

# Leadership in Small and Medium Scale Enterprises (SMEs), Inflation and Economics Development in Nigeria (1981-2021)

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**Abstract:** *One of the important components of economic development which contributes to the growth of the population employment level is the increase in the country's export potential, development of domestic market of goods and services and small and medium – sized entrepreneurship. It plays special role in the filling of state budget in countries with low and medium level of economic development. The purpose of this paper is to model the relationship between the level of economic development of the country as an indicator of the functioning of small and medium-sized enterprises, assessment of the impact of inflation on the level of economic development. The information base of the research is the data of the World Bank, National Bureau of Statistics of Nigeria, and annual statistical bulletin of the Central Bank of Nigeria. The object of the study is indicators of the functioning of small and medium-sized enterprises and economic development in Nigeria, the period of study is 1981-2021. As dependent variables characterized by the development of a small and medium- sized enterprise, the volume of income per unit of capital was chosen and the GDP was chosen as an indicator of the country's economic development. Factor variables are characterized by the relationship between the development of small and medium-sized enterprises and the economic development of Nigeria. These include gross capital formation, interest rate, exchange rate and inflation rate. The methodological tools for researching the relationship between the analyzed indicators are the method of estimating the autoregressive distributed lag, the extended Dickey Fuller test and Granger test. According to the results of econometric modeling, the negative impacts of the growth of the exchange rate and the level of inflation on the development of the Nigerian economy has been proven. Thus, a 1% increase in exchange rate would lead to a 0.01% decrease in GDP, while a 0.01% decrease in inflation would be accompanied by an increase in GDP of about 1%. At the same time, gross capital formation exerts a positive and statistically significant influence on the volume of GDP (an increase of 1% will lead to an increase of GDP by approximately 7%). Based on the results of the research, it was concluded that stimulating the growth of investment in small and medium- sized enterprises by simplifying access to credit resources, infrastructure development and capacity building is a prerequisite for long- term socio- economic development of Nigerians.*

**Keywords:** small and medium entrepreneurship, economic development, inflation, gross capital formation and exchange rate.

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# Leadership in Small and Medium Scale Enterprises (SMEs), Inflation and Economics Development in Nigeria (1981-2021)

## 1. Introduction

Small and medium-scale enterprises are businesses whose personnel and revenue numbers fall below a certain limit. According to Onakoya, Fasanya, and Abdulrahman (2013), small and medium-sized firms are the foundation upon which major corporate organisations are built. Olaye, Adedeji and Ayeni-Agbaje (2018) established that they are key tools industrialised countries use to achieve socio-economic growth. It is significant in promoting entrepreneurship and competition, which brings about external benefits for development, inventions and cumulative economic productivity growth. In addition, it raises employment levels faster than larger companies since they are labour-intensive. It is also affirmed by UNCTAD (2001) that countries with high rates of small and medium-scale enterprises have succeeded in making income distribution more equitable. The purpose of small and medium-scale enterprises can be established with a certain emphasis on investment and employment to reduce the rate of unemployment and poverty.

Due to their versatile organizational structures and important contributions to nation-building, the growth of small and medium-sized firms has been a goal for many governments worldwide. (Aderemi et al., 2019; Tehseen and Ramayah, 2015; Kayadibi et al., 2013; Khalique et al., 2011). Due to the significance of small and medium enterprises to the global economy, the contribution of SMEs to the growth and development of an economy has drawn widespread interest and research, particularly in developing nations (Muritala et al., 2012; Offor, 2012). Small-scale industry is now viewed as the foundation of the contemporary economy. According to historical evidence, small and medium-sized firms, primarily cottage industries, dominated the European economy before the late 19th century (Aremu, 2010). In developing nations like Nigeria, small to medium-sized enterprises significantly impact growth and development.

Muritala et al. (2012) claim that the impact of SMEs on economic growth and development is felt through increased use of local raw materials, employment creation, promotion of rural development, growth of entrepreneurship, mobilization of local savings, connections with more significant industries, provision of regional balance by more evenly distributing investments, provision of an avenue for self-employment and provision of opportunity for manager training. As a result, small and medium-sized businesses have been viewed as a growth engine (Eze and Okpala, 2015). Existing research, as referenced by Eze and Okpala (2015), showed that small and medium companies (SMEs) growth should be viewed as attempts to attain a more significant economic and socio-economic purpose, including reducing poverty. Small and medium-sized businesses (SME) are responsible for driving the growth of their nation by generating jobs and adding to the GDP (Anyanwu, 2001; Ayozie and Latinwo, 2010; Kuteyi, 2013; Muritala et al., 2012).

Despite the perceived impact of Small and Medium Enterprises on the growth and development of an economy as observed in the literature, and also the government effort at promoting SMEs in the country, the impact of SMEs on Gross Domestic Product in Nigeria is reported to be low (Adeloye, 2012; Yusuf and Dansu, 2013), which affects all other aspects of the economy despite the literature's perception of their influence on the growth and development of an economy and the government's efforts to promote SMEs in the nation. Despite all the government's federal, state and local efforts to support the growth of SMEs in Nigeria, Eze and Okpala (2015) encapsulate the latent issue by claiming that SMEs continue to fail. However, to start and maintain economic growth, most industries and emerging nations depend on small and medium-sized businesses' energy, resourcefulness and risk-taking.

