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# **Economic Environment of Small and Medium Scale Enterprises: Implications on Economic Growth in Nigeria**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Author LO designed the work and drafted the introduction. Author CUO wrote the literature review and author EC conducted the analysis and made the interpretations. All authors read and approved the final manuscripts.*

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## **ABSTRACT**

The complexities arising from the fluctuations of economic environmental factors have constituted core difficulties encumbering the operations of small and medium scale enterprises in Nigeria. This led to collapse of businesses, loss of jobs and unprecedented decline on their performance which is a cog on the wheel of economic growth. Therefore, this study titled economic environment of small and medium scale enterprises and its implications on economic growth in Nigeria was an attempt to explore the implications of economic environment of small and medium scale enterprises on economic development. The study employed a quantitative design with secondary data on SMEs performance, government tax revenue, exchange rate, interest rate and inflation rate, respectively. Ordinary Least Square (OLS) formed the basis for the estimation. The study found that exchange rate, inflation rate, interest rate and government tax revenue have negative relationship with SMEs performance. The implication of this negative relationship is that consistent increase in government tax revenue, exchange rate, inflation rate and interest rate have propulsive

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affect on performance of SMEs in Nigeria, vice versa and recommended that the federal government should come up with economic policy and regulatory framework that will maintain fixed exchange rate, interest rate and low inflation because stabilizing these economic variables would drive the operations of small and medium enterprises, as they will innovate, create and invent new things, products and services to stimulate productivity, which in turn, create resource-based economy.

*Keywords: Economic environment; inflation rate; exchange rate; interest rate; government tax revenue; SMEs performance.*

## 1. INTRODUCTION

Economic policies are action-driven statement of the government that explains workable strategies for sustainable economic growth [1]. Sustaining economic growth as observed by Drill [2] underscores the imperativeness of evidenced-based policy formulation that evolves from economic environmental factors that predict the economic stability of a given country. Economic environment is the totality of economic factors such as interest rate, exchange rate, inflation rate, income, unemployment, government tax revenue etc., which exert considerable influence on the performance of small and medium scale enterprises [3]. These economic environmental indicators according to Gabriel [4] are essentially strong indicators of economic stability of a country. The fluctuations of the aforementioned macroeconomic indicators as observed by Allen [5] have propulsive effect on the operations of small and medium scale enterprises. Similarly, Bernard [6] opines that economic instability of a given country affects the performance of small and medium scale enterprises and has a multiplier effect on the Gross Domestic Products (GDP).

Small and Medium Scale Enterprises (SMEs) play vital role in nation's economic development [7]. In Nigeria, small and medium scale enterprises account for about 70% of industrial employment and over 50% of the Gross Domestic Product [8]. Globally, SMEs contribute over 50 per cent to the Gross Domestic Product (GDP) in developed countries. In U.S.A., SMEs formed over 50 per cent of the non-farm private GDP and have generated 75 per cent job employment [9]. Schumpeter [10] believes that when economy is in recession, profit motivated entrepreneurs will innovate, create and invent new things, products and services to stimulate productivity and job creation, thereby increasing wealth of the nation, which heretofore engenders consumer confidence on the economy. Thus, the absence of consumer confidence in the economy

offers an explanation of low-capacity utilization by most organizations as they could not survive in a recessed economy [11]. Therefore, Small Scale Industry Development Plan [12] sees small scale business in Nigeria as any manufacturing process or service industry, with a capital not exceeding N150,000 in manufacturing and equipment alone. More so, the Small Scale Industries Association of Nigeria [13] sees small scale business as those having investment (i.e. capital, land, building, and equipment of up to N60, 000 pre-SAP Value) and employing not more than fifty persons. Companies and Allied Matters Act 1990, provides that a company qualifies as a small company in a year, if for that year the following conditions are met: it is a private company having a share capital, the amount of its turnover in a year is not more than two million naira, or such amount as may be fixed by the Corporate Affairs Commission (CAC), and the directors between them hold not less than 51% of its equity capital [14].

