



IMPLICATIONS OF THE AFRICAN CONTINENTAL FREE TRADE AREA (AfCFTA) ON THE NIGERIA'S MANUFACTURING SECTOR

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Abstract

This study examines AfCFTA's implications for Nigeria's manufacturing sector, focusing on potential benefits, and challenges, using two hypotheses. The study adopted a cross-sectional design, covering 65 manufacturing firms with 6,555 staff, from which 400 respondents were sampled using multistage and proportionate sampling. Primary questionnaire data and secondary sources were used. Data were analysed using frequencies, percentages, means, standard deviations, and multiple linear regression. The findings show that AfCFTA offers important opportunities for Nigeria's manufacturing sector, with a cumulative mean of 3.37. Key benefits include economic diversification (Mean=3.58), wider African market access (M = 3.54), investment and employment opportunities (Mean=3.43), export growth and improved competitiveness (Mean=3.16 each). Ho1: The regression model was significant ($F = 183.187$, $p = .001$), confirming that AfCFTA-related factors significantly predict potential benefits for Nigeria's manufacturing sector. However, major constraints remain, with a cumulative mean of 3.30. Limited technology, finance and skilled labour (Mean=3.59) ranked highest, followed by trade barriers, high production costs, inadequate transport infrastructure, complex regulations and unreliable energy. Ho2: The model was significant ($F = 394.240$, $p < .001$), showing that infrastructure, regulatory barriers, and competitiveness significantly influence AfCFTA benefits. Conclusion: AfCFTA offers Nigeria's manufacturing sector opportunities to expand markets and exports, but inadequate finance, infrastructure, skills and technology must be addressed to achieve lasting benefits. Recommendations: Government and trade agencies should improve export support through market intelligence, certification, financing and simpler procedures, while manufacturers target African demand and customs agencies digitise processes to reduce delays and costs.

Keywords:

AfCFTA; Manufacturing Sector; Market Access; Export Competitiveness; Trade Barriers.

1. Background to the Study

The African Continental Free Trade Area (AfCFTA) initiative was essentially set-up to create a single market for Africa's 1.2 billion people, societies have traded with each other since the beginning of recorded history (Nagu & Nkannebe, 2018). According to Nagu and Nkannebe (2018), the AfCFTA is a multilateral agreement between African States to progressively

eliminate the high intra-African tariff rates (of 6.1% on average), thus making it easier for African businesses to trade across borders but within Africa. It should be stated that even though the AfCFTA is called a 'Free Trade Area' it is more akin to a comprehensive partnership agreement, as its mandate transcends trade in goods to services, investment, competition and intellectual property. By the year 2050 when the population of Africa is projected to reach 2.5 billion and comprise of 26 per cent of the world's labour, the single market created by the AfCFTA will be the most dynamic market space in history.

Mustapha and Adetoye (2020) argued that in order for Nigeria to truly take advantage of the opportunities that the AfCFTA presents, a number of key obstacles, including those related to trade facilitation procedures, institutional capacity, and infrastructure, need to be addressed. These obstacles are fact that Nigeria does not have the infrastructure to implement these procedures. It is known that Nigeria lacks adequate infrastructure; road networks, limited rail connections, inadequate ports and customs facilities, and an unstable electricity supply contributes to the inadequacy in manufacturing goods and the management of trade logistics. Thus; contributing to the rise in production and transportation-related expenses (Chete et al., 2014; Barigbon & Idoniboye-Obu, 2022)

2. Statement of the Problem

Industrialisation remains central to Nigeria's economic growth, employment creation and diversification efforts. Since the 1960s, successive governments have adopted industrial policies aimed at strengthening domestic production and reducing dependence on primary commodities. However, translating these policies into sustained industrial development has remained difficult, as the manufacturing sector continues to face structural and operational constraints (Arize, 2023).

Nigeria signed the African Continental Free Trade Area (AfCFTA) Agreement on 7 July 2019, against the background of sluggish economic growth and heavy dependence on crude oil. Aigheyisi and Iyoha (2022) observed that Nigeria's economic performance weakened between 2015 and 2019, largely because of the decline in crude oil prices and production, alongside persistent structural constraints. AfCFTA subsequently created new prospects for Nigerian manufacturers through access to a larger continental market, increased intra-African trade, regional value-chain participation and export expansion.

Despite these opportunities, Nigerian manufacturing firms continue to contend with inadequate infrastructure, unreliable power supply, high production and logistics costs, limited access to finance and technology, and difficulties complying with product and international quality standards. Previous evidence indicates that similar constraints limited Nigeria's ability to exploit earlier export opportunities, particularly because of weaknesses in manufacturing capacity, infrastructure and compliance with packaging and product standards (Adewuyi & Oyejide, 2021).