The World Bank defines SMEs as companies employing up to 300 people. Nigerian law defines small and medium-sized businesses as those with less than 50 employees. Basically, these businesses are independently owned and controlled, invest in machinery and equipment of less than or equivalent to 600,000 naira, and do so to create jobs and achieve sales standards (CBN, 2018). 90% of Nigeria's enterprises were made up of these corporate organizations (Gbandi and Amisah, 2014). According to the National Bureau of Statistics (NBS), there are 41.4 million SMEs in Nigeria.

According to an OECD poll, small and medium-sized enterprises (SMEs) account for between 96 and 99% of all businesses in member nations and continue to employ more people than major corporations. Small and medium-sized enterprises (SMEs) are essential for long-term growth and prosperity, so emerging economies like Nigeria constantly take urgent steps to support their expansion and survival. These measures frequently take the form of legislative recommendations and the creation of organizations and agencies that will

guarantee the funding and support of small firms. Small and medium-sized enterprises (SMEs) are said to foster innovation, international fiscal advantages, and increased productivity. It is also asserted that SME productivity is much higher than that of major firms despite the banking system and other institutional flaws inhibiting their development (Alese and Alimi, 2014). However, financing (lack of access to funding) and high tax rates are the key obstacles for SMEs in emerging economies like Nigeria. Commercial banks lend less to SMEs to reduce risk exposure because most small and medium-sized firms do not demonstrate excellent profitability prospects, particularly in the early years of their business's existence (Ilegbinosa and Jumbo, 2015).

According to Keynesian Economics, the government should raise demand to spur economic growth. According to Keynesians, consumer demand is an economy's main engine. Therefore, the hypothesis is in favour of an expansionary monetary policy. Government spending on infrastructure, unemployment benefits and education are its key tools. Overusing Keynesian programs has the disadvantage of raising inflation. In "The Basic Principles of Occupation, Dividends, and Money", Keynes outlined in his thesis. When it was released in February 1936, it was innovative. First, it made the case that government expenditure significantly contributed to overall demand. That implied that rising spending would spur rising demand. Second, Keynes contended that to keep full employment, government investment was essential. Keynesian Theory Keynes promoted deficit spending during the business cycle's contractionary stage. Keynesian economists advocate increasing taxes to slow the economy down when there is inflation. This tactic, however, is less effective during "stagflation" periods when inflation and an already weak economy are combined. The macroeconomic theories of Keynesian economics explain how, in the short run and particularly during recessions, total economic spending significantly impacts economic production. According to the Keynesian perspective, aggregate demand is impacted by various factors and occasionally exhibits erratic behavior, which impacts output, employment, and inflation. It also does not always match the economy's productive potential.

During the Great Depression of the 1930s, existing economic theory could not explain the causes of the severe worldwide economic collapse or provide an adequate public policy solution to jump-start production and employment. John Maynard Keynes, a British economist, led a shift in economic theory that disproved the dominant notion that free markets (classical) would perpetually produce full employment. The central tenet of Keynes's theory, which bears his name, is the claim that the most significant economic driver is aggregate demand, which is calculated as the sum of consumer, business and government spending. Keynes argued further that no self-balancing processes in open markets produce full employment. Keynesian economists use public policies that seek to attain full employment and price stability to defend government intervention.

Keynes contended that lengthy periods of high unemployment could result from a lack of overall demand. The total of an economy's four factors: consumption, investment, government purchases, and net determine the output of products and services. One of these four components must be the source of any growth in demand. However, powerful forces frequently depress demand as expenditure decreases during a recession. For example, uncertainty typically weakens consumer confidence during recessions, which causes people to reduce their spending, especially on opulence like an apartment or vehicle. Businesses may spend less on investments due to customers spending less of a need for their products. As a result, the government is now responsible for raising outputs. Keynesian economics holds that government intervention is required to control the business cycle or the ups and downs in economic activity. Solow growth model also contributes to the understanding of factors that determine the economic growth rate for different countries, and this growth comes from adding capital to labor inputs. The model believes that a sustained rise in capital investment increases the growth rate only temporarily because the ratio of capital to labor goes down. For a steady growth path to be reached, output capital and labor are all growing at the same rate.

### 3. Methodology

3.1 Model Specification. The model in this study is specified following Lionel Effiom and Samuel Etim Edet (2018) and Oluseyi Ajayi (2015) with some modifications. The human development index as a dependent variable will be regressed on gross capital formation, interest rate, exchange rate and inflation rate. Also, PCI as a dependent variable will be regressed on gross capital formation, interest rate, exchange rate and inflation rate. In its implicit form, the model is given as:

$$\text{HDI} = f(\text{GCF}, \text{IR}, \text{ER}, \text{INF}) \quad (1)$$

$$\text{PCI} = f(\text{GCF}, \text{IR}, \text{ER}, \text{INF}) \quad (2)$$

In stochastic form, equation 1 becomes  $HDI = \beta_0 + \beta_1 GCF + \beta_2 ER + \beta_3 IR + \beta_4 INF + \beta_5 EFFECT + \mu$  (3)

Equation 2 become:

$PCI = B_0 + \beta_1 GCF + \beta_2 ER + \beta_3 IR + B_4 INF + \beta_5 EFFECT + \mu$  (4)

where: HDI = Human development index PCI = Per capital income f = Function of the independent variables (GCF, IR, ER, INF) GCF=Gross capital formation EFFECT=interactive effect. (GCF\* INFLATION). IR=interest rate ER=Exchange rate. IFLR = Inflation rate.  $\beta_0$  = Constant;  $\beta_1 - \beta_5$  = Regression coefficients;  $\mu$  = Error term.