Small and medium scale enterprises operate in a dynamic environment, orchestrated by the interplay of various elements of the economic environment which interact in predicting their performance [15]. These interactions according to Pithom [16] could either make or mar the operations of small and medium scale businesses. Every business decisions are found to be contingent upon a good analysis of the environment which is often the bane of all the constraints as this environment creates the opportunities, threats and problems for the business organization [17]. Evolving from this is the belief that business organization is an integral part of its environment on the ground that they are mutually interdependent and exclusive, where the environment plays the role of providing the resources and opportunities to organization for its existence, and the business organization in turn, offers its goods and services to the people. From the foregoing, small and medium scale enterprise operators need to understand and

appreciate its environment as they proactively respond to it.

Small and medium scale enterprises operate in economic environment characterized with macro-economic factors such as inflation rate, exchange rate, interest rate and government tax revenue which interact on a regular basis in predicting their performance. The fluctuations of these variables according to Shielder [18] have a multiplier effect on the productive capacity of small and medium scale enterprises. This is predicative of the fact that these firms operate as an open system as they depend on the environment for their material-inputs needed for their operations and heavily rely on its environment for their output.

From the aforementioned, CBN statistical Bulletin [19] has succinctly shown the proportionate increase on inflation rate, exchange rate, and interest rate from 1970 to 2016 as: 0.23% to 17.65%, 0.564% to 18.2%, and 7% to 14.00%, respectively. More so, Federal Ministry of Finance [20] showed a detailed increase of government tax revenue from 1970 to 2016. These firms overtly rely on the environments for their raw-material inputs, as such, persistent increase on these variables make these firms to incur high production costs on their operations as their purchasing power are affected. This situation tends to affect their productive capacity and may have negative effect on their performance. Therefore, it would be difficult to determine the underlying net effect(s) of the interactions of these economic variables of inflation rate, exchange rate, interest rate and government tax revenue on the operations of small scale enterprises without research-based evidence, hence this study.

The general objective of the study is to determine the extent to which economic environment of small scale and medium scale enterprises relates to economic growth in Nigeria. Specifically, the study seeks to ascertain the extent to which inflation rate, exchange rate, interest rate and government tax revenue relate to the operations of small and medium scale enterprises in Nigeria.

## **2. REVIEW OF RELATED LITERATURE**

### **2.1 Conceptual Issues**

#### **2.1.1 Economic environment**

Economic environment consists of those economic parameters that directly or indirectly

influence the performance of small scale businesses in Nigeria, it include inflation rate, exchange rate, interest rate, government tax revenue, etc. Asiedu [21] affirms that economic stability is the attainment of price stability, low inflation, fixed exchange rate, interest rate and maintaining full employment on the economy. Mathew [22] opines that economic environment exerts considerable influence on the operations of small scale enterprises. He, however, suggested that firms must have holistic knowledge or understanding of the interactions of these variables in order to make pertinent decisions. The reality and relevance of understanding the complexities of economic environment underscores the nitty-gritty of proactive management which is quintessential for superior performance.

#### **2.1.2 Government tax revenue (GTR)**

This is a proportionate measure of total tax revenue that is collected by government through taxation [23]. Tax includes personal and corporate income taxes, value added taxes, excise taxes, and tariffs. This is a measure of total tax revenue which explains the income received by the government through tax. Therefore, it is a fee charged by government on products produced, income and businesses. Multiple-taxation on small and medium enterprises as observed by Tolu [24] affects their operations especially on their purchasing power. When the purchasing power of these firms is affected, their productive capacity is also affected and the resultant effect is decline in gross domestic products.

#### **2.1.3 Exchange rate (EXR)**

Exchange rate is the rate at which the naira is converted to another currency [25]. It is measured as domestic price x nominal exchange rate x 1 divided by foreign price. Exchange rate is expected to have either positive or negative effect on the economy. High exchange rate culminates to hike in price of raw material inputs used for their production. James [26] averred that price increase on raw-materials transient to increase per unit cost on their production. It is therefore expedient to note that since exchange rate has propulsive influence on the performance of small scale enterprises, they should take abreast of the economic environment for effective decision making, since it is external to them [26,27]

#### **2.1.4 Interest rate (INTR)**

This is the proportion of a loan that is charged as interest to the borrower. It is expressed as an annual percentage of the loan outstanding. Interest rate is the amount charged, expressed as a percentage of principal, by a lender.

