





# “The effect of trade liberalization on SMEs performance in Nigeria”

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# THE EFFECT OF TRADE LIBERALIZATION ON SMES PERFORMANCE IN NIGERIA

## Abstract

Small and medium enterprises (SMEs) are vital for achieving sustainable development. However, it remains unclear whether engagement in international trade-oriented policies improves SMEs operations, particularly in Africa, where concluded arrangements are made to partake in the African Continental Free Trade Agreement (AfCFTA). This study examined the role of trade liberalization on SMEs performance in Nigeria using the Central Bank of Nigeria's statistical bulletin and the World Development Indicators from 1981 to 2019. The ARDL model showed that a 1% rise in trade openness improves SMEs performance by approximately 2% but only in the short run. For the control variables, a 1% increase in labor force participation reduced SMEs performance by about 6% in the short run and increased it by approximately 9% in the long run. The results also showed that a 1% rise in gross fixed capital formation in the short run reduced SMEs performance by approximately 5%. The results showed an inconclusive short-run effect of the exchange rate and taxes on SMEs performance. With a 1% increase in the exchange rate, SMEs performance improved by approximately 0.04% in the long run. Similarly, a 1% increase in taxes improves SMEs performance by approximately 2.90% in the long run. Findings suggest a positive effect of trade liberalization on SMEs performance and support the operation of AfCFTA in achieving sustainable development. Policy efforts should focus on productive investment strategies and using locally sourced inputs to raise the competitiveness of SMEs.

## Keywords

trade liberalization, openness, SMEs performance, ARDL, Nigeria

## JEL Classification

P17, P42, F13, F53

## INTRODUCTION

Trade remained an area of interest to policymakers. Countries with healthy trade potentials have a significant impact on helping small businesses grow and enhance development in their national economy. One avenue to promote businesses is through trade and particularly international trade. This is because trade creates opportunities for technology transfer, knowledge, and innovation that, in turn, enhance firm productivity and the creation of new businesses and firms (Anabori, 2011).

The role of trade in enhancing business activities, particularly in terms of small and medium enterprises (SMEs), is generally given top consideration in global policy discussions mainly due to their importance in promoting economic growth and development. In addition, SMEs are recognized as a key to achieving macroeconomic goals, especially in poverty alleviation, employment creation, and income generation (Katwalo & Madichie, 2008; Obokoh, 2008). SMEs operations are fundamental for sustainable development in developed and developing economies. The OECD reports that SMEs dominate in the number of enterprises worldwide, accounting for over 95% of all firms and em-

ploying close to 70% of the workforce in the OECD countries (OECD, 2000). Similarly, the contribution of SMEs in emerging countries is impressive as the sector generates up to 45% and 33% of the economies' employment and GDP.

Despite the fundamental contribution of SMEs in reaching economic sustainability in developed countries, not many empirical studies exist on how trade has impacted the performance of SMEs, particularly in Africa, where poverty rates are relatively high compared to other regions (Oladimeji & Ibrahim, 2017). Findings are often provided for trade with per capita income and, in some instances, on industrial output or technology transfer (Semancikova, 2016; Iyoha & Okim, 2017). Literature associating trade with the operations of SMEs is even scarcer in Africa, where business activities are mainly centered on SMEs due to low income, which makes it more challenging to operate at the industrial level.

Efforts that harness the benefits of trade in Africa engineered the introduction of trade bloc operations in the region, one of which is the Economic Community of West African States (ECOWAS). Trade bloc operations in Africa, particularly that of the ECOWAS, strongly recognize the positive impact of SMEs in opening up opportunities for economic progress (Ijirshar, 2019). However, with evidence that member countries still need to fully integrate their economies, harnessing trade rewards in improving SMEs may not be adequately attained (Menyah et al., 2014).

Nigeria is practically the largest economy in Africa and is identified as a critical player in the operations of ECOWAS. The economy is characterized by abundant natural resources and a teeming labor force that advances SME activities (Iyoha & Okim, 2017). However, it is still unclear whether engagement with international trade-oriented policies has improved SMEs operations in Nigeria. This is particularly important in Africa, as countries in the region had concluded arrangements for the operation of the African Continental Free Trade Area (AfCFTA) (UNCTD, 2019). This study's contribution is mainly in providing additional literature findings on the role of trade liberalization on macroeconomic variables with an acute focus on SMEs, for which findings are relatively scarce in the literature.