**3.2 Data and Data Sources.** The correlation between micro, small, and medium-sized businesses and financial growth in Nigeria will be examined in this study using secondary data. 1981-2021 Data will be source from the World Bank's development indicators over several years, the National Bureau of Statistics over several years and the CBN statistical bulletin over some years. The subsequent Economic variables such as the Human Development Index, Gross Capital Formation, Labor Force, Exchange Rate, and Inflation Rate will be utilized to assess the relationship between Nigeria's economic growth and small and medium-sized businesses.

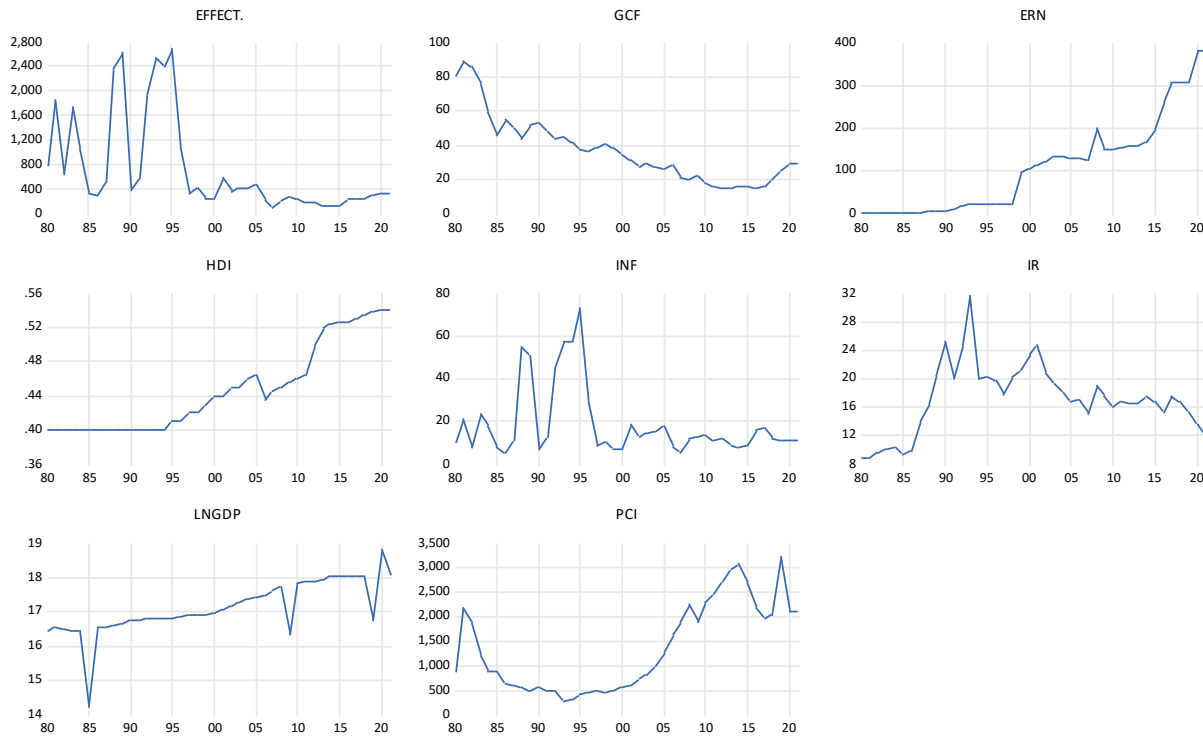
#### 4. Results and Discussions

Table 4.1. Descriptive Statistics

	EFFECT	ERN	GCF	HDI	INF	IR	LNGDP	PCI
Mean	740.0560	108.5052	37.09405	0.447214	18.55976	17.17857	17.12456	1359.595
Median	350.1860	110.1650	32.52000	0.437500	12.15500	16.92000	16.92417	955.0000
Maximum	2712.562	380.500	89.38000	0.540000	72.84000	31.65000	18.84149	3230.000
Minimum	114.4836	0.600000	14.90000	0.400000	5.390000	8.900000	14.21785	270.0000
Std. Dev.	801.2766	111.2735	19.67425	0.050745	16.56730	4.930675	0.775210	903.2269
Skewness	1.474919	0.904617	1.062464	0.723382	1.902901	0.321545	-0.816984	0.500791
Kurtosis	3.648554	2.950710	3.607281	2.070166	5.472795	3.497886	6.065480	1.866362
Jarque-Bera	15.96379	5.732579	8.547193	5.176004	36.04796	1.157547	21.11728	4.004528
Probability	0.000342	0.056910	0.013932	0.075170	0.000000	0.560586	0.000026	0.135029
Sum	31082.35	4557.220	1557.950	18.78300	779.5100	721.5000	719.2317	57103.00
Sum Sq. Dev.	26323812	507653.9	15870.12	0.105579	11253.49	996.7739	24.63897	33448574
Observations	42	42	42	42	42	42	42	42