Furthermore, Egbuna et al. (2026) reported that infrastructure and logistics deficiencies, limited finance and regulatory compliance remain major challenges to effective AfCFTA participation. Although Nigeria recorded growth in overall trade between 2023 and 2024, its trade under AfCFTA remains relatively limited. This raises concerns about whether Nigerian manufacturers possess the capacity to fully exploit the opportunities created by continental market integration. The problem, therefore, is the uncertainty surrounding the extent to which

AfCFTA is translating into improved manufacturing performance, competitiveness and export opportunities in Nigeria.

3. Objectives of the Study

On Nigeria's manufacturing industry, with an emphasis on challenges to realizing benefits. Specific objectives include to:

1. evaluate the potential benefits of AfCFTA for Nigeria's manufacturing sector, including enhanced market access, increased exports, and economic diversification
2. examine the major challenges facing Nigeria's manufacturing industry in benefiting from AfCFTA, such as infrastructure limitations, regulatory barriers, and low competitiveness.

4. Research Hypotheses

H₀₁: AfCFTA has no significant relationship on the potential benefits of Nigeria's manufacturing sector in terms of enhanced market access, increased exports and economic diversification.

H₀₂: Infrastructure limitations, regulatory barriers and low competitiveness have no significant influence on the ability of Nigeria's manufacturing sector to benefit from AfCFTA.

5. Literature Review

Empirical studies have identified several factors that may shape Nigeria's ability to benefit from the African Continental Free Trade Area (AfCFTA), particularly within the manufacturing sector. Arize (2023) found that Nigeria's industrial development has been constrained by persistent power outages, limited access to finance, multiple taxation and insecurity. The study emphasised that a supportive business environment, improved financing and policies that encourage local manufacturing are necessary for industrial growth. Similarly, Osabohiena et al. (2021), in their assessment of Nigeria's experience under the African Growth and Opportunity Act (AGOA), reported that weak manufacturing capacity, inadequate infrastructure, and poor compliance with international packaging and product standards limited Nigeria's export gains. These findings suggest that market access alone may not translate into improved manufacturing performance. Aigheyisi and Iyoha (2022), using ARDL analysis for 1981–2019, found that intra-African trade had a positive and significant long-run effect on Nigeria's economic growth, although its short-run effect was positive but insignificant. More recently, Egbuna et al. (2026) reported that AfCFTA implementation had recorded greater progress at the policy level than in actual trade. They identified poor infrastructure and logistics (37.2%), limited business finance (26.5%), and regulatory compliance (17.7%) as major constraints facing Nigerian businesses. Generally, the study indicate that AfCFTA presents opportunities for manufacturing expansion, employment and investment, but these benefits depend substantially on infrastructure, finance, standards, regulatory capacity and effective trade facilitation.

6. Methodology

The study was conducted in Nigeria, with emphasis on major manufacturing and commercial hubs where manufacturing activities, trade and logistics operations are concentrated. The selected locations include Lagos, Kano, Ogun, Onitsha (Anambra), and Port Harcourt (Rivers).

These locations provide geographical coverage of major manufacturing and distribution clusters and capture variations in access to markets, transportation infrastructure, energy supply and trade facilities. The choice of the study area is also consistent with the importance of infrastructure, logistics and regulatory conditions to firms' participation in international trade.

The study adopted cross sectional research design. The population comprise of manufacturing firms operating in Nigeria, particularly firms engaged in the production of goods with actual or potential regional export markets under AfCFTA. The study will target owners, chief executive officers, production managers, export managers, supply-chain/logistics managers and other senior personnel with knowledge of their firms' production, marketing and trade activities. Manufacturing firms will be selected across relevant subsectors, including food and beverages, textiles and apparel, chemicals and pharmaceuticals, plastics, metal products, household products and other consumer and intermediate manufacturing activities.

Table 1a: Sample Frame

S/N	Location of sampled Manufacturing Firms	Population	Proportional Allocation Method
1	Lagos (14)	2,520	153
2	Kano (12)	880	53
3	Aba (4)	230	15
4	Onitsha & Environs (13)	810	50
5	Port Harcourt (9)	575	35
	Ogun (13)	1,540	94
	Total	6,555	400

Source: Field work, 2026.

Note: See Appendix I: Table 1b Sample Fame with details of Manufacturing Firms

A multistage sampling procedure was adopted. First, major manufacturing hubs were purposively selected to ensure representation of important industrial and commercial centres. Second, manufacturing firms were stratified according to subsector and firm size where adequate sampling-frame information is available. Finally, eligible firms were selected using simple random within the identified strata. 65 manufacturing firms serve as the study population of interest, where the actual respondents (400) were randomly selected as the unit of inquiry.

The required sample size was determined using Taro Yamane's formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n = the required sample size, N = total population of eligible manufacturing firms, e = the error of sampling/accepted error limits (0.05), 1 = the constant figure/level of precision.