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## 1. LITERATURE REVIEW

Trade liberalization refers to the removal of trade policy barriers to allow free trade operations and create a competitive environment between domestic and international markets (Bakare & Fawehinmi, 2011). As a result, it is expected that both markets will benefit from the competitive environment associated with international trade. Given this, many developing countries have adopted trade-oriented policies comprising import and export tariff reduction and removal of trade policy barriers (Keho & Wang, 2017).

Often, the term free trade is captured as trade openness and measured as the import and export ratio to gross domestic product (Yanikkaya, 2003; Osakede & Adenikinju, 2022). Proponents of trade-oriented policy argue that it promotes SME performance and induces economic growth through the transfer of technology and innovation that in turn raises overall output in an econ-

omy (Hafeez et al., 2013; Ijirshar, 2019). Rodrik (1998) provides for the vital role of trade-oriented policy in improving economic outcomes not only in terms of income growth but also for the improved performance of SMEs. Bloom et al. (2013) support the positive effects of trade liberalization on economic performance in terms of increased firm welfare gain and innovativeness, particularly where there is low-cost importation.

Studies examining SMEs performance, whether in terms of trade effect or other drivers, capture it using various outcome variables. These include the amount of capital employed, profit, number of employees, market share, financial capacity, assets owned, and turnover (Oladimeji et al., 2017). For example, in Nigeria, the SME Development Agency (SMEDAN) defines SMEs on the basis of staff employment and capital base. In this case, SMEs are enterprises employing 1 to 200 persons and having a capital base ranging from 50,000 to 200 million NGN (Faloye, 2015).

Other indicators in measuring SMEs' performance are commonly financial strength, innovative ability, output, export, employment capacity, and marketing power (Faloye, 2015; Faloye & Abasilim, 2018; Ndiaye et al., 2018). Ndiaye et al. (2018), for instance, measured the performance of SMEs using five yardsticks: capacity utilization, employment growth rates, percentage of fixed asset acquisition, labor productivity growth rate, and real sales growth rate. There are, however, constraints with the availability of data in using the performance indicators of SMEs provided in the literature, mainly when SMEs are considered on a national scale in developing countries. Therefore, this study focuses mainly on using primary data for very few SMEs in a locality.

In linking trade openness with SMEs performance, Cernat et al. (2014) indicated trade's key role in promoting SMEs employment in Europe. Findings showed that exporting enterprises employed over six million of the labor force in the region. Similar results were earlier obtained by Chiao et al. (2006) in Taiwan showing a positive association between international trade and SMEs performance. The association is described as U-shaped, which indicates a maximized profitability level, given an optimum level of international trade.

In developing countries, Ndiaye et al. (2018) also suggested that trade is positively linked to the performance of firms. Findings by Faloye and Abasilim (2018) support the positive role of trade liberalization on SMEs growth in Nigeria and Ghana, especially in terms of innovative performance. Specifically, evidence from the findings suggests that product innovation, marketing innovation, and organizational innovation were significantly related to trade liberalization in Nigeria. At the same time, only innovative process performance is valid for Ghanaian SMEs. Murat and Isaac (2019) also found a positive impact of trade on SME growth using an ex-post facto research design for 72,838 SMEs in Abuja from 1986 to 2018. The results suggest a fundamental role of globalization on the performance of SMEs in Nigeria with positive effects of imports and exports volume on SME output.

In contrast, several empirical findings do not support the potential of trade-oriented policies in promoting the performance of SMEs. For instance, Bilgin et al. (2012) investigated the effect of tech-

nology transfer, finance channels, and exporting behavior on SME performance. Using a firm-level dataset on 177 developing countries, evidence showed that the measure of export volume had no significant impact on SME performance. Faloye (2015), using qualitative and quantitative approaches, noted a fall in the growth of SMEs in Nigeria due to trade-oriented policies. Oladimeji et al. (2017) reflected the non-increasing effect of trade-oriented policies on SME performance in Nigeria. In this case, evidence provided using the vector error correction model showed the adverse effects of openness on SME performance as a measure of trade liberalization. The results also suggest the key role of macroeconomic variables such as trade openness, interest rate, as well as bank credit, which do not support SME performance. In a related study, Chingwaru (2015) examined the effect of trade policy on SMEs operations, comparing findings for Zimbabwe and South Africa. Using a combination of qualitative and quantitative approaches, findings showed a negative impact of trade and economic liberalization policy on the operations of SMEs in both countries. In the same vein, Oladimeji and Ibrahim (2017) investigated the effect of trade on SMEs growth in Nigeria. Using the analytical tools of ordinary least squares, the study revealed an inverse relationship between trade openness and SMEs growth in Nigeria.