#### **2.1.5 Inflation rate**

Inflation rate is a sustained increase in the general price level of goods and services in an economy over a period of time. Consequently, inflation reflects a reduction in the purchasing power of individuals as well as small scale businesses per unit of money on the economy. More so, inflation rate is a tool for measuring the stability of the economy. A country with a consistently lower inflation presents a suitable economy that favors the activities of small scale enterprises in the country [20,28].

#### **2.1.6 SMEs performance**

The objective of SMEs is not only to gain competitive advantage but to improve on its operations toward the attainment of organizational goal. SMEs performance could be sustained through effective thru-put system to improve their output. Veer [29] argues that most SMEs strive to strengthen their supply-chain channels to improve on their sales, thereby enhancing their performance. Improved sales through supply-chain interconnectivity are one of the construct measurements of performance which must be entrenched for effective flow of products from the manufacturer down to the ultimate consumers. In addition, Jerill [30] sees SMEs performance as the nexus between effective cost and realized output and also relationship between output and results achieved over a period of time.

More so, enterprise performance explains how organization successfully appropriates their resources in meeting the demands of the changing environment. Thus, efficiency in resource allocation, utilization and mobilization that result to improved performance is referred to as improved performance. For organization to achieve enhanced performance, every segment of the organization must work in synergy that has collective effect on the output, rather than individual output [31]. Therefore, SMEs performance is measured succinctly with the registered products and services produced over

the years by SMEs. This is SMEs specific relative to gross domestic products (GDP).

### **2.2 Empirical Review**

Adeoye [32] studied impacts of External Business Environment on Organizational Performance in the Food and Beverage Industry. The study was designed to evaluate the implications of external business environment on organizational performance in Nigeria. The study used descriptive research design of which structured questionnaire was administered to sample of one hundred and fifty (150) drawn from three companies in Nigeria. The data collected were analyzed with multiple regression. The result revealed that external environment factors (political, socio-cultural, economic and technology) have considerable affect on the performance of these organizations and concluded that organizations should pay adequate attention on the business environment through periodic scanning of the environment to cushion the effect on business performance.

In the same vein, Imoisi and Ephraim [33], studied Small and Medium Scale Enterprises and Economic Growth in Nigeria. The objective of the study was to explore the effects of small and medium scale enterprises on economic growth in Nigeria, from 1975-2012. The study employed ex-facto research design, of which secondary data were used. Ordinary least Square, co-integration and error correction models were employed on the study. The result of the findings revealed that money available to SMEs has a positive relationship between economic growth, while interest and inflation rate revealed a negative and positive influence on economic development. The study concludes that those economic environmental factors play a vital role in ascertaining the implications of SMEs on economic growth in Nigeria.

Rotimi [34] studied the implications of environmental factors on performance of small scale enterprises in Nigeria. The study was designed to ascertain the effect of high exchange rate on performance of small scale enterprises. Secondary data was obtained from Central Bank of Nigeria (CBN) and ordinary least formed the basis for estimation. The study found that high exchange rate affects the performance of small scale businesses in Nigeria, and therefore concludes that federal government should come up with stringent policy and regulations that will maintain

exchange rate in an attempt to create enabling environment for small scale businesses to thrive. The study recommends that federal government through its agencies should look into the key sectors of the economy and create a sustained framework that will stabilize the economy in order to enhance the performance of the small scale businesses in Nigeria.

## **2.3 Theoretical Framework**

### **2.3.1 Keynesian economic theory**

Keynesian Economic Theory was propounded by Keynes [35]. This theory believes that small scale enterprises play a vital role in the economic development of a country. The theory inferred that government can entrench economic stability through efficient financial disbursement to small scale enterprises via micro finance banks. The theory opines that the operations of small scale enterprises drive when the government makes the environment conducive. The government intervention in ensuring a conducive economic environment for the small scale enterprises must ensure efficient allocation of resources, regulation of markets, and stabilization of policies on those economic factors that interact on the operations of small scale enterprises.

