro studies reveal how exchange rate fluctuations affect SME ecosystems. Omolehin and Adeyemo (2018)'s panel study of 174 Nigerian SMEs (2003-2013) demonstrated the dual nature of currency depreciation: while initially boosting export competitiveness through favorable pricing, the long-term effects prove detrimental due to rising import costs and inflationary pressures.

Expanding the geographical scope, Obwulu (2019)'s 50-country African analysis (1990-2015) established that exchange rate volatility negatively impacts economic growth, particularly in import-reliant nations with underdeveloped financial markets. This macro perspective helps explain why Nigerian SMEs face disproportionate challenges during currency fluctuations. Supporting evidence comes from Udoh et al. (2018) and Suleyman (2014), who emphasized how limited access to stable exchange rates constrains SME operations, particularly for import-dependent businesses facing supply chain disruptions.

3. Methodology

Theoretically, this paper adopted the Network theory of Johansson & Mattson (1988) which proposes the possibility of many firms been linked together in one or more foreign market networks by common source of supply, customer base, production process, sources of information, acquired knowledge, and other market criteria for mutual benefits. The population for this study comprises of various SMEs which are classified as either small scale enterprises or medium scale enterprises in Kaduna North Local Government Area. These enterprises cut across various sectors, including manufacturing, services, and trade. The focus on this population is justified by the significant role SMEs play in the local economy and their potential vulnerability to foreign exchange risks. The population for the study was 1000 registered SMEs in Kaduna North market. A sample of 278 SMEs was obtained by means of Krejcie and Morgan (1970) which was based on the formula;

$$\boldsymbol{s = X^2 NP\,(1 - P) \div d^2\,(N - 1) + X^2\ P\,(1 - P)}$$

Where;

s = 3.841; P = .50; d = .05; N = 1000 (population). Hence, s = 3.841 x 250 ÷ 2.4975 + 0.96025 = 960.25 ÷ 3.45775 = 277.71

Approximately**, S ≈ 278.**

The data collected were analyzed using descriptive statistics to summarize the data, and inferential statistics (regression analysis) to examine the relationship between foreign exchange fluctuations and SME performance, and Chi square test using Statistical Package for Social Science (SPSS). A simple Chi Square test was applied using the formular below:

$$\boldsymbol{X^2 = \sum\left(\frac{(O_i - E_i)^2}{E_i}\right)} \quad \text{---------- (1)}$$

Where:

X^2- Test statistics

O_i- the observed frequency

E_i – the expected frequency

4. Results and Discussion

The demographic characteristics of the respondents as depicted in the tables below shows that most of the respondents fall within the 18-30 years age group which is 46.3% and the least respondent are from the 50 and above age group which consist of 3%.

Table 4.1: Demographic Characteristics

Age bracket	**Frequency**	**Percent**
18-30	124	46.3
31-40	113	42.2
41-50	23	8.6
51 and above	8	3.0
Total	**268**	**100**
Gender of Respondents		
Male	194	72.4
Female	74	27.6
Total	**268**	**100.0**
Qualification of the respondent		
	Frequency	**Percent**
Primary	24	9.0
Secondary	65	24.3
Degree	110	41.0
Postgraduate	15	5.6
Informal	46	17.2
None	8	3.0
Total	**268**	**100**

Source: SPSS Output, 2024

Consequently, the Gender of the respondents shows that most of the respondent are male, consisting of 72.4% and the female consist of 27.6% of the total sample as can be seen in the table 4.1 above. From the table, it could be inferred that the SMEs in Kaduna North Local government market were runed and managed by mostly the male gender, while female business operators are few. On the educational level of the respondents, the results shows that 41% of the respondents are degree holders which is the highest category, while 3% of the respondents

have no any formal or Informal school qualification at all. To further buttress the above, most of the respondents operating SMEs are youth, as such they have one qualification or the other especially looking at the fact that Kaduna is a center of learning and it environ is characterized with higher institutions of learning such Kaduna Polytechnic, Ahmadu bello University Zaria Furthermore, most of the respondents spent between 6-10 years in business, this represent about 41.8% of the respondents who spent between 6-10 years in business and 22.8% of the respondents that spent between 11-15 years in there small-scale business as can be seen in the table below:

Table 4.2: Years in business of the respondents

Years in Business	Frequency	Percent
1-5 years	48	17.9
6-10 years	112	41.8
11-15 years	61	22.8
16-20 years	36	13.4
20 and above	11	4.1
Total	**268**	**100.0**

Source: SPSS Output, 2024

This is because our focus was small and medium scale business, the more years spent in a business the better the chances of it growing past small and medium scale. Furthermore, we assess the average monthly sales revenue of the respondents which shows that most of SME owners sampled for this research earned between N60,000 – N100,000 Naira monthly. This can be seen in the table below:

Table 4.3: Average monthly sales revenue of the respondents

Average monthly sales revenue	Frequency	Percent
< N10,000	26	9.7
N10,000 - 50,000	65	24.3
N60,000 - 100,000	103	38.4
N100,000 - 500,000	59	22.0
N500,000 and above	15	5.6
Total	**268**	**100.0**

Source: SPSS Output, 2024

The table above shows that the average monthly revenue of respondents in the market is between N60,000 – N100,000 which represents 38.4% of the total sample, a large number of respondents fall between this range because they are mostly small-scale businesses and the least is 100,000 and above as seen above due to lack of capital to boost business. **4.1 Extent of the impact of exchange rate fluctuations on the performance of SMEs in Kaduna North Local Government**

Consequently, the first objective of the research is to examine the extent of the impact of exchange rate fluctuations on the performance of SMEs in Kaduna North Local Government, to archive that, a question on significance of the exchange rate fluctuation on business was asked in the questionnaire and below is a graph of the responses recorded.