Several factors have been identified in the literature that pose a challenge to the ability of domestic businesses and firms to maximize the benefits of trade-oriented policies. These factors are formal and informal (Dana & Ratten, 2017). Formal factors include excessive regulations, franchising, and licensing procedures, while informal factors comprise cultural barriers, market sophistication gap, and negative perception of products in developing economies, mainly African nations. Aside from these factors, most developing economies, predominantly African nations, are characterized by weak government intervention in the operations of SMEs, lack of knowledge and resource management, and low innovativeness. In this case, the removal of trade barriers for developing countries can threaten the continued existence of domestic firms (Nguyen et al., 2011). However, the findings in this regard are generally inconclusive.

With diverse findings on the role of trade on SME performance, further evidence is necessary, particularly in Africa where actions for the operation of the African continental free trade had been concluded. Findings are vital for the expected effects of such action on sustainable development. Therefore, this study examines the effect of trade liberalization on the performance of SMEs in Nigeria.

## 2. METHOD

### 2.1. Model specification

The model adopted in this study borrows from the assumptions of the new trade and endogenous growth theory. As shown by Nataraj (2011), endogenous growth and new trade theory predict a number of channels through which free trade could encourage productivity among local and domestic firms and businesses. These channels include technological advancement, increased managerial efforts, exploitation of economies of scale, industrial learning innovations, increased labor skills, knowledge spillover, and specialization in research and development (R&D) (Grossman & Helpman, 1991; Melitz, 2003). In this case, the supporters of liberalized trade argue that opening local and domestic markets may favorably permit an efficient allocation of resources, resulting in improved productivity in local firms and businesses, and hence, turn out into a higher level of economic growth. It is, however, possible for domestic firms or businesses not to attract efficiency gains where there are credit constraints, which can avert investments in new technology and the adaptation of foreign technology (Topalova & Khandelwal, 2011).

In line with the propositions of the new growth theory, this paper presents a simple model specification for SME performance in a closed economy:

$$SMEPI = Af(L, K), \quad (1)$$

where *SMEPI* is the performance indicator for SMEs in the domestic economy, *A* is total factor productivity, *L* is labor force, and *K* is capital. The study captured the labor force in this model using labor force participation and capital *K* using gross fixed

capital formation (Apergis & Payne, 2010; Sanghi et al., 2015). Given that opening domestic markets encourages the efficient allocation of resources that may yield improved productivity in local industries, one can specify total factor productivity (TFP) as an indicator of trade policy variables. That is

$$A = f(TL), \quad (2)$$

where *TL* is the indicator for trade liberalization. Based on data availability, trade liberalization is measured using openness. Trade openness is also used due to widespread application and hence providing ample evidence with which to compare findings. Additional determinants of firm performance, such as the exchange rate and macroeconomic income, are included as predictors. With the rise in the exchange rate, prices of imports used by businesses for production activity rises, and this limits the expansion capacity of business firms. With income rise, the demand for products of businesses rises, and the after effect is expected to increase in firm's profitability. The paper also includes net taxes, as an increase in taxes ordinarily will lead to a fall in the capacity of businesses to expand. However, where tax revenue is used to advance infrastructure development, the "after effect" creates an enabling environment for business firms to thrive. The model specification for SME performance is hence stated as

$$SMEPI = f(Open, L, K, GDP, Exr, Tax). \quad (3)$$

For estimation, equation 3 is re-specified in time series using the variables above

$$SMEPI_t = \alpha_0 + \alpha_1 Open_t + \alpha_2 L_t + \alpha_3 K_t + \alpha_4 \Delta GDP_t + \alpha_5 \Delta Exr_t + \alpha_6 \Delta Tax_t + \varepsilon_t, \quad (4)$$

where  $\alpha_0$  is the intercept,  $\alpha_1, \alpha_2, \alpha_3, \alpha_4$  and  $\alpha_5$  stands for the slope of the dependent variables. *SMEPI* is SME performance indicator, *Open* is trade openness, *L* is labor force participation, *K* is gross fixed capital formation, *GDP* represents the real Gross Domestic Product, *Exr* is the official exchange rate, and *Tax* represents net taxes.