Keynes assumes that small scale enterprises drive in a conducive environment where there are policies that maintain fixed interest rate, exchange rate and inflation rate that could have propulsive effect on the operations and therefore, the ability of these firms to understand its environment of operations taking cognizance of the dynamism in the business environment will not only make them proactive to the changing environment but make pertinent decisions that enhance their performance. The following are the assumptions of the theory:

- i) The theory assumes that small scale enterprises operate in environment orchestrated by the interplay of various elements of the environment. Therefore, small scale operators should take abreast of its economic environmental factors, though external to them, but help them to be proactive in their operations.
- ii) The theory also assumes that small scale enterprises drive in stable economic environment where there are fixed exchange rate, interest rate, inflation rate etc.

### **2.3.2 The Schumpeterian theory on innovation**

Schumpeter theory of Economic Development on Innovation was propounded by Schumpeter [36]. The theory believes that individuals with mental and creative ability to convert innovative ideas to economically viable products or services that meet the demands of the people. This assertion is premised on the fact that business environment changes over-time and exerts considerable influence on the performance of businesses. The theory argues that entrepreneurs are risk-takers and their innovative ideas are orchestrated based on their pro-activeness on the environment. Although, environmental factors are succinctly external to them but responding to the environmental factors calls for holistic understanding on the interplay of those factors for sound decision making. The theory opines that being proactive to the business environment helps entrepreneurs to secure and sustain greater operational effectiveness that afford them greater leverage for improved performance. However, the theory describes entrepreneurs as visionary change management agents who introduce new economic activity that leads to a change in the market. Consequently, the creative activity of the entrepreneur is independent of the organizational or legal setting in which he/she may work. Second, entrepreneurship is not a profession and it is not a long-lasting state. The kind of business an entrepreneur is doing perhaps does not matter, what matters is linking the markets needs with innovation. Third, Schumpeter portrayed entrepreneurship as individual that add values to their businesses. For instance, carving an inch in the market place that distinguishes you from others. The entrepreneur breaks up with established practices and destroys the status quo while moving the market forward in a different direction.

Entrepreneurs are agents of change, creating chaos by disrupting the status quo in constructive ways to instigate new products, processes or knowledge. The forgoing is essentially premised that innovation is the hallmark of entrepreneurship. The theory contends that innovativeness and creativity as a hallmark of entrepreneurship play a crucial role in defining business performance. Schumpeter had linked innovation and inventions to the entrepreneur. The theory states that when the economy is in distress, profit motivated entrepreneurs will innovate, create and invent new things, products

and services to stimulate productivity and job creation, thereby increasing wealth and profit. The theory assumed that there are prevailing economic parameters that interact within the environment of business operations and those parameters could be control when entrepreneurs innovate and invent new things to revamp the economy.

### **2.3.3 Resource-based theory**

Resource Based theory was propounded by Penrose [37] in her work, "The theory of the Growth of the firm". Resource based theory conceptualized organizations from two perspectives which are resource diversity and resource immobility in order to have a clear picture on the dimensions resources could be appropriated to achieve competitive edge in the business environment. Resource diversity stems when organization possesses resources or capabilities that are ubiquitous and could not sustain competitive advantage in the market place. While resource immobility laid emphasis on that capabilities, resources, operational dexterity, skills and working strategies that are not common which perhaps distinguished business operators from others. The theory believes that when entrepreneur(s) possess the aforementioned characteristics that they can strategically allocate resources in a sustainable manner in meeting the demands of the environment. Resource based theory holds that businesses are facilitated especially when entrepreneurs have unique capabilities, resources and operational skills that enable them acquire and deploy resources effectively.