The Taro Yamane formula is applied to the above population to determine the sample size:

$$n = \frac{6555}{1 + 6555(0.05)^2}$$

$$n = 400$$

The study instrument was adequately distributed to each population strata using a proportionate method of allocation derived from Amamilo et al. (2021).

$$\text{Proportionate formula: } n = \frac{N_p \times n}{N}$$

Where: N_p = number of persons per strata, n = sample size of the study, N = total population of the study. See table 1, for the other distribution of the study instrument.

The study made use of both primary and secondary data sources; primary data were obtained through a structured questionnaire administered to selected manufacturing firms through e-sampling (google form); focusing on the owner/CEO, production manager, export manager, supply-chain/logistics manager, or other senior staff with adequate knowledge of production and trade operations. The nature of secondary data utilized were published articles in academic journals.

A structured questionnaire was the principal instrument used, it was divided into three sections:

Section A: firm characteristics

Section B: Potential benefits of AfCFTA to manufacturing firms in Nigeria

Section C: Challenges affecting manufacturers' ability to benefit from AfCFTA

The 400 copies of the questionnaires were administered directly to respondents, supplemented where necessary by electronic distribution. Respondents were informed about the purpose of the study and assured that the information supplied will be used strictly for academic purposes. Only respondents with sufficient knowledge of their firms' production, marketing, supply-chain or export activities were included. For the qualitative component, relevant policy documents, official reports and trade statistics were systematically reviewed to identify documented changes, opportunities and constraints associated with AfCFTA and Nigeria's manufacturing sector. Data obtained from the questionnaire were coded and analysed using descriptive (mean and standard deviation) and inferential statistics such as Multiple Linear Regression.

7. Results and Discussion

Objective One: evaluate the potential benefits of AfCFTA for Nigeria's manufacturing sector, including enhanced market access, increased exports, and economic diversification

Table 2: Perception of Respondents on the potential benefits of AfCFTA for Nigeria's manufacturing sector.

SN		SA (4)	A (3)	D (2)	SD (1)	Mean	Standard deviation
1.	AfCFTA can provide Nigerian manufacturers with greater access to markets across African countries.	260	105	25	10	3.54	3.08
2.	AfCFTA can increase the volume of manufactured goods exported from Nigeria to other African countries.	115	245	28	12	3.16	2.70
3.	AfCFTA can create opportunities for Nigerian manufacturers to expand production and compete more effectively in the African market.	110	255	25	10	3.16	2.69
4.	AfCFTA can help diversify Nigeria's economy by reducing dependence on crude oil and promoting the growth of manufacturing and other productive sectors.	270	100	20	10	3.58	3.11
5.	AfCFTA can attract new investment into Nigeria's manufacturing sector and support the creation of more jobs.	230	125	30	15	3.43	2.99
	Cumulative mean					3.37	

Source: Field work, 2026.

The results in table 2 show that respondents generally perceived the African Continental Free Trade Area (AfCFTA) as having substantial potential benefits for Nigeria's manufacturing sector. The cumulative mean of 3.37, which is above the four-point scale midpoint of 2.50, indicates a generally positive perception of the agreement's expected contribution to manufacturing development. The highest-rated benefit was its potential to diversify Nigeria's economy by reducing dependence on crude oil and promoting manufacturing and other productive sectors, with a mean of 3.58 and standard deviation of 3.11. This was followed by the expectation that AfCFTA would provide Nigerian manufacturers with greater access to African markets ($M = 3.54$, $SD = 3.08$). Respondents also agreed that the agreement could attract new investment and create employment opportunities ($M = 3.43$, $SD = 2.99$). Similarly, AfCFTA was perceived as capable of increasing the volume of Nigerian manufactured exports to other African countries ($M = 3.16$, $SD = 2.70$) and creating opportunities for manufacturers to expand production and compete more effectively within the African market ($M = 3.16$, $SD = 2.69$). Overall, the findings suggest that respondents associate AfCFTA with expanded market opportunities, export growth, investment, employment and economic diversification, although the relatively lower means for export expansion and production competitiveness indicate areas requiring further support.

This finding is consistent with Aigheyisi and Iyoha (2022), who found a positive and significant long-run relationship between intra-African trade and Nigeria's economic growth, suggesting that deeper African trade integration could generate sustained economic benefits. Similarly, Mustapha and Adetoye (2020) identified AfCFTA as an avenue for economic growth and

diversification through preferential access to the African market, while cautioning that inadequate infrastructure and trade-facilitation systems could restrict its practical benefits.

The present finding also agrees with Arize (2023), who identified unreliable electricity, inadequate finance, multiple taxation and insecurity as persistent constraints on Nigeria's industrial development. More recent evidence from Egbuna et al. (2026) similarly shows that Nigeria's AfCFTA implementation has progressed more clearly at the policy level than in actual trade, with infrastructure, logistics, finance and regulatory issues continuing to constrain participation. Thus, the positive perception recorded in this study supports the view that AfCFTA can broaden market access, stimulate exports, investment and diversification, but its manufacturing benefits depend on Nigeria's capacity to overcome the structural constraints that currently limit competitiveness.