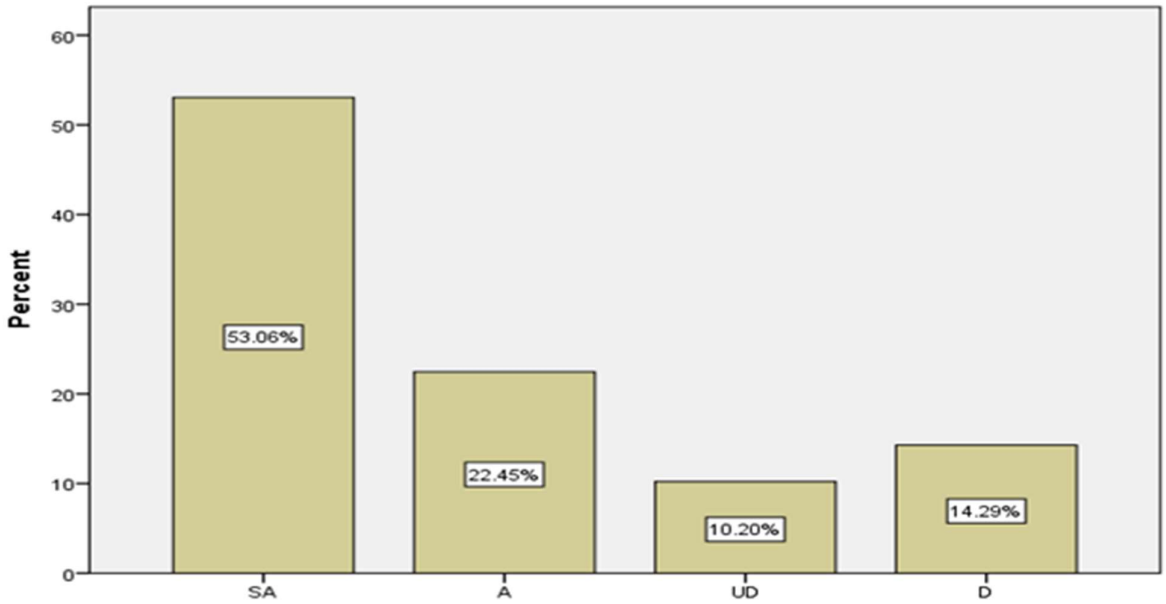


Figure 4.1: Effect of exchange rate fluctuation on SMEs performance
Source: SPSS Output, 2024

The graph indicates that 53.06% of respondents strongly agreed that exchange rate fluctuations have notably impacted the performance of small businesses, whereas 10.20% were uncertain about the effect. On average, it can be inferred that exchange rate fluctuations have significantly influenced small-scale businesses. For example, if the Naira depreciates by 10% against the US Dollar, the cost of imported goods could rise proportionately, thereby impacting profitability. Similarly, if the cost of imports increases by 15% due to exchange rate changes, SMEs may experience a reduction in profit margins unless they adjust their prices. Exchange rate fluctuations introduce considerable risks and uncertainties for small-scale businesses, influencing their costs, pricing strategies, cash flow, and overall market competitiveness. The impact can vary based on the business's reliance on international trade and its ability to adapt to economic shifts. Small-scale enterprises often lack the financial resilience to absorb such shocks, rendering them particularly susceptible to fluctuations in exchange rates (Oni & Ojo, 2020; Adegboye et al., 2021).

In addition, it was discovered that the nature of the impact of exchange rate fluctuations is majorly on sales output of small-scale businesses in the market using cross tabulation on SPSS, 187 respondents strongly agree that exchange rate fluctuations hurt their sales as it led to a decrease in sales volume, particularly since most of their customers are sensitive to price changes, while 61 respondents agree that it reduces sales volume. Consequently, 20 respondents strongly disagreed. This can be seen in the table below:

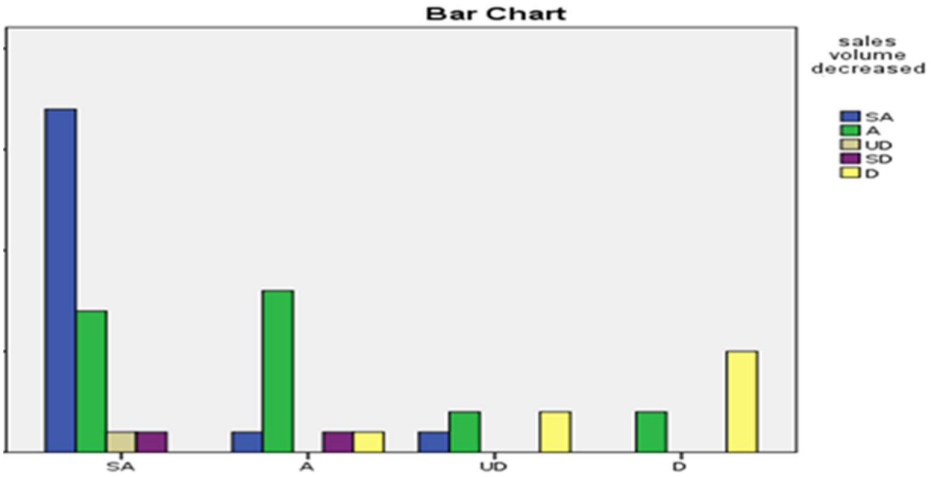


Figure 4.2: Nature of impact of exchange rate fluctuations

Source: SPSS Output, 2024.

4.2: Impact of exchange rate fluctuations on the development of indigenous small and medium-sized businesses

Similarly, the study examined the extent of the impact of exchange rate fluctuations on the development of indigenous small and medium-sized businesses in Kaduna North Local Government. A chi square test which measures the interdependence was employed to determine the effect, and the result is presented in the table below:

Table 4.7: Chi-Square Test result

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.204[a]	12	.000
Likelihood Ratio	37.321	12	.000
Linear-by-Linear Association	21.351	1	.000
N of Valid Cases	268		

a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .60.

From the table above, the P-value of the Pearson chi square test is 0.000 which is less than 5%, this implies that the development of indigenous small and medium sized businesses in Kaduna North Local government depends largely on exchange rate stability. However, the table below shows that about 83.6% of the development of SMEs in Kaduna North relies on exchange rate arrangements that favors the growth and development of SMEs. Exchange rate changes mess up small businesses in Kaduna North. When the Naira drops, stuff from abroad gets more expensive, making it harder for local businesses to make money. They have to raise their prices, but then customers might not want to buy. Managing money becomes a nightmare because they can't predict how much things will cost. They also struggle to get foreign exchange at good rates, making things worse.

Table 4.8: impact of exchange rate fluctuations on the development of indigenous SMEs

	Frequency	Percent
SA	157	58.6
A	67	25.0
UD	24	9.0
SD	9	3.4
D	11	4.1
Total	268	100.0

5.1 Conclusion and Recommendations

5.1 Conclusion

The study examined the impact of exchange rate fluctuations on the performance of Small and Medium Enterprises (SMEs) in Kaduna North Local Government. Sequel to the findings the paper concludes that fluctuations in exchange rates have a significant negative effect on various aspects of SME operations, including sales revenue, credit collection efficiency, and supply chain stability. Furthermore, the study also concludes that the development and sustainability of indigenous SMEs in the area is dependent on exchange rate stability. These insights underscore the vulnerability of local businesses to macroeconomic variables, particularly in environments where access to foreign currency and financial buffers is limited. Overall, the research highlights the critical importance of a stable exchange rate regime in fostering a resilient and thriving SME sector.

Several empirical studies support the conclusions drawn in this paper. For instance, Agesan (2020) found that exchange rate volatility negatively impacts firms' productivity and investment decisions, particularly affecting smaller enterprises that lack substantial financial resources. Larger firms, by contrast, tend to manage currency fluctuations better due to greater access to hedging options and foreign exchange, which reduces their vulnerability to such risks. This aligns with Aliyu's (2010) findings in Nigeria, where exchange rate volatility poses a significant challenge to SMEs, especially those dependent on imported goods and materials. Aliyu's research underscores that SMEs with limited forex access struggle more with exchange rate instability, which directly hampers their growth and performance, emphasizing the need for policy measures to stabilize currency markets.

5.2 Recommendations

Based on the above conclusion, this study recommends as follows:

i. The Government should implement policies aimed at stabilizing the exchange rate to mitigate its negative impact on SME performance. Ensuring a more predictable and stable exchange rate environment will enable SMEs to plan and operate more effectively.

ii. The Central Bank of Nigeria (CBN) should adopt more proactive and transparent exchange rate policies to minimize excessive fluctuations as a managed floating exchange rate system, with periodic adjustments based on economic fundamentals, could help stabilize the naira and reduce uncertainty for SMEs.

Government incentives (tax breaks, grants, and subsidies) should be provided to SMEs engaged in local production to reduce dependency on imports. This will encourage SMEs to source materials locally can reduce reliance on imports and make businesses less vulnerable to exchange rate fluctuations.

iii. The government should facilitate easier access to forex for SMEs, especially for those heavily reliant on imported inputs. This could involve creating dedicated forex windows or providing preferential exchange rates for SMEs.

iv. Training programs that focus on financial management, market diversification, and business strategy should be promoted to enable SMEs to navigate economic challenges such as currency fluctuations more effectively.

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