The theory argued that it is only with appropriate resources and capabilities that can be deployed in a sustainable manner over a long term that entrepreneurs achieve sustainable competitive advantage and success. The theory holds that an entrepreneur achieves resounding success when there is good understanding of the resource potentials, through good vision, intuition and creative act, an entrepreneur chooses a particular business where resources that are valuable, rare, hard to copy and resources that are non-substitutable, the entrepreneur will not only be able to succeed but enjoy long term competitive advantage and economic success. Without sustainable competitive advantage entrepreneurs successes are ephemeral as competitors quickly obliterate the successful outcome of the initial effort.

The theory laid emphasis on the need for an entrepreneur to possess the required capabilities and resources as prerequisite condition necessary for achieving a sustained competitive advantage. The aforementioned addresses the need for small scale enterprises to be proactive giving the changing business environment. In the light of the foregoing, small and medium scale businesses that wish to survive in a changing business environment must possess an exceptional skill that would guarantee good understanding of the economic environment in attempt to achieve a sustained competitive advantage.

### **2.4 Theoretical Synthesis**

Aligning the three theories that underpinned this study, the Keynesian economic theory believes that the operations of small and medium scale businesses drive in a conducive environment where there are stringent policies that stabilize those environmental factors. The theory emphasizes the need for small and medium scale operators to take abreast of its environment since it is always in the state of flux. It is on that note that they can make pertinent decisions on the allocation of resources for the desired performance. On the other hand, Schumpeter theory of economic development on innovation also acknowledges the dynamic nature of business environment and suggests that entrepreneurs may overtly subscribe to environmental demands, when they have mental and creative ability to transform innovative ideas to economically viable products or services that meet the demands of the society at profit. The theory holds that possessing creative ability as small and medium scale business operators would help them to innovate, create and invent new things, products and services to stimulate productivity thereby making the economy resource-based economy. While Resource based theory believes that entrepreneur who possess unique capabilities, resources, operational dexterity, skills and working strategies that are not common can allocate resources in a sustainable manner given the dynamism of the environment.

From the foregoing, the three theories shared the same belief on the dynamism of business environment, as a result, exerts considerable influence on their operations. The study considers Schumpeter theory of economic development on innovation as the one that fit most to the present study. This is because the

theory did not only appreciate the dynamism of the environmental factors but subscribed to the imperativeness of possessing mental and creative ability in transforming innovative ideas into viable products that meet the demands of the environment. It therefore implies that ability to create and invent new things that meet the demands of the environment buoy their performance. An entrepreneur should possess such creative skills and mental capability to see business opportunities where others do not see and create sustainable framework for competitive advantage.

### 3. METHODS

The study employed a quantitative research design. This design attempt to build mathematical model that would explore the relationship among the modeled variables. In order to determine the predictability of the economic environment of small and medium enterprises on economic growth, the study employed regression model. Secondary annual data from 1970-2016 on inflation rate, exchange rate, interest rate, government tax revenue and SMEs performance were respectively obtained from Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics. The study carried preliminary diagnostics test of model validity on Anderson Darling Normality test on the chosen variables, correlation test, auto-correlation test, and homoscedasticity was tested with Levene test of homogeneity of variance. Conducting these tests is to ensure that the study satisfy the conditions of regression analysis. Ordinary least Square formed the basis for the estimation of the regression model.

#### 3.1 Model Specification

The multiple regression models would estimate the effects of economic environment of small and medium enterprises on economic growth in Nigeria. The study adopted Euler's theorem on SMEs performance ( $SMEs_p$ ). Theoretically, the statistical/economic relationship according to Euler's [38] states that:  $SMEs_p = f(X_1, X_2, X_3, X_4, \dots, X_n)$ . These explanatory variables represent those economic environmental parameters that interact within the environment of small scale operations.