Test of Hypothesis One

H_0 : AfCFTA has no significant relationship on the potential benefits of Nigeria's manufacturing sector in terms of enhanced market access, increased exports and economic diversification.

H_1 : AfCFTA has a significant relationship on the potential benefits of Nigeria's manufacturing sector in terms of enhanced market access, increased exports and economic diversification.

Table 3: Analysis of variance of regression of the potential benefits of Nigeria's manufacturing sector in terms of enhanced market access, increased exports and economic diversification.

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	107.175	5	21.435	183.187	.001
	Residual	46.102	394	.117		
	Total	153.278	399			

a. Dependent Variable: AfCFTA

b. Predictors: (Constant), AfCFTA attracts investment into Nigeria's manufacturing sector, AfCFTA creates opportunities for manufacturing expansion, AfCFTA promotes economic diversification beyond crude oil, AfCFTA increases Nigeria's manufactured exports to Africa, AfCFTA improves Nigerian manufacturers' access to African markets.

Source: Author's computation, 2026.

Table 3 shows that the regression model is statistically significant, with an F-value of 183.187 and a significance level of $p = 0.001$. This indicates that the model, which includes AfCFTA-related predictors investment attraction, manufacturing expansion, economic diversification, increased manufactured exports, and improved access to African markets significantly explains the variance in the potential benefits of Nigeria's manufacturing sector at the 0.05 level.

Therefore, the null hypothesis that AfCFTA has no significant relationship on the potential benefits of Nigeria's manufacturing sector in terms of enhanced market access, increased exports and economic diversification is rejected. This result indicates that the set of AfCFTA-related predictors jointly has a statistically significant relationship with the potential benefits of Nigeria's manufacturing sector.

Table 4: Model Summary of the potential benefits of Nigeria's manufacturing sector in terms of enhanced market access, increased exports and economic diversification.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836	.699	.695	.342

a. *Predictors: (Constant), AfCFTA attracts investment into Nigeria's manufacturing sector, AfCFTA creates opportunities for manufacturing expansion, AfCFTA promotes economic diversification beyond crude oil, AfCFTA increases Nigeria's manufactured exports to Africa, AfCFTA improves Nigerian manufacturers' access to African markets.*

Source: Author's computation, 2026.

The model summary indicates a strong relationship between AfCFTA-related predictors and the potential benefits of Nigeria's manufacturing sector. The coefficient of determination (R^2) is 0.699. This indicates that 69.9% of the variance in the potential benefits of Nigeria's manufacturing sector, in terms of enhanced market access, increased exports and economic diversification, is explained by the predictor variables: attraction of investment, manufacturing expansion opportunities, economic diversification, increased manufactured exports, and improved access to African markets. Thus, 69.9% of the variation in the potential benefits of Nigeria's manufacturing sector is accounted for by these AfCFTA-related factors. The adjusted R^2 value of 0.695 provides a more conservative estimate, indicating that, after adjusting for the number of predictors in the model, approximately 69.5% of the variance in the potential benefits of Nigeria's manufacturing sector is accounted for by the predictors. The standard error of the estimate is 0.342, indicating the average deviation of the observed values from the regression line. The R value of 0.836 indicates a strong positive relationship between the predictors and the potential benefits of Nigeria's manufacturing sector. Overall, the model demonstrates a high level of explanatory power in accounting for variations in the potential benefits associated with AfCFTA.

Table 5: t-values of regression of the potential benefits of Nigeria's manufacturing sector in terms of enhanced market access, increased exports and economic diversification.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.879	.095		9.207	.001
	AfCFTA attracts investment into Nigeria's manufacturing sector.	-.066	.104	-.077	-.638	.524
	AfCFTA creates opportunities for manufacturing expansion.	.082	.108	.089	.758	.449
	AfCFTA promotes economic diversification beyond crude oil.	.278	.108	.288	2.579	.010
	AfCFTA increases Nigeria's manufactured exports to Africa.	.074	.093	.084	.791	.429

	AfCFTA improves Nigerian manufacturers' access to African markets.	.401	.060	.510	6.719	.001
a. Dependent Variable: AfCFTA						

Source: Author's computation, 2026

Table 5 presents the contributions of the individual AfCFTA-related predictors to the potential benefits of Nigeria's manufacturing sector in terms of enhanced market access, increased exports and economic diversification. The analysis indicates that AfCFTA attracts investment into Nigeria's manufacturing sector ($\text{Beta} = -0.077$, $t = -0.638$, $p = .524$) has a negative but statistically non-significant relationship with the dependent variable at the 0.05 level.