Source: Compiled by the authors

The descriptive statistics for the variables showed that exchange rate (ERN) growth and gross capital formation (GCF) averaged 108.5 per cent and 37.1, respectively. In contrast, the human development index (HDI) and inflation rate (INF) are associated with mean values of 0.4 and 18.5 per cent, respectively. Also, interest rate (IR) and log of gross domestic product (LNGDP) had mean values of 17.1 and 17.1 per cent. At the same time, Capital income (PCI) and interactive effect (EFFECT) are associated with mean values of 1359.6 and 740.0. The standard deviations showed that all variables converge to their respective mean values. In addition, the probability values of the Jarque-Bera statistics revealed that gross capital formation (GCF) and inflation (INF), log of gross domestic (LNGDP) and interactive effect (EFFECT) are normally distributed at a 5 per cent level while exchange rate (ERN), interest rate (IR), human development index (HDI) and per Capital income (PCI) are not.



**Figure 1. The Trends of the Variables Used**

Source: Authors' Computations

The above figure shows the trends of the study and give evidence that the data of all variables employed are growing at the same pace showing the potential of small and medium scale business in bring about increase in other variables.

**Table 4.2. Unit Root Test: Augmented Dickey-Fuller**

Variables	1% level	5%level	10%level	ADF	P-value	Order
ERN	-3.605593	-2.936942	-2.606857	-6.57279	0.0000	I(1)
GCF	-3.605593	-2.936942	-2.606857	-5.184868	0.0001	I(1)
HDI	-3.605593	-2.936942	-2.606857	-5.561595	0.0000	I(1)
INF	-3.600987	-2.935001	-2.605836	-3.363437	0.0374	I(0)
IR	-3.610453	-2.93897	-2.607932	-5.515925	0.0000	I(1)
PCI	-3.605593	-2.936942	-2.606857	-8.05386	0.0000	I(1)
LNGDP	-4.198503	-3.523623	-3.192902	-7.42805	0.0000	I(0)
EFFECT	-4.198503	-3.523623	-3.192902	-3.757499	0.0294	I(1)

Source: Compiled by the authors

Table 4.2 shows that LNGDP and INF are station at level while ERN, GCF HDI, IR, PCI and EFFECT are stationary at the first difference. These confirm the justification for using ARDL models.

**Table 4.3. ARDL Bound Test Result for Long-Run Relationship Among the Variables (LNGDP as dependent variable)**

F-Bounds Test	Null Hypothesis: No Levels relationship				
	Test Statistics	Value	Signif	I(0)	I(1)
F-statistics	7.34085		10%	2.38	3.45
			5%	2.69	3.83
K	7		2.5%	2.98	4.16
			1%	3.31	4.63

Source: Compiled by the authors

Table 4.3 shows the F statistics value of 7.34085. Based on it, the authors deduce the existence of a long-run relationship among the variables in the model. The computed F statistic exceeds the 5% upper bound critical value of 3.83.



Table 4.4. ARDL Bound Test Result for Long-Run Relationship Among the Variables (PCI as dependent variable)

F-Bound Test				
Null Hypothesis: No Levels relationship				
Test Statistics	Value	Signif	I(0)	I(1)
F-statistic	2.142164	10%	2.38	3.45
		5%	2.69	3.83
K	7	2.5%	2.98	4.16

Source: Compiled by the authors

Table 4.4 shows the F statistics value of 2.142164, and from it, we deduce that there is no long-run relationship among the variables in the model. The computed F statistic is less than the 5% upper bound critical Value of 3.83.

Table 4.5. ARDL Bound Test Result for Long-Run Relationship Among the Variables (HDI as dependent variable)

F-Bounds Test				
Null Hypothesis: No Levels relationship				
Test Statistics	Value	Signif	I(0)	I(1)
F-statistic	1.708154	10%	1.92	2.89
		5%	2.17	2.21
K	7	2.5%	2.43	3.51
		1%	2.73	3.9

Source: Compiled by the authors

We therefore proceed to short-run relationship between GDP and the independent variables.