For simplification, if the economic variable components are represented as  $X_1, X_2, X_3,$  and  $X_4,$  respectively, for inflation rate, interest rate, exchange rate and government tax revenue, respectively. It is pertinent to note that these are

economic prevailing parameters, whose values will be deduced from Central Bank of Nigeria. Based on the aggregative nature of the aforementioned,  $X_1, X_2, X_3,$  and  $X_4,$  respectively, shall be used to decompose values of these parameters. Thus, it will be expressed as:

$$SMEs_p = X_1 + X_2 + X_3 + X_4, \quad (1)$$

Generally, Equation 1 is additive. In order to use Equation 1 to predict the implications of  $X_1$  on  $SMEs_p,$   $X_2$  on  $SMEs_p,$   $X_3$  on  $SMEs_p,$   $X_4$  on  $SMEs_p$  and the sum of  $X_1, X_2, X_3,$  and  $X_4,$  on  $SMEs_p, X_i, i = 1, 2, 3, 4,$  becomes a function of inflation rate, interest rate, exchange rate and government tax revenue, respectively. Therefore, the general function becomes:

$$SMEs_p = f(INF, INT, EXT, GTR) \quad (2)$$

Where:  $SMEs_p$  is small and medium scale business performance, INF is inflation rate, INT is interest rate, EXT is exchange rate, and GTR is government tax revenue. Estimating Equation 2 should basically require the introduction of stochastic error term in order to minimize the variance of the scores. Therefore, Equation 2 may specifically be rewritten as:

$$SMEs_p = \beta_0 + \beta_1 INF_1 + \beta_2 INT_2 + \beta_3 EXR_3 + \beta_4 GTR + \mu_1 \quad (3)$$

Where:

- $SMEs_p$  = Performance
- INF. = Inflation rate
- INT. = Interest rate
- EXR. = Exchange rate
- GTR = Government tax revenue
- $\beta_0$  = Intercept
- $\beta_1 - 4$  = Parameters to be estimated
- $\mu_1$  = Stochastic error term

However, Equation 3 may be estimated in an attempt to discover the effects of those economic environmental factors on small scale performance. Series of factors have been identified in literature to influence performance of small scale enterprises.

## 4. PRESENTATION AND ANALYSIS OF DATA

### 4.1 Regression Diagnostics

#### 4.1.1 Results on normality test

The normality test in Table 1 showed the Anderson Darling Normality test on all the variables in ascertaining the degree, they could

affect the results. Normality tests are employed in an attempt to determine if a data is well-modeled by a normal distribution. From Table 1 above, the Anderson darling normality test shows that all the variables are normally distributed.

The correlation analysis in Table 2 showed that all the explanatory variables have significant negative relationship with the performance of small and medium scale enterprises. The implication of the aforementioned is that any percent increase on the environmental factors result to proportionate decline on the performance of these businesses. In order words, the economic environmental factors have linear relationship with the performance of these firms. Euler's (1987) observed that the stabilization of these factors would create a sustainable framework through which the operations of small and medium scale enterprises will thrive, thereby stimulating the economy.

**4.2 Test for Autocorrelation (Durbin-Watson)**

The result of Durbin-Watson is used to detect the presence of auto-correlation. The upper and lower limits of Durbin-Watson, at 5% level of significance, 47 observations, with four explanatory variables are 1.709 and 1.889. The computed Durbin-Watson is 1.912. Since, computed DW > D<sub>u</sub>, the study concludes that is no evidence of positive first order correlation.

The assumption of homoscedasticity was tested with Levene test of homogeneity of variance. The

residuals is the same for all values of the explanatory variables, yielded Levene statistic of 1.064, p=0.390 which is greater than the required alpha level of significance of 0.05. Therefore, the assumption of homoscedasticity was satisfied.

**5. RESULTS**

R<sup>2</sup>= 0.67, D/W = 1.912

$$SME_{Sp} = 1.23654 - 0.388X_{GTR} - 0.862X_{EXR} - 0.539X_{INTR} - 0.019X_{INFR} \quad (4)$$

Table 3 shows the macro-economic environment (coefficient) of small and medium enterprises in Nigeria. The four explanatory variables of X<sub>GTR</sub>, X<sub>EXR</sub>, X<sub>INTR</sub> and X<sub>INFR</sub> represent government tax revenue, exchange rate, interest rate and inflation rate that interact within the environment of business operations in Nigeria. The coefficient of the constant term is 1.23654 and shows where the economic environmental factors intercept the Y axis. This implies holding these predictors constant, the performance of small and medium scale enterprises will increase by 1.2%, and it is statistically insignificant as shown in Table 3. However, the infinitesimal increase is due to extraneous factors outside the modeled environmental factors that could possibly influence the performance of small and medium enterprises.