Similarly, AfCFTA creates opportunities for manufacturing expansion ($\text{Beta} = 0.089$, $t = 0.758$, $p = 0.449$) and AfCFTA increases Nigeria's manufactured exports to Africa ($\text{Beta} = 0.084$, $t = 0.791$, $p = 0.429$) show positive but statistically non-significant relationships with the dependent variable.

In other words, AfCFTA promotes economic diversification beyond crude oil ($\text{Beta} = 0.288$, $t = 2.579$, $p = 0.010$) has a positive and statistically significant relationship with the potential benefits of Nigeria's manufacturing sector. Also, AfCFTA improves Nigerian manufacturers' access to African markets ($\text{Beta} = 0.510$, $t = 6.719$, $p = 0.001$) and shows a positive and statistically significant relationship. Overall, the results indicate that economic diversification and improved access to African markets are significant individual predictors of the potential benefits of Nigeria's manufacturing sector, while investment attraction, manufacturing expansion opportunities, and increased manufactured exports do not make statistically significant individual contributions within the regression model.

Objective Two: Examine the major challenges facing Nigeria's manufacturing industry in benefiting from AfCFTA, such as infrastructure limitations, regulatory barriers, and low competitiveness

Table 6: Perception of Respondents on the major challenges facing Nigeria's manufacturing industry in benefiting from AfCFTA.

S/N	Item Statement	SA (4)	A (3)	D (2)	SD (1)	Mean	Rank Mean Value
5.	Inadequate electricity supply and unreliable energy infrastructure limit the ability of Nigerian manufacturers to compete effectively under AfCFTA.	125	35	180	60	2.56	6 th
6.	Poor road, rail, port, and other transport infrastructure increases the cost of moving manufactured goods to African markets.	230	110	45	15	3.39	4 th
7.	Complex government regulations and administrative procedures make it difficult for Nigerian manufacturers to take full advantage of AfCFTA opportunities.	210	115	50	25	3.28	5 th
8.	Customs procedures, tariffs, and other trade-related barriers hinder the export of Nigerian manufactured products to other African countries.	270	90	30	10	3.55	2 nd

9.	High production costs make Nigerian manufactured goods less competitive in African markets under AfCFTA.	250	100	35	15	3.46	3rd
10.	Limited access to modern technology, finance, and skilled labour reduces the competitiveness of Nigerian manufacturers in the AfCFTA market.	280	85	25	10	3.59	1st
	Cumulative mean					3.30	

Source: Field work, 2026.

The results in table 6 indicate that Nigerian manufacturers face several significant challenges in taking full advantage of the African Continental Free Trade Area (AfCFTA), with a cumulative mean of 3.30, which is above the benchmark mean of 2.50. This suggests that respondents generally perceived the identified factors as major constraints to manufacturing competitiveness under AfCFTA. Limited access to modern technology, finance, and skilled labour ranked first, with a mean of 3.59, indicating that inadequate productive capacity and human capital remain critical concerns. Customs procedures, tariffs, and other trade-related barriers followed closely, with a mean of 3.55, highlighting the difficulties manufacturers may encounter in moving goods across African borders. High production costs ranked third ($M = 3.46$), reflecting the cost pressures that can reduce the competitiveness of Nigerian products in regional markets.

Similarly, poor road, rail, port, and other transport infrastructure recorded a mean of 3.39 and ranked fourth, suggesting that logistics constraints increase the cost and difficulty of accessing African markets. Complex government regulations and administrative procedures ranked fifth ($M = 3.28$), while inadequate electricity supply and unreliable energy infrastructure ranked sixth ($M = 2.56$). Although energy infrastructure recorded the lowest mean, it still exceeded the benchmark, indicating that respondents regarded it as a relevant challenge. Overall, the findings show that competitiveness under AfCFTA depends substantially on improvements in technology, finance, skills, trade facilitation, production costs, infrastructure, and regulatory efficiency.

The findings show that Nigerian manufacturers face substantial constraints in benefiting fully from AfCFTA, as reflected in the cumulative mean of 3.30, above the benchmark of 2.50. Limited access to modern technology, finance and skilled labour ranked highest ($M = 3.59$), suggesting that weak productive capacity remains a major competitiveness concern. This agrees with Enoch (2021), who found that Nigeria's manufacturing sector remains relatively uncompetitive, while Osondu-Oti (2022) identified inadequate finance, obsolete machinery and infrastructure deficits as major constraints to AfCFTA-related competitiveness. Customs procedures and trade barriers also recorded a high mean ($M = 3.55$), consistent with evidence that cumbersome customs processes and administrative requirements increase trade costs and delay cross-border movement. Similarly, poor transport infrastructure ($M = 3.39$) and high production costs ($M = 3.46$) reinforce the findings of recent Nigerian studies identifying infrastructure, logistics and finance as major AfCFTA implementation constraints. In all, the results suggest that AfCFTA's market opportunities can only translate into stronger manufacturing performance when Nigeria addresses these underlying structural and institutional constraints.