Regarding the apriori expectation, the direction of the effect of trade liberalization on SME performance cannot be outrightly deciphered. Liberal trade policies promote SME performance through



**Table 1.** Variable description, source, and measurement

S/N	Symbol of variable	Description	Source	Measurement
1.	SMEPI	Commercial bank loan to SME percentage of total credit	CBN (2020)	Percentage
2.	Open	Ratio of the sum of imports and exports (F.O.B) to real GDP (2010 constant basic prices)	CBN (2017, 2020)	Ratio
3.	L	Labor force participation rate, total (modeled ILO estimate)	World Bank (n.d.)	(% of total population ages 15-64)
4.	K	Gross fixed capital formation	World Bank (n.d.)	(constant LCU)
5.	GDP	Real GDP (2010 constant basic prices)	CBN (2017, 2020)	Annual (Billion NGN)
6.	Exr	Official exchange rate average	World Bank (n.d.)	LCU per USD period
7.	Tax	Net taxes on products	World Bank (n.d.)	(constant LCU)

the diffusion of knowledge and access to advanced technology and innovation (Adeleke et al., 2021). However, the effect can be negative if domestic firms are not competitive with other firms in the international market (Silajdzic & Mehic, 2018). As such, one expects  $0 < \alpha_1 < 0$ . On the other hand, a positive effect of a rise in labor force participation on SME performance is expected with the contribution of labor to economic profits; hence,  $\alpha_2 > 0$ . Similarly,  $\alpha_3 > 0$  as business performance improves with an increase in investment, particularly in a conducive business environment (Chandra et al., 2021). With the increase in real GDP, the demand for imports rises, particularly where imported goods are superior to locally made products. However, an increase in income will improve SME performance, leading to a rise in domestic purchases. The effect of real GDP on SME performance is hence ambiguous. Therefore, the study expects  $0 < \alpha_4 < 0$ . Similarly, the exchange rate is expected to have an ambiguous effect on SME performance as a rise in the exchange rate can reduce business operations, mainly where the economy is highly import-dependent for production as imports become costly.

On the other hand, a rise in the exchange rate will improve SME operations where the enterprise products are competitive in the international market and hence cheap for buyers to purchase (Belghitar et al., 2016). Therefore, taxes are also expected to have a non-unidirectional effect on SME performance. When taxes are implemented to improve infrastructure and enhance business operations, positive effects are expected. However, where there is tax implementation with no associated infrastructure provision to reduce the overhead cost of operation, negative effects are expected (Ongayi et al., 2021). Hence,  $0 < \alpha_6 < 0$ .

This study captured SME performance indicators using the fraction of loans accessed by SMEs in total credit provided by commercial banks. This is mainly due to challenges with obtaining time series data for measures of SME performance. Indeed, this variable mirrors business firms' financial capacity and performance in an economy. Ordinarily, the financial capacity and volume of assets, as well as turnover rate, influence the volume of loans that commercial banks are willing to lend to an enterprise (Oladimeji et al., 2017). In addition, the size and profitability of a firm dramatically determine the volume of loan that is accessible (Cernat et al., 2014; Kisseih, 2017), and a well-developed financial system is capable of attracting substantial trade inflows (Bali moune-Lutz & Ndikumana, 2007). Therefore, the assumption is that firms that can access more loans will ordinarily have a reasonable turnover rate and asset base.

The study covered the period from 1981 to 2019. Data were obtained from the Central Bank of Nigeria's statistical bulletin for 2017 and 2020 and the World Development Indicators for 2020. The study also used the CBN bulletin for 2017 to obtain data for earlier periods not provided in the 2019 bulletin. The description of the variables used in the study, source, and measurement are shown in Table 1.