Tables 4.6. Long Run Coefficient Using ARDL Approach (LNGDP)

Variable	Coefficient	Std. Error	t- statistic	Prob*
LNGDP (-1)	-0.186459	0.164622	-1.132646	0.2663
EFFECT	0.000411	0.000623	0.659805	0.5144
ERN	0.003059	0.003763	0.812924	0.4227
ERN (-1)	-0.009071	0.003726	-2.434295	0.0211
GCF	0.022849	0.015870	1.439801	0.0403
INF	-0.012722	0.026976	-0.471607	0.0406
IR	0.000939	0.025301	0.037116	0.9706
C	16.71193	3.354415	4.982072	0.0000
@TREND	0.146932	0.047390	3.100507	0.0042
R-Squared		0.734518	Mean dependent Variable	17.14129
Adjusted R- squared		0.646024	S.D dependent var	0.777127
S.E of registration		0.462358	Akaike info criterion	1.519257
Sum squared resid		6.413253	Schwartz criterion	1.978996
Log likelihood		-20.14477	Hannan-Quinn criter	1.686668
F- Statistics		8.300216	Durbin-Watson stat	2.084693
Prob( F- Statistics)		0.000003		

Source: Compiled by the authors

As it is shown on the Table 4.6, the coefficient of exchange (ERN) rate has a negative impact on economic development (LNGDP) and statistically significant. It implies that a one per cent increase in ERN will bring -0.01 per cent depletion in GDP in Nigeria. Simply put, an increase in the exchange rate will retard economic development, or a reduction in the exchange rate will increase GDP because importation will reduce while exportation will increase. Also, the inflation rate (INF) negatively impacts economic development (LNGDP) and is statistically significant. It implies that a 0.01 reduction in the inflation rate will bring about a 1 % increase in GDP, which means that a decline in the inflation rate will bring about economic development. In addition, the coefficient of GCF is positive and statistically significant, representing a 1% increase in GCF will bring about a 7% increase in GDP. It means an increase in SMEs will lead to economic development, which aligns with some previous literature.

Tables 4.7. Long Run Coefficient Using ARDL Approach (PCI)

Variable	coefficient	Std. Error	t-Statistics	Prob*
PCF (-1)	0.594444	0.130558	4.5553088	0.0001
EFFECT	0.746645	0.477822	1.562600	0.1283
ERN	-4.914635	2.168831	-2.266030	0.0306
GCF	7.32226	12.56508	0.582744	0.5643
INF	-32.51740	20.69332	-1.645913	0.1099
IR	-30.66077	18.62843	0.037116	0.9706
@TREND	86.61030	34.86546	2.484129	0.0186

Source: Compiled by the authors

As shown in Table 4.7, the coefficient of exchange (ERN) rate negatively impacts Per Capital income (PCI) and is statistically significant. It implies that a one per cent increase in ERN will bring a -5 per cent depletion in PCI in Nigeria. Simply put, an increase in the exchange rate will retard economic growth, or a reduction in the exchange rate will bring about an increase in PCI because importation will reduce while exportation will increase.

Table 4.8. Estimated Short-Run Regression Result

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	16.71193	1.961466	8.520123	0.0000
D(ERN)	0.003059	0.003016	1.014348	0.3185
CointEq(-1)	-1.186459	0.139410	-8.510556	0.0000
R-squared	0.698954	Akaike Info. Criterion		1.177794
Adjusted R-squared	0.003059			
F-Statistics	28.63488	Hannah-Quinn Criterion		1.238670
Durbin Watson stat.	2.084693			

Source: Compiled by the authors

As shown in the Table 4.8 short run result, the error correction parameter appeared with the correct sign negative (-) and is statistically significant given its probability value of 0.0000. The coefficient of error correction term is - meaning that the speed of adjustment is 118% when the system is disturbed. The adjusted R-squared value of 0.67 indicates that the joint interactions of the variables in the model explain 67% of the changes in ERN. The remaining 33% are exogenously accounted for factors not included in the specified model. Table 4.9 shows the granger causality results.

Table 4.9. Granger Causality Results

Null Hypothesis	Observations	F-Statistics	Prob.
PCI does not granger cause LNGDP	40	1.75664	0.1875
LNGDP does not granger cause PCI	40	4.64520	0.0162
HDI does not granger cause LNGDP	40	4.59423	0.0169
LNGDP does not granger cause HDI	40	1.55095	.02263
GCF does not granger cause LNGDP	40	9.53574	0.0005
LNGDP does not granger cause GCF	40	3.64852	0.0364
ERN does not granger cause LNGDP	40	4.49669	0.0183
LNGDP does not granger cause ERN	40	0.45779	0.6364
GCF does not granger cause PCI	40	5.08380	0.0115
PCI does not granger cause GCF	40	1.79513	0.0181
ERN does not granger PCI	40	7.07402	0.0026
PCI does not granger ERN	40	0.28192	0.7560

Source: Compiled by the authors

Table 4.9 shows the granger-causality test results between GDP and the independent variables. For causality between two variables, the probability of F-Statistic is less than or equal to 0.05. The results show causality between Value of PCI and LNGDP (0.1875 & 0.0162), HDI and LNGDP (0.0169 & 0.2263), GCF and LNGDP (0.0005 & 0.0364), ERN and LNGDP (0.0183 & 0.6364), GCF and PCI (0.0115 & 0.1811), ERN and PCI (0.0026 & 0.7560). It confirms some of our earlier results. However, there is no causality between inflation, exchange rate and GCF since the probability of the F-Statistic is greater than 0.05. there is no interactive effect between GCF, ERN, INF and EFFECT.