Test of Hypothesis Two

H_0 : Infrastructure limitations, regulatory barriers and low competitiveness have no significant influence on the ability of Nigeria's manufacturing sector to benefit from AfCFTA.

H_1 : Infrastructure limitations, regulatory barriers and low competitiveness has significant influence on the ability of Nigeria's manufacturing sector to benefit from AfCFTA.

Table 7: Analysis of variance of regression of the Infrastructure limitations, regulatory barriers and low competitiveness on the ability of Nigeria's manufacturing sector to benefit from AfCFTA

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	371.061	6	61.844	394.240	.000
	Residual	61.649	393	.157		
	Total	432.710	399			

a. Dependent Variable: AfCFTA

b. Predictors: (Constant), Limited technology, finance, and skilled labour reduce competitiveness; unreliable electricity supply limits manufacturing competitiveness; poor transport infrastructure increases distribution costs; complex regulations hinder access to AfCFTA opportunities; high production costs reduce product competitiveness; customs and trade barriers hinder manufactured exports

Table 7 shows that the regression model is statistically significant, with an F-value of 394.240 and a significance level of $p < 0.001$. This indicates that the model, which includes unreliable electricity supply, poor transport infrastructure, complex regulations, customs and trade barriers, high production costs, and limited technology, finance and skilled labour, significantly explains the variation in the ability of Nigeria's manufacturing sector to benefit from AfCFTA. Since the significance value ($p = 0.000$) is less than the 0.05 significance level, the null hypothesis that infrastructure limitations, regulatory barriers and low competitiveness have no significant influence on the ability of Nigeria's manufacturing sector to benefit from AfCFTA is rejected.

Thus, the six predictor variables jointly have a statistically significant relationship with the ability of Nigeria's manufacturing sector to benefit from AfCFTA.

Table 8: Model Summary of the Infrastructure limitations, regulatory barriers and low competitiveness on the ability of Nigeria's manufacturing sector to benefit from AfCFTA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926	.858	.855	.396

a. Predictors: (Constant), Limited technology, finance, and skilled labour reduce competitiveness, Unreliable electricity supply limits manufacturing competitiveness, Poor transport infrastructure increases distribution costs, Complex regulations hinder access to AfCFTA opportunities, High production costs reduce product competitiveness, Customs and trade barriers hinder manufactured exports.

Source: Author's computation, 2026.

Table 8 presents the model summary of the influence of infrastructure limitations, regulatory barriers, and low competitiveness on the ability of Nigeria's manufacturing sector to benefit

from AfCFTA. The R value of 0.926 indicates a very strong relationship between the predictor variables and the ability of Nigeria's manufacturing sector to benefit from AfCFTA. The coefficient of determination (R^2) is 0.858, indicating that 85.8% of the variance in the ability of Nigeria's manufacturing sector to benefit from AfCFTA is explained by the six predictor variables: unreliable electricity supply, poor transport infrastructure, complex regulations, customs and trade barriers, high production costs, and limited technology, finance and skilled labour. Thus, 85.8% of the variation in the dependent variable is accounted for by these factors. The adjusted R^2 value of 0.855 provides a more conservative estimate, indicating that, after adjusting for the number of predictors in the model, approximately 85.5% of the variance in the ability of Nigeria's manufacturing sector to benefit from AfCFTA is explained by the predictors. The standard error of the estimate is 0.396, indicating the average deviation of the observed values from the regression line. Overall, the model demonstrates a very high level of explanatory power, indicating that infrastructure limitations, regulatory barriers, and competitiveness-related factors collectively account for a substantial proportion of the variation in Nigeria's manufacturing sector's ability to benefit from AfCFTA.

Table 9: t-values of regression of the Infrastructure limitations, regulatory barriers and low competitiveness on the ability of Nigeria's manufacturing sector to benefit from AfCFTA

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.657	.106		-6.215	.000
		.407	.030	.424	13.464	.000
		.143	.095	.114	1.503	.134
		.351	.069	.306	5.069	.000
		.104	.122	.074	.850	.396
		.229	.099	.177	2.319	.021
		-.153	.109	-.106	-1.402	.162
a. Dependent Variable: AfCFTA						

Source: Author's computation, 2026

Table 9 presents the contributions of the individual predictors to the ability of Nigeria's manufacturing sector to benefit from AfCFTA. The results indicate that limited technology, finance, and skilled labour (Beta = 0.424, $t = 13.464$, $p < 0.001$) have a positive and statistically significant relationship with the dependent variable. Similarly, poor transport infrastructure (Beta = 0.306, $t = 5.069$, $p < 0.001$) and high production costs (Beta = 0.177, $t = 2.319$, $p = 0.021$) are positive and statistically significant predictors.

