



Leveraging the African Continental Free Trade Area (AfCFTA): Nigeria's Path to Export-Led Growth

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ABSTRACT

This article on leveraging the African Continental Free Trade Area (AfCFTA): Nigeria's Path to Export-Led Growth aimed to analyze the Nigeria's journey towards export-led growth under the AfCFTA framework. Quarterly time series data covering the period under review were collected on each of the variables employed in the model (GDP, TRB, TAR and EXR). TRB, TAR and EXR represented the trade balance, tariff and exchange rate were used as the independent variables while GDP (Gross Domestic Product) was used as the dependent variable. Using the ARDL method of OLS, the findings reveal that there is a significant relationship between GDP and tariffs, exports, and exchange rate. The study concluded that AfCFTA is a commendable program that has the potentials improving the GDP of Nigeria and other African countries. However, there is need to improve on the export basket of the nations; improve the tariffs, and ensure the challenges associated with using foreign currencies is defeated within the African context.

Keywords: GDP, exports, tariffs, exchange rate

Introduction

The Agreement establishing the African Continental Free Trade Area (AfCFTA) was opened for signature on March 21, 2018, a landmark day that also saw the launch of two complementary continental initiatives: the Protocol on Free Movement of Persons and the Single African Air Transport Market (SAATM) (Obeng-Odoom, 2020). The AfCFTA Agreement came into force on May 30, 2019, completing the legal groundwork for its operationalization. To date, all African countries except Eritrea have signed the agreement, with over 30 countries having ratified it. On July 7, 2019, the operational phase of the AfCFTA was launched, supported by five key operational instruments: Rules of Origin, the online negotiating forum, the mechanism for monitoring and eliminating non-tariff barriers, a digital payments system, and the African Trade Observatory. In August 2020, the AfCFTA Secretariat was inaugurated in Accra, Ghana, by the African Union Commission (Apiko et al., 2020).

As one of the continent's largest economies, Nigeria holds the key to unlocking the AfCFTA's full potential (Pasara, 2020). Trading under the African Continental Free Trade Area (AfCFTA) officially commenced on January 1, 2021, marking a significant milestone in advancing continental economic integration according to Onwuka & Udegbunam (2019). The successful involvement of numerous states in this initiative is a noteworthy achievement, and expectations for its future impact remain high.

According to Gammadigbe (2021) once fully operational and inclusive of all African nations, the AfCFTA will be the largest free trade area by membership under World Trade Organization (WTO) rules, integrating 55 African economies. The agreement aims to create a unified continental market for goods and services, supported by the free movement of capital and people, and to lay the groundwork for establishing a continental Customs Union (Tröster & Janechová, 2021). Additional objectives include fostering sustainable and inclusive development, gender equality, structural transformation, industrial growth and diversification, regional value chain development, agricultural progress, and enhanced food security across Africa (Simola et al., 2022).

Beyond boosting intra-African trade, the expansive markets facilitated by the AfCFTA are expected to attract investments, enhance productivity, and add value to the continent's economies (Adeboje et al., 2022). This is anticipated to generate more revenue and better employment opportunities, improve welfare, and further expand markets, creating a positive cycle of growth. Although the COVID-19 pandemic poses risks to this vision, the potential benefits of the AfCFTA are more critical now than ever. The initiative remains a top priority for African policymakers and international partners who support it alongside other regional and continental agendas (Fofack et al., 2021).

While policymakers are aware of these challenges, it is essential to emphasize the role of key actors' interests and incentives in shaping AfCFTA outcomes. Olney (2022) highlighted the importance of understanding these dynamics, stressing how they can guide future discussions on how to best engage stakeholders at continental, regional, and national levels and ensure international partners offer effective and appropriate support.

The AfCFTA process is inherently complex, involving phased negotiations and requiring extensive collaboration among public and private stakeholders across local, national, and continental levels (Leshoele, 2023). This complexity raises numerous technical and political questions that will vary by region and sector (Olney, 2022). Initially scheduled to begin on July 1, 2020, trading under the AfCFTA was postponed to January 1, 2021, due to the global disruptions caused by the COVID-19 pandemic (Olney, 2022).

There have been various phases of negotiations leading up to the establishment of AfCFTA. According to Melo & Twum (2021), phase 1 negotiations of the AfCFTA focused on trade in goods and services, as well as mechanisms for dispute settlement. Phase 2 addresses intra-African investment facilitation, intellectual property rights, and competition policy. Discussions are ongoing to also include e-commerce negotiations under Phase 2, though this is currently planned for Phase 3. An African Union Extraordinary Summit on the AfCFTA was held in 2020, to resolve outstanding issues before trading commenced (Obeng-Odoom, 2020).

As of May 2020, a year after the AfCFTA legally entered into force, critical aspects of its implementation were still under development (Olajumoke & Anaele, 2021). These included finalizing the schedules of tariff concessions and rules of origin for goods, as well as specific commitments on services. Under the agreed tariff liberalization framework, member states committed to liberalizing 90% of tariff lines within five years (or ten years for least-developed countries), with 7% designated as "sensitive products" subject to gradual liberalization and 3% excluded entirely (Wapmuk & Ali, 2022).