## 5. Summary, Conclusion and Recommendations

The study examines small and medium-scale enterprises (SMEs), inflation rate (INF) and economic development (GDP) in Nigeria between 1981 and 2021. The unit root test result favoured using the Auto-regressive Distributed Lag (ARDL) estimation technique. The specific objectives of the study were:

- Examine the trend of SMEs, inflation and economic development in Nigeria;
- Investigate the relationship between SMEs and economic development in Nigeria;
- Examine the relationship between inflation and economic development in Nigeria.
- Investigate the interactive effects of SMEs and inflation on economic development in Nigeria.

To achieve the stated objectives, gross capital formation (GCF), inflation rate (INF), per capital income (PCI), interest rate (IR), an exchange rate (EXR) and interactive effect (Effect) were modelled against human development index (GDP) and data were extracted from Central Bank of Nigeria (CBN) statistical bulletin. The augmented Dickey-Fuller (ADF) test was used to detect the presence of unit roots among the variables. From the ADF test, LNGDP and INF are stationed at a level while ERN, GCF HDI, IR, PCI and EFFECT are stationary at the first difference.

As shown in Table 4.6, the coefficient of exchange (ERN) rate negatively impacts economic development (LNGDP) and is statistically significant. It implies that a 1% rise in ERN will result in a -0.01 per cent depletion in GDP in Nigeria. Simply put, an increase in the exchange rate will retard economic development, or a reduction in the exchange rate will increase GDP because importation will reduce while exportation will increase. The inflation rate (INF) negatively impacts economic development (LNGDP) and is statistically significant. It implies that a 0.01 reduction in the inflation rate will bring about a 1 % increase in GDP, which means that a decline in the inflation rate will bring about economic development.

In addition, the coefficient of GCF is positive and statistically significant, meaning a 1% increase in GCF will bring about a 7% increase in GDP. It represents that an increase in SMEs will lead to economic development, which aligns with previous literature. From the short-run result, the error correction parameter appeared with the correct sign negative (-), and it is statistically significant given its probability value of 0.0001. The coefficient of error correction term is 1 .186459, meaning that the speed of adjustment is 118 % when the system is disturbed. Also, the adjusted R-squared value of 0.67 indicates that the joint interactions of the variables in the model explain 67% of the changes in GDP. In comparison, the remaining 33% are exogenously accounted for by factors not included in the specified model.

The study concludes that the inflation rate (INR) and exchange rate (ERN) have a negative and significant impact on economic development (LNGDP) in Nigeria. Gross capital formation indicated a positive and significant relationship with GDP - meaning that investing in SMEs will bring about economic growth. The estimated signs for gross capital formation (GCF) conformed to the expected signs an apriori ground. Inflation rate (INF), Exchange rate (EXR) and interest rate (INR) did not conform. The authors discover that investments in SMEs (GCF) have had a significant and positive impact on economic growth (PCI) and economic development (GDP) in the country. Given that Nigeria is economically underdeveloped, most of its (primarily rural) must be integrated into economic development through entrepreneurship and small businesses. It means encouraging further investment in SMEs and prioritizing their access to credit facilities, infrastructure improvement, and capacity building to promote long-term socioeconomic growth through this channel.