Also, unreliable electricity supply (Beta = 0.114, $t = 1.503$, $p = 0.134$) shows a positive but statistically non-significant relationship with the dependent variable. Complex government regulations (Beta = 0.074, $t = 0.850$, $p = 0.396$) also show a positive but non-significant relationship. Customs and trade barriers (Beta = -0.106, $t = -1.402$, $p = 0.162$) have a negative but statistically non-significant relationship.

Generally, the results show that limited technology, finance and skilled labour, poor transport infrastructure, and high production costs make statistically significant individual contributions

to the model, whereas unreliable electricity supply, complex regulations, and customs and trade barriers do not make statistically significant individual contributions at the 0.05 level.

8. Conclusion

The study concludes that AfCFTA presents significant opportunities for Nigeria's manufacturing sector through expanded market access, export growth, investment, employment creation and economic diversification. However, these opportunities are constrained by limited access to finance, technology and skilled labour, high production costs, inadequate transport infrastructure, and cumbersome trade procedures. Therefore, achieving meaningful manufacturing gains from AfCFTA requires sustained improvements in productive capacity, infrastructure and trade facilitation.

9. Recommendations

The following recommendations were made based on the study findings;

1. Government and trade agencies should establish targeted AfCFTA export-support programmes that provide manufacturers with market intelligence, export documentation assistance, product certification and access to African buyers. This would help convert the perceived market-access and export opportunities into actual trade and production growth. Manufacturers and industry stakeholders should develop market-oriented production and investment strategies focused on products with competitive demand across African markets. Government should complement this effort through investment incentives, export financing and industrial infrastructure that encourage firms to expand production, create employment and reduce dependence on crude oil.
2. Government should prioritise affordable industrial finance, technology upgrading, skills development and reliable infrastructure, particularly transport and energy systems. Dedicated financing schemes and industrial technology-support programmes would help manufacturers improve productivity and reduce production costs. Customs and regulatory agencies should simplify and digitise cross-border trade procedures, while manufacturers strengthen compliance, workforce training and logistics planning. Stakeholders should establish coordinated trade-facilitation platforms to reduce delays, administrative burdens and other barriers to efficient AfCFTA participation.

10. Study Limitation

A major limitation of the study was the reluctance of some selected manufacturing firms to disclose or release official information on their staff strength, citing organisational confidentiality. This constrained direct verification of the population figures for some firms. To address this limitation, the researchers with 2 research field assistants per locations conducted a 30-day census of persons entering the selected facilities to obtain an indicative measure of workforce presence. In addition, available staff-strength information was obtained from firms' official publications and other publicly accessible records.

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Appendix I: Table 1b Sample Fame with details of Manufacturing Firms

	Location	Manufacturing firm	Major manufacturing subsector/product	Population	Proportional Allocation Method
1	Lagos (Lagos State)	Nestlé Nigeria Plc	Food and beverages	260	16
2		Flour Mills of Nigeria Plc	Food processing, flour and Agro-processing	560	34
3		Dangote Refinery/Petrochemical	Petrochemical/Energy	350	21
4		Dangote Fertiliser	Fertiliser	150	9
5		Sunflag Nigeria	Textiles	300	18
6		May & Baker Nigeria Plc	Pharmaceuticals and chemicals	60	4
7		PZ Wilmar Nigeria Ltd.	Edible oils	100	6
8		PZ Cussons Nigeria Plc	Consumer goods	100	6
9		Friesland Campina WAMCO Nigeria Plc	Peak Milk, Three Crowns, Friso and dairy products	150	9
10		UAC Foods Ltd	Gala Sausage Roll, Supreme Ice Cream, Swan Water, Funtime Snacks, Zuri Seasoning	90	6
11		Erisco Foods Ltd.	Tomato paste, milk cubes, non-dairy creamer, seasoning, instant garri mix, beverages	50	3
12		Morison Industries Plc	Household/chemical products	10	1
13		Crown Flour Mill Ltd.	Flour, semolina, bread flour, confectionery flour, noodle flour and pasta-related products	120	7
14		Seven-Up Bottling Company Ltd.	Pepsi, 7UP, Mirinda, Mountain Dew, Teem, Aquafina, Lipton Ice Tea and other beverages	220	13
	Lagos (Lagos State) Subtotal			2,520	153
15	Kano	Safari Textiles Ltd.	Garments, textile printing, embroidery	50	3
16		FAS Agro Sacks	Polypropylene packaging	40	2
17		BUA Flour Mills	Flour and wheat-based products	100	6
18		Mamuda Agro & Allied Products	Agro-processing and allied products	100	6
19		Pal Pharmaceutical Industries Ltd.	Pharmaceutical products	40	2
20		Nigerian Bottling Company Ltd	Beverages	100	6
21		Grand Cereals-related manufacturing operations	Food/agro-processing	80	5
22		Seven-Up Bottling Company Plc	Beverages	100	6
23		Dantata Plastics Ltd.	Buckets, basins, kettles, cups, jerry cans, PVC pipes, films	80	5
24		Fursa Foods Ltd.	Fursa Crown Rice	60	4
25		Z-Tannery	Wet-blue leather, sheep/goat crust leather	60	4
26		ASM Veg Oil Ltd	Refined groundnut, sesame and soybean oil	70	4
	Kano subtotal			880	53
27	Aba (Abia State)	Pitason Industries Ltd	PVC shoe soles, TPR products and boots	35	2
28		Em's Feet Ventures	Unisex slippers and half-cut shoes	25	2