## 2.2. Estimation techniques

Equation 4 is examined using the model of autoregressive distributed lag. The model is adopted in this study following several advantages, one of which is that the model efficiently determines the co-integrating relation involving small sample cases (Tang, 2003; Ghatak & Siddiki, 2001). It

is also preferred for scientific determination of the parsimonious equation from the over-parameterized specification. The time reaction of variables may be dissimilar, indicating non-uniform optimal lags for different variables. The ARDL model permits such instances of various optimal lags for different variables. In addition, the model does not necessarily require the restrictive assumptions of all variables being of the same order of integration. It can be applied either the regressors are integrated of order one I (1) or order zero I (0) or in the case mutual co-integration. It is, however, necessary that the integration order of the variables is at most 1 (Pesaran et al., 2001; Orhunbilge & Taş, 2014; Osakede & Sanusi, 2018). If the nature of the stationarity of the data is unclear, the use of the ARDL bounds test is appropriate (Pesaran et al., 2001).

According to Pesaran and Pesaran (1997) and Pesaran et al. (2001), the ARDL model specification is given as

$$\phi(L, p)y_t = c_0 + \sum_{i=1}^k \beta_i(L, q_i)x_{it} + \delta w_t + \mu_t; \quad (5)$$

$$t = 1, \dots, n,$$

where,  $y_t$  is the dependent variable,  $c_0$  is the constant term,  $x_{it}$  are the independent variables,  $L$  is the lag operator, and  $w_t$  is the  $s \times 1$  vector of deterministic variables, including intercept terms, dummy variables, time trends, and other exogenous variables with fixed lags.

### 3. RESULTS

The descriptive statistics of the variables used in the study are shown in Table 2. Table 3 presents the results for the stationarity of the variables, and Table 4 presents the ARDL model results.

Table 2 shows that commercial bank loans to SMEs as a percentage of total credit is approximately 5.94%. On average, the openness measure

**Table 2.** Descriptive statistics

Source: Authors' computation based on World Bank (n.d.) and CBN (2017, 2020).

Description	SMEPI	Open	L	K	GDP	Exr	Tax
Mean	5.93752	2.65e-09	58.7223	8.50e+12	34690.67	88.53089	7.69e+11
Maximum	27.0355	1.83e-08	61.199	1.58e+13	71387.83	306.0837	3.32e+12
Minimum	.07	1.76e-11	53.621	5.67e+12	13779.26	.6177082	3.62e+12
Std. dev.	7.30824	4.14e-09	2.612103	1.98e+12	20237.78	87.10396	1.42e+12
Observations	28	38	30	38	39	38	36

**Table 3.** Unit root test results

Variable	Constant	Augmented Dickey-Fuller (ADF)		Constant	Phillip Peron (PP)		
		Constant and trend	None		Constant and trend	None	
<b>Level</b>							
SMEPI	-4.303***	-3.602*	-5.256***	-4.216***	-3.492*	-5.232***	
Open	-2.616*	-2.714	-2.148**	-2.708*	-2.783	-2.198**	
L	0.589	-0.991	-2.228**	0.130	-1.332	-1.697*	
K	-4.428***	-5.762***	-1.499	-4.266***	-7.522***	-1.415	
GDP	2.810*	-2.075	7.211***	1.590	-1.833	4.471***	
Exr	1.745	-0.810	3.316***	1.535	-1.176	3.051***	
Tax	-2.548	-2.462	-2.463**	-2.448	-2.361	-2.376**	
<b>First Difference</b>							
SMEPI	-1.693	-1.067	-2.305**	-4.020***	-3.490*	-4.890***	
Open	-2.921*	-3.074	-2.300**	-2.752*	-2.847	-2.249**	
L	-0.465	-1.897	-1.230	0.233	-1.248	-1.840*	
K	-0.609	-2.774	0.193	-0.745	-3.337*	-0.188	
GDP	0.352	-1.939	1.632*	2.074	-1.897	5.539	
Exr	0.742	-1.939	1.753*	1.488	-1.119	2.978***	
Tax	-2.778*	-2.666	-2.671***	-2.580	-2.529	-2.478**	

Note: \*\*\* Significant at 1%; \*\* Significant at 5%; and \* Significant at 10%.

is about 2.65e-09. The statistics also show that approximately 58% of individuals ages 15 to 64 are in the labor force. This statistic reflects slightly higher figures for more individuals in the working-age population to be economically engaged than otherwise. The average gross fixed capital formation is approximately 8500 million NGN. The average real GDP for the study period is about 34690.67 million NGN. The average value for the official exchange rate is approximately 88.53 NGN to 1 USD. Net taxes for the study period worth 769 million NGN approximately.