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## References

1. Aderemi, T.A., Olu -Young, F., Taiwo, A.A., & Adejumo, O.O. (2019). Agripreneurship Financing and Agricultural Development Nexus in Nigeria: Prospects or Problems? *International Journal of Accounting Research*, 4(4), 1-7. [\[Google Scholar\]](#) [\[CrossRef\]](#)
2. Adisa, T.A., Abdulraheem, I., & Mordi, C. (2014). The characteristics and challenges of small businesses in Africa: An exploratory study of Nigerian small business owners. *Economic insights – Trends and Challenges*, 3(4), 1-14. [\[Google Scholar\]](#)
3. Anane, G., Cobbinah, P., & Manu, J. (2013). Sustainability of Small and Medium Scale Enterprises in Rural Ghana: The Role of Microfinance Institutions. *Asian Economic and Financial Review*, 3(8), 1008-1017. [\[Google Scholar\]](#)
4. Anigbogu, T.U., Onwuteaka, C.I., Edoko, T.D., & Okoli, M.I. (2014). Role of small and medium scale enterprises in community development: Evidence from Anambra south senatorial zone, Anambra State. *International Journal of Academic Research in Business and Social Sciences*, 4(8), 302-315. [\[Google Scholar\]](#)
5. Anyanwu, J.C. (1993). *Monetary Economics: Theory policy and Institutions* Onitsha: Hybrid Publishers. Available at: [\[Link\]](#)
6. Ariyo, D. (2005). Small firms are the backbone of the Nigerian economy. Retrieved Bank, pp. 1-2. Available at: [\[Link\]](#)
7. Aruwa S.A.S. (2005). *The Business Entrepreneur. A Guide to Entrepreneurial Development*. Kaduna. Available at: [\[Link\]](#)
8. Auciello, K.E. (1975). *Employment generation through stimulation of small industries, an international compilation of small-scale industry definitions*. Atlanta: Georgia Institute of Technology. Available at: [\[Link\]](#)
9. Ayyagari, M., Beck, T., & Demirguc-Kunt, A. (2011). Firm innovation in emerging markets. The role of finance, governance, and competition. *Journal of Financial and Quantitative Analysis*, 46(6), 1545-1580. [\[Google Scholar\]](#) [\[CrossRef\]](#)
10. Beck, T. & Cull, R. (2014). *Small and Medium-sized Enterprise finance in African*. African Growth Initiative (working paper 16). Washington DC: Brookings. [\[CrossRef\]](#)
11. Berry, A. (2007). The importance of SMEs in the Economy, ITD Global Conference on Taxation of Small and Medium Enterprises, Buenos Aires, Argentina, 17-19 October 2007. Available at: [\[Link\]](#)
12. Brush, C.G., & Vanderwerf, P.A. (1992). A comparison of methods and sources for obtaining estimates of new venture performance. *Journal of Business Venturing*, 7(2), 157-170. [\[Google Scholar\]](#) [\[CrossRef\]](#)
13. Bryson, J.R. (1997). Small and medium-sized enterprises, business link and the new knowledge workers. *Policy Studies*, 18(1), 67-80. [\[Google Scholar\]](#) [\[CrossRef\]](#)
14. Carrillo, F.J., Brachos, D., Kostopoulos, K., Soderquist, K.E., & Prastacos, G. (2007). Knowledge effectiveness, social context and innovation. *Journal of knowledge Management*, 11(5), 31-44. [\[Google Scholar\]](#) [\[CrossRef\]](#)
15. CBN (2010). *Guidelines for #200 Billion SME credit Guarantee*. Abuja: Development Finance Department, Central Bank of Nigeria. Available at: [\[Link\]](#)
16. CBN (2018) Central Bank of Nigeria. Available at: [\[Link\]](#)
17. Dalberg (2011). *Report on support to SMEs in developing countries through financial intermediaries*. Washington, DC. Available at: [\[Link\]](#)
18. Dalberg Eke Robert (2010). *The Relevance of Small and Medium Scale Enterprises to Nigeria's Economic Development: An investigation* M.Sc. Thesis, Nnamdi Azikwa University. Akwa, Nigeria. Available at: [\[Link\]](#)
19. Eze, T.C., & Okpala, C.S. (2015). Quantitative analysis of the impact of small and medium scale enterprises on the growth of Nigeria economy: 1993-2011. *International journal of development and emerging Economics*, 3(1), 26-38 Available at: [\[Link\]](#)
20. Fjose, S., Grunfeld, L.A., & Green, C. (2010). SMES and growth in Sub-Sahara Africa: Identifying SME Role and obstacles to SME growth. *MENON-Publication*, 14, 1-28. Available at: [\[Link\]](#)
21. Gibson, T., & Van der Vaart, H.J. (2008). *Defining SMEs: A less imperfect way of defining and small medium enterprises in developing countries*. Brookings Global Economy and Development, September.
22. Government of Ghana (2013). *Ghana banking Survey*. Available at: [\[Link\]](#)
23. Gutter, C. (2001). *Improving competitiveness of SMEs in Development countries: The Role of Finance to Enhance Enterprise Development*, UNCTAD, New York & Geneva. Available at: [\[Link\]](#)