The regression coefficients of X<sub>GTR</sub>, X<sub>INFR</sub>, X<sub>EXR</sub>, and X<sub>INTR</sub> variables have negative signs on the performance of small and medium scale enterprises and their related t-values are

**Table 1. Result of Anderson darling normality test on the variables**

Variables	Skewness	AD (Probability)	Normality distribution
SME <sub>Sp</sub>	0.329004	2.907862(1.200912)	Yes
GTR	0.432211	1.047254(0.011254)	Yes
EXR	0.299832	1.094532(0.654932)	Yes
INTR	0.107651	3.629671(0.321970)	Yes
INFR	0.118943	1.882653(0.118638)	Yes

Source: Computed by the researcher

**Table 2. Correlation results**

	SME <sub>Sp</sub>	GTR	EXR	INTR	GTR
SME <sub>Sp</sub>	1.000	-0.112	-0.103	-0.077	-0.324
GTR	-0.112	1.000	-0.078	-0.017	-0.039
EXR	-0.103	-0.078	1.000	-0.002	-0.100
INTR	-0.077	-0.017	-0.002	1.000	-0.442
INFR	-0.324	-0.039	-0.100	-0.442	1.000

Source: Extracted from SPSS 20.0  
Correlation is significant at 0.05 level



**Table 3. Macro-economic coefficients of small and medium enterprises**

Dependent variable: SMEs<sub>p</sub>  
 Method: Least squares  
 Sample: 1970-2016  
 No of observations 47

Variable	Coefficient	St. error	Beta	t-statistics	Prob.
(Constant)	1.23654	2.2472		4.917	.071
X <sub>GTR</sub>	-.388	.047	.120	1.560	.000
X <sub>EXR</sub>	-.862	.561	-.049	31.876	.000
X <sub>INTR</sub>	-.539	.022	-.272	1.745	.000
X <sub>INFR</sub>	-.019	.024	.444	2.835	.060

Source: Analysis of research data (2017)

statistically significant at 5% level of significant. This implies that government tax revenue, exchange rate interest rate have a significant effect on their performance. The implications are: per unit increase of government tax revenue will contribute substantially to a significant decrease on their performance by 4%, in so far as X<sub>EXR</sub>, X<sub>INTR</sub> and X<sub>INFR</sub> are hold constant. More so, a unit increase on exchange rate will also contribute to significant decrease of 86% on the performance of small and medium scale enterprises, a unit increase on interest rate will contribute substantially to decrease by 54% significantly on their performance and per unit increase on inflation rate will lead to substantive decrease by 2% on performance and it's also statistically insignificant as revealed in Table 3.

**6. CONCLUSION**

From the findings, the study concludes that economic environmental factors such as government tax revenue, exchange rate, interest rate and inflation rate have significant negative effect on the operations of small and medium enterprises. The implication of this negative relationship is that consistent increase in government tax revenue, exchange rate, interest rate and inflation rate will result to attendant decline on the performance of SMEs in Nigeria, vice versa. Consistent decline on the performance of SMEs would have a negative effect on the gross domestic products and thus resulting to economic quagmire crisis. The study provided evidence that these macro-economic parameters predict the performance of small and medium enterprises and therefore points to the need for federal government and policy makers to pay greater attention to government tax revenue, exchange rate, interest rate and inflation rate in stabilizing the economy. The imperativeness of stabilizing these economic environmental factors in revamping the economy

cannot be over-emphasized especially given the prevailing economic quagmire in Nigeria.

**7. RECOMMENDATIONS**

The federal government should come up with economic policy and regulatory framework that will maintain fixed exchange rate, interest rate and low inflation. Stabilizing these economic variables would drive the operations of small and medium enterprises, as they will innovate, create and invent new things, products and services to stimulate productivity, which in turns, create resource-based economy.