**Table 4.** Estimates of the ARDL model for the effect of trade openness on SME performance in Nigeria

Variable	Coefficient	Std. error	
<b>Short run results</b>			
Log Open (-1)	2.163295*	1.364718	
Log Open (-2)	1.486156*	0.856361	
Log Open (-3)	0.937049**	0.286549	
L(-1)	5.592924	4.429382	
L(-2)	4.423131	4.391876	
L(-3)	-6.607008*	3.540178	
K(-1)	-5.111556***	1.465433	
K(-2)	1.571606	1.242145	
K(-3)	-1.870337	1.104481	
RGDP(-1)	0.001621*	0.000784	
RGDP(-2)	-0.002646*	0.001253	
RGDP(-3)	0.002139*	0.001103	
RGDP(-4)	-0.000979*	0.000529	
Exr(-1)	0.018346*	0.021422	
Exr(-2)	0.002353*	0.019509	
Exr(-3)	0.083448*	0.028212	
Exr(-4)	-0.097127**	0.027488	
Log Tax (-1)	-0.50058*	1.867818	
Log Tax (-2)	4.710645**	1.605778	
<b>Long run results</b>			
Log Open	-0.555568	0.551495	
L	8.645784**	2.976813	
K	-1.154179	1.383760	
RGDP	-0.000266*	0.000304	
Exr	0.040041*	0.024636	
Log Tax	2.90238*	3.387312	
C	75.91834	36.09199	
<b>Diagnostics</b>			
Normality (Jarque-Bera)	0.10599	Prob. 0.048381	
<b>Breusch-Godfrey Serial Correlation LM Test:</b>			
F-statistic	1.046579	Prob. F(2,1)	0.5686
<b>Heteroskedasticity Test: Glejser</b>			
F-statistic	3.582479	Prob. F(18,3)	0.1603
<b>Linearity test: Ramsey RESET Test</b>			
F-statistic	Value	Df	Probability
	2.095785	(1, 2)	0.2847
<b>ARDL Bounds Test</b>			
<b>Null Hypothesis: No long-run relationships exist</b>			
Test Statistic	Value	K	
F-statistic	1.670082	3	
<b>Critical Value Bounds</b>			
Significance	I0 Bound	I1 Bound	
10%	2.72	3.77	
5%	3.23	4.35	
2.5%	3.69	4.89	
1%	4.29	5.61	

Note: \*\*\* Significant at 1%; \*\* Significant at 5%; and \* Significant at 10%.



Following the requirement of applying the ARDL model to stationary variables at not more than the first difference (I (1)), this paper conducted unit root tests, as shown in Table 3. The test for stationarity is examined using commonly adopted methods of the Augmented Dickey-Fuller (ADF) and Phillip Peron (PP) test statistics.

Findings from the unit root test results suggest stationarity of the variables at the level and first difference, indicating adaptability to the use of the ARDL model. Results of the ARDL model are hence presented in Table 4.

A close examination of the diagnostic test results for the model reveals that the Jarque-Bera statistic indicates the normality behavior of the estimated residuals. The Breusch-Godfrey LM test statistic rejects the null hypothesis for the existence of serial correlation and the ARCH test confirms that the residuals are homoscedastic. The RESET test also shows no misspecification of the model. The Cusum and Cusum square test results show the stability of the model in the test for model stability (Figures A1 and A2). Finally, the bounds test F-statistic results show no existence of a long-run relationship. However, the short and long-run results are shown for a more robust discussion.

The result in Table 4 shows the significant effect of openness on SME performance in Nigeria. The effect is observed only in the short run showing a positive relationship. The result suggests that a 1% rise in openness at the first and second-period lag value increases SME performance by approximately 2 and 1%, respectively. The result for labor force participation showed that an increase in the proportion of individuals in the labor force reduces SME performance but only in the short run. The effect becomes positive in the long run. Findings showed that a 1% increase in labor force participation would reduce SME performance by about 6% in the short run at lag period three and increase it by approximately 9% in the long run. Findings for gross fixed capital formation showed an inverse relationship with SME performance in the short run. With a 1% rise in gross fixed capital formation at lag period one, SME performance will fall by approximately 5%.