24. Hall Roberted (1982). *Inflation, Causes and Effects*. University of Chicago press, Chicago, 1982. Available at: [\[Link\]](#)
25. Hategu, L. (2007). *SME development in Uganda*. Kampala: Private Sector Foundation.
26. Hayton, J.C. (2003). *Strategic human capital management in SMEs: An empirical study of entrepreneurial performance*. Published in Cooperation with the School of Business Administration, the university of Michigan and in alliance with the Society of Human Resources Management. *Human Resource Management*, 42(4), 375-391. [\[Google Scholar\]](#) [\[CrossRef\]](#)
27. Hellerstein, R. (1997). The Impact of Inflation. *Regional Review*, 7(1). Available at: [\[Link\]](#)
28. Iegbinosa, I.A. & Jumbo, E. (2015). Small and medium scale enterprises and economic growth in Nigeria: 1975-2012. *International Journal of Business and Management*, 10(3), 203-216. [\[Google Scholar\]](#) [\[CrossRef\]](#)
29. IFC (2010). *Scaling-up SME Access to financial services in the Developing World: Financial inclusion Experts Group/SME Finance Sub-Group*: International finance corporation. World Bank Group sized Enterprises in Turkey. Available at: [\[Link\]](#)
30. Kamunge, M.S., Njeru, A., & Tirimba, O.I. (2014). Factors affecting the performance of small and macro enterprise in Limuru town market of Kiambu county. *International Journal of Scientific and Research Publications*, 4(12), 1-20. [\[Google Scholar\]](#)
31. Katua, N.T. (2014). The role of SMES in employment creation and economic growth in selected countries. *International Journal of Education and Research*, 2(12), 461-472. Available at: [\[Link\]](#)
32. Kauffman, C. (2006). *Financing SMEs in Africa*. Paris OECD Development Centre, policy insight nr 7. Available at: [\[Link\]](#)
33. Kayadibi, S., Polat, R., & Fidan, Y. (2013). Small and Medium-Sized Business in Malaysian Economy: Case of Turkish Entrepreneurs in Kuala Lumpur. *Business Economy*, 31, 265-281. [\[Google Scholar\]](#)
34. Khalique, M., Isa, A.H.B.M., Shaari, N., Abdul, J., & Ageel, A. (2011). Challenges Faced by the Small and Medium Enterprises (SMEs) in Malaysia: An Intellectual Capital Perspective. *International Journal of Current Research*, 3(6), 398-401. [\[Google Scholar\]](#)
35. Kozetinac, G., Vukovic, V., & Kostic, D. (2010). Corporate finance and monetary policy: The role of small and medium-sized enterprises. Available at: [\[Link\]](#)
36. Lumpkin, G.T., & Dess, G.G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking it to performance. *The Academy of Management Review*, 21(1), 135. [\[Google Scholar\]](#) [\[CrossRef\]](#)
37. Mwarari, M.M., & Ngugi, P.K. (2013). Factors influencing listing of Kenya SMEs in the Securities market for capital raising opportunities. *European Journal of Management Sciences and Economics*, 1(2), 99-115. Available at: [\[Link\]](#)
38. Nuwagaba, A. & Nzeri, H. (2013). Major Environmental Constraints on Growth of Micro and small Enterprises in Uganda: A Survey of selected Micro and small Enterprises in Mbarara Municipality. *International Journal of Cooperative Studies*, 2(1), 26-33. [\[Google Scholar\]](#)
39. OECD (Organization for Economic Co-operation and Development) (2004a). *Small and Medium Sized Enterprises in Turkey Issues and Policies*, OECD Publications. Available at: [\[Link\]](#)
40. OECD (Organization for Economic Co-operation and Development) (2004b). *The informal Economy in Albania Analyzes and Policy Recommendations*, OECD Publications. Available at: [\[Link\]](#)
41. OECD (2005). *SME and entrepreneurship outlook*. Paris, OECD. Available at: [\[Link\]](#)
42. Ogbuanu, B., Kabuoh, M., & Okwu, A. (2014). Relevance of Small and Medium Enterprises in the Growth of the Nigerian Economy: A study of Manufacturing SMEs. *International Journal of Advanced Research in Statistics, Management and Finance*, 2(1), 26-33. Available at: [\[Link\]](#)
43. Olaoye, C.O., Adedeji, A.Q., & Ayeni-Agbaye, R.A. (2018). Commercial bank lending to small and medium scale enterprises and Nigeria economy. *Journal of Accounting, Business and Financial Research*, 4(2), 49-55. [\[Google Scholar\]](#) [\[CrossRef\]](#)
44. Onakoya, A.B.O., Fasanya, I.O., & Abdulrahman, H.D. (2013). *European Journal of Business and Management*, 5(4), 130-136. Available at: [\[Link\]](#)
45. Onwuchekwa, F., Emele, E., and Onwuchekwa, J. (2017). Small and Medium Scale Enterprise (SMES) and Industrial Development of Onitsha Metropolis: A cluster lead approach. *International Journal of Economics and Business Management*, 3(7), 1-9. [\[Google Scholar\]](#)
46. Otaju, J. & Keji, S. (2015). An assessment of the Determinants of Industrial Sector Growth in Nigeria. *Journal of research in Business and Management*, 3(7), 1-9. Available at: [\[Link\]](#)
47. Parkey, J.C. (1996). *Micro and small-scale enterprises in Zambia: results of the 1996 nationwide survey*. London: Graham Bannock and Partners Ltd. Available at: [\[Link\]](#)

48. Quartey, P., Turkson E., Abor, J., Iddrisu, A. (2017). Financing the growth of SMES in Africa. What are the constraint to SMEs in Africa: What are the Constraints to SME financing within ECOWAS? *Review of Development Finance*, 7, 18-28. [\[Google Scholar\]](#) [\[CrossRef\]](#)
49. Taiwo, M., Ayodeji, A., & Yusuf, B. (2012). Impact of small and Medium Enterprises on Economic Growth and Development. *American Journal of Business and Management*, 1(1), 18-22. [\[Google Scholar\]](#) [\[CrossRef\]](#)
50. Tehseen, S., & Ramayah, T. (2015). Enterpreneurial competencies and SMEs business success: The contingent role of external integration. *Mediterranean Journal of Social Sciences*, 6(1), 50. [\[CrossRef\]](#)
51. Warner, A. (2001). Small and Medium Sized Enterprises and Economic Creativity in Improving The Competitiveness of SMEs in Developing Countries: The role of Finance To Enhance Enterprise Development, UNCTAD, New York & Geneva. Available at: [\[Link\]](#)
52. Wiklund, J., & Shepherd, D. (2005). Enterpreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20(1), 71-91. [\[Google Scholar\]](#) [\[CrossRef\]](#)
53. World Bank (2001). Business Development Services for Small Enterprises: Guiding principles for Donor Intervention. Committee of Donor Agencies for Small Enterprise Development, 2001 Edition, February, Washington D.C. Available at: [\[Link\]](#)
54. World Bank (2018). Small and Medium Enterprises (SMEs) Finance. Available at: [\[Link\]](#)
55. Wymenga, P., Spanikova, V., Barker, A., Konings, J., & Canton, E. (2012). EU SMEs in 2012: at the crossroads: Annual report on small and medium-sized enterprises in the EU, 2011/12. Rotterdam: European Commission. Available at: [\[Link\]](#)