29		Enyimba Garment Factory Ltd	School uniforms, defence wear, hospitality clothing, workwear, private-label fashion, athleisure	80	5
30		Enyimba Automated Shoe Company Ltd (ENASCO)	Men's and women's shoes, school shoes, safety/army boots, canvas footwear, leather accessories	90	6
	Aba subtotal			230	15
31	Onitsha & Environs (Anambra State)	Seahorse Lubricant Industries	Lubricants	60	4
32		Whiz Products (W.A.) Ltd / Whiz Oil	Lubricants	50	3
33		Jezco Oil	Lubricants	40	2
34		KM Oil & Gas	Lubricants	35	2
35		Eastern Distilleries & Food Industries Ltd. (EDFI)	Malt drinks, non-alcoholic beverages, wines, spirits and other beverages	80	5
36		A-Z Petroleum Products	Engine lubricants, gear oils, brake oils, greases and other petroleum products	50	3
37		Ibeto Petrochemical Industries Ltd	Engine oils, lubricants and petroleum products	90	6
38		Visa Petroleum Resources Ltd / Visa Oil	Engine oil, ATF, gear oil, synthetic oil, brake fluid and oil treatments	45	3
39		Coca Cola (Nigeria Bottling Company)	Soft drinks, carbonated beverages and related beverages	120	7
40		Krisoral Group of Companies (ROPP & HDPE Plants)	ROPP caps, HDPE caps, PVC shrink films/labels, drug dispensing cups	60	4
41		Showers Chemicals and Allied Industries LTD	Paints and chemical products	70	4
42		Delendu Aluminum Manufacturing Company Limited	Aluminium products/sheets and related products	60	4
43		Manfes Pharmaceutical Company Nigeria Limited	Pharmaceutical products	50	3
	Onitsha & Environs (Anambra State) Subtotal			810	50
44	Port Harcourt	Richter Group of Industries	Manufacturing/industrial products	60	4
45		Avon Basson Nigeria Ltd	Chemicals	40	2
46		Chicobest Chemical	Chemicals	30	2
47		De-Elbon Pharmaceutical Ltd	Pharmaceuticals	35	2
48		International (Pabod) Breweries Ltd	Beverages	80	5
49		Nigerian Bottling Company Ltd	Beverages	100	6
50		Amalgamated Distilleries of Nigeria	Spirits/beverages	60	4
51		Trans-Amadi industrial manufacturers	Chemicals, plastics, fabrication and consumer products	100	6
52		Port Harcourt metal/fabrication firms	Metal products	70	4
	Port Harcourt Subtotal			575	35
53	Ogun (Ogun State)	Dangote Cement	Cement	140	9

54		Lafarge Africa	Cement, aggregates, ready-mix concrete, mortar	120	7
55		Nestlé Nigeria	Maggi, Milo, Golden Morn, Nescafé, cereals and other food/beverage products	180	11
56		Dufil Prima Foods	Indomie noodles, pasta, flour, oil, snacks, seasoning, cassava-based products	200	12
57		Nigerian Breweries	Beer, malt drinks and non-alcoholic beverages	130	8
58		Rite Foods	Bigi soft drinks, Fearless energy drinks, Bigi water, Sosa fruit drinks, sausages	160	10
59		GZ Industries	Aluminium beverage cans	100	6
60		Coleman Technical Industries	Electrical wires, power cables, telecommunications and fibre-optic cables	120	7
61		Fidson Healthcare	Tablets, capsules, creams/gels, dry powders, oral liquids and pharmaceutical products	80	5
62		Nigerian Foundries	Industrial castings, valves, manhole covers, oil & gas castings, bridge/road castings	60	4
63		Honeywell Flour Mills	Pasta/noodles and other wheat-based food products	100	6
64		Veepee Industries	Flexible packaging, polyethylene products, corrugated paper products, printing inks/resins	70	4
65		Shongai Packaging	Plastic crates, pallets, containers and jars	80	5
	Ogun subtotal			1,540	94
	GRAND TOTAL			6,555	400

Source: Field work, 2026.