Findings for real GDP showed expected positive effects on SME performance only for short-run

results with one period lag. Surprisingly, the result for real GDP for subsequent lag periods and, in the long run, showed an inverse relationship with SME performance. The magnitude of the coefficients is, however, relatively small. Findings for the exchange rate showed a significant positive effect on SME performance in the short and long run, except for lag period four, where adverse effects are shown. The result concluded more positive than negative effects but is, however, inconclusive in this case. As expected, results also found a negative effect of an increase in taxes on SME performance but only in the short run, while higher taxes increases SME performance in the long run.

## 4. DISCUSSION

From the descriptive statistics, findings for a commercial bank loan to SMEs as a percentage of total credit is low and indicates that for the study period, over 94% of commercial bank lending was offered to non-SMEs. The statistic for openness is also low and depicts low trade volume relative to GDP in Nigeria. The result also showed that many working-age people are not engaged economically. The indication, therefore, is that the economy loses labor contribution to output from those in the working-age population that is not productively engaged.

Findings from the ARDL model showed a significant positive effect of trade openness on SME performance in the short run. This suggests that opening local markets in Nigeria can lead to a more efficient allocation of resources that improves SME performance. The finding also suggests that an increase in trade volume in Nigeria increases knowledge spillover, technological advancement, innovation, and managerial efforts, as supposed by proponents of international trade (Grossman & Helpman, 1991; Melitz, 2003; Adeleke et al., 2021; Osakede & Adenikinju, 2022). This effect is, however, observed only in the short run. No significant effects are seen in the long run, suggesting that the positive effect of trade on SME performance is only for a short period. The competitiveness of business firms may fizzle out as time progresses. This could be due to the low technology that characterizes most African firms and distorts their ability to benefit from trade in the

long run (Goldar, 2002). Findings for the positive effect of trade liberalization on SME performance are similar to that of Ndiaye et al. (2018), Faloye and Abasilim (2018), and Murat and Isaac (2019). However, the results are contrary to the evidence provided by Bilgin et al. (2012), Faloye (2015), Chingwaru (2015), and Oladimeji et al. (2017). Differences in the results can be associated with the data types used as most of these studies made use of primary data that sometimes do not capture a more representative sample. The results provided by Bilgin et al. (2012) were obtained from a panel data study that is often characterized by heterogeneity and hence does not depict the true picture of what is observed in country case studies.

A negative effect of labor force participation on SME performance in the short run that afterward switches to a positive impact in the long run may be due to the firm's inability to recoup sufficient profit for expansion at the initial period of operation. However, as time progresses, returns to production could be high enough to sufficiently accommodate labor employment costs so that no more harmful effects are observed.

A negative effect of gross fixed capital formation on SME performance can be linked to constraints of businesses at the start-up process in accommodating input costs. Furthermore, the negative effects of gross fixed capital formation are not observed in the long run suggesting that firms can accommodate such costs over time. Positive effects of gross investment on SME performance are similar to findings by Piatkowski (2020) that revealed favorable effects of investment financing of SMEs in Poland regardless of the source of investment financing. Although

this study focused on the direct financing of SMEs, the evidence suggests the positive effects of investment on SME performance.

A positive effect of the real GDP on SME performance is expected. However, the negative effect of real GDP on SME performance suggests that the demand for SME products falls with a rise in income. This is because most times residents in a country will generally prefer more foreign goods to home-based products, especially where local goods are inferior to those produced by foreign countries.

Similarly, a negative effect of a rise in the exchange rate on SME performance is in line with what is expected as exports become costlier. On the other hand, findings for the positive effect of the exchange rate on SME performance indicate that with a rise in the official exchange rate, the domestic currency depreciates, increasing the competitiveness of home-made products in the international market and hence motivating more local production and expansion. The result is similar to Belghitar et al. (2016), showing that appreciation and depreciation can negatively influence SMEs even in developed countries, such as the United Kingdom.

In the same vein, increases in taxes are expected to reduce SME performance through a fall in investment income. This finding is similar to Ongayi et al. (2021), who showed a negative effect of taxes on the financial performance of SMEs. In the long run, the positive effect of taxes on SME performance is suggestive of public use of tax funds for basic facilities, particularly in terms of key infrastructure that promotes business operations. However, such an effect can only be noticeable in the long run.

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## CONCLUSION

This paper focused on the effect of trade liberalization on the performance of SMEs in Nigeria. It used a commercial bank loan to SMEs as a percentage of total credit as a performance indicator over the period 1981–2019. Estimates from the ARDL model applied in the study showed a significant effect of trade liberalization on SME performance but only in the short run. The evidence suggests that policies that promote trade, such as increased openness, tend to raise SME performance. Therefore, the indication is that opening local markets in Nigeria induces the efficient allocation of resources, knowledge spillover, and innovation that results in productivity improvements in SMEs.