The federal government should equally look at issues relating to tax revenue and address the problems of multiple-taxation on small and medium enterprises in Nigeria. Reduction of tax imposition on small and medium enterprises would enhance their purchasing power to diversify their businesses and this may equally attract foreign investors, to invest on the economy, thereby creating job employment as the economy would be stimulated.

Government should evolve in effective spending on strategic area with multiplier effect such as agriculture and manufacturing sector to encourage made in Nigeria products. The Nigeria government needs to increase her productive capacity (made in Nigeria products) to improve her export earnings.

**COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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**Appendix A: Data collected for the analysis**

Year	SMEs	GTR	EXR	INTR	INFL	UNP
1970	0.32	467.4	0.564	7	0.23	4.8
1971	1.45	658.7	0.564	7	0.23	5.3
1972	2.13	640.8	0.551	7	0.24	5.2
1973	1.88	679.3	0.505	7	0.28	5.2
1974	1.01	813.4	0.6	7	0.31	4.6
1975	2.01	1243.2	0.632	6	0.46	3.8
1976	0.18	1400.7	0.641	6	0.5	4.3
1977	1.44	1961.8	0.6466	3.25	0.66	4.9
1978	0.25	2815.2	0.606	4.25	0.7	5.3
1979	0.22	2031.6	0.5957	5.5	0.75	5.1
1980	1.61	15,233.50	0.5464	6.5	10	6.4
1981	1.91	13,290.50	0.61	6.5	21.4	5.2
1982	2.09	11,433.70	0.6729	8	7.2	4.3
1983	2.20	10,508.70	0.7649	10	40.7	6.2
1984	2.12	11,253.20	0.7649	10	40.7	6.2
1985	1.23	15,050.40	0.8938	10	4.7	6.1
1986	1.26	12,595.80	2.0206	10	5.4	5.3
1987	0.24	23,380.60	4.0179	15.8	10.2	7
1988	1.49	27,596.70	4.5367	14.3	56	5.1
1989	1.52	53,870.40	7.3916	21.2	50.5	4.5
1990	0.21	98,102.4	8.0378	23	7.5	3.5
1991	0.30	100,991.60	9.9095	20.1	12.7	3.1
1992	1.46	190,453.20	17.2984	20.5	44.8	3.5
1993	2.18	192,769.40	22.0511	28.02	57.2	3.4
1994	1.84	201,910.80	21.8861	1.5	57	3.2
1995	1.05	459,987.30	21.8861	14.27	72.8	1.9
1996	2.06	523,597.00	21.8861	13.55	29.3	2.8
1997	0.13	582,811.10	21.8861	7.43	10.7	3.4
1998	1.47	463,608.80	21.8861	10.09	7.9	3.5
1999	0.28	949,187.90	92.6934	14.3	6.6	17.5
2000	0.22	1,906,159.70	102.1852	10.44	6.9	18.1
2001	0.43	2,231,600.00	111,9433	10.09	18.9	13.7
2002	0.24	1,731,837.50	120,9702	15.57	12.9	12.2
2003	1.01	2,575,095.90	129,3565	11.88	14	14.8
2004	1.57	3,920,500.00	133,5004	12.21	15	11.8
2005	1.20	5,547,500.00	132,147	8.68	17.8	11.9
2006	0.60	5,965,101.90	128,6516	8.26	8.2	12.3
2007	0.25	5,715,600.00	125,8331	9.49	5.4	12.7
2008	0.86	7,866,590.10	118,5669	11.95	11.6	14.7
2009	1.94	4,844,592.34	148,9017	13.23	12.4	19.7
2010	2.47	7,303,671.55	150,298	7.58	13.7	21.1
2011	0.43	11,116,900	154,18	8.56	14	23.9
2012	1.72	10,654,724.87	155,75	9.43	7.8	23.9
2013	1.51	12,542,765.60	160,65	10.52	8.2	24
2014	0.59	12,976,564.90	162,75	11.12	12.43	24.6
2015	0.01	13,564,810.56	172,65	11.65	12.54	25
2016	-0.07	14,431,901.76	180,3	14	17.78	26

Source: Central Bank of Nigeria (CBN), National Bureau of Statistics (NBS)

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