The results for control variables in the study suggest that labor force participation improves SME performance but only in the long run. In contrast, the real GDP, exchange rate, and taxes showed inconclusive effects on SME performance based on the direction of variable effects in the short and long run. Furthermore, the results also indicate the negative effect of gross investment on SME performance, suggesting the need for an improved business climate for the operations of SMEs. In line with these findings, policy directives to raise SME performance in Nigeria should focus on promoting international trade, specifically increased openness. Furthermore, aside from pursuing a trade liberalization policy, efforts that encourage the increased purchase of local production and tax revenue to promote a conducive business environment will also enhance SME performance in Nigeria.

## AUTHOR CONTRIBUTIONS

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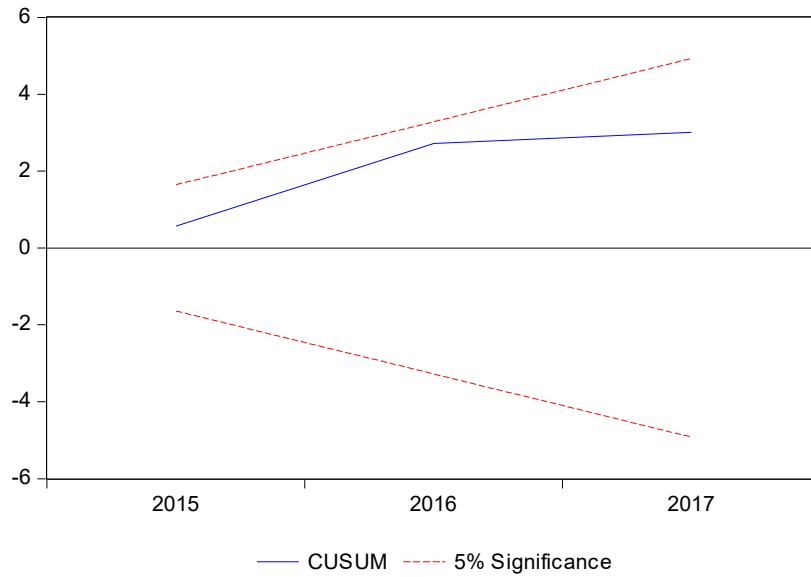
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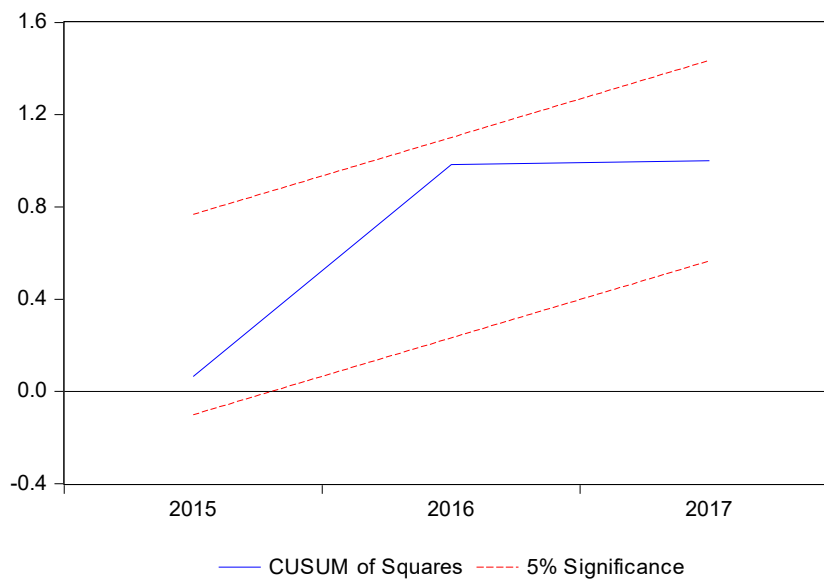
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## APPENDIX A



**Figure A1.** Cusum test



**Figure A2.** Cusum square test

*Note:* Cusum and Cusum square tests are used to examine the stability of the model. The relative direction of the blue line shows that the model is stable at 5% level of significance.