Osabohien et al (2021) noted that the AfCFTA's implementation follows the principle of variable geometry, allowing flexibility for some member states to take additional time to meet their liberalization commitments.

One of the AfCFTA's stated objectives is to streamline trading regimes across the continent (Turkson et al, 2023). However, given the overlapping nature of various regional arrangements, the AfCFTA is designed to build on the progress already made by Africa's Regional Economic Communities (RECs). Many RECs have established their own free trade areas or customs unions. According to the Article 19(2) of the AfCFTA Agreement, the regional economic communities, regional trading arrangements and customs unions, which have attained among themselves higher levels of regional integration than under this Agreement, shall maintain such higher levels among themselves (Leshoele, 2023).

In practice, this means that customs unions are included in AfCFTA negotiations, even when they are sub-groups within an REC. As a result, trading arrangements at the REC level will continue to operate alongside the AfCFTA. This dual-layer structure could place an additional institutional burden on African states, adding complexity to trade relations, at least in the short to medium term as pointed out by Byiers & Woolfrey (2023). Ensuring effective coordination and clear task division between the AfCFTA, RECs, and member states will be critical to leveraging these institutional frameworks to enhance intra-African trade (Obeng-Odoom, 2020). As of the September 2020 meeting of senior Trade Officials, only six countries and the Economic and Monetary Community of Central Africa (CEMAC) had submitted their tariff offers, indicating that significant work remained to be done in ensuring all the member states key into the agreement (Apiko et al, 2020).

Despite its economic size and resource endowment, Nigeria's export performance has been relatively stagnant, primarily due to over-reliance on crude oil exports and structural constraints hindering diversification (Pasara, 2020). The AfCFTA offers a unique platform to address these challenges and propel Nigeria towards export-led growth. However, realizing this potential requires a comprehensive understanding of the opportunities and constraints facing the nation. Therefore, this article empirically examines the benefits of AfCFTA for Nigeria's export market, focusing on the African continent.

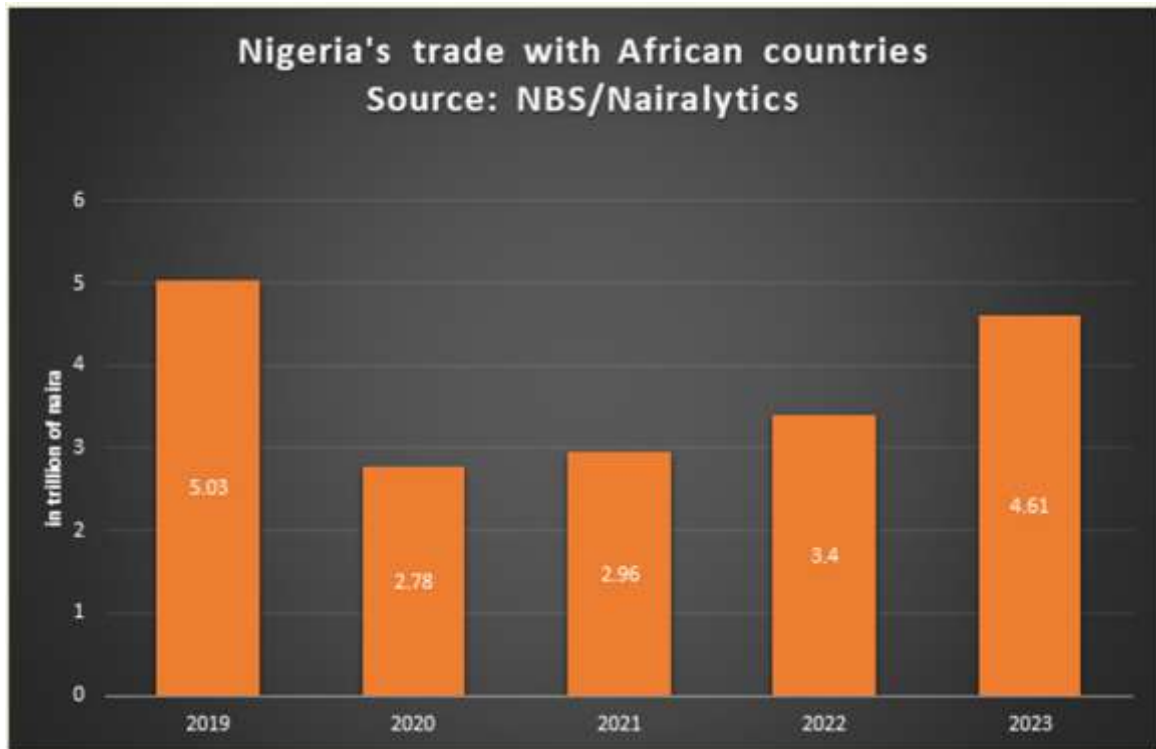
Research Questions

1. What is the relationship between Nigeria's exports within Africa and the GDP since the introduction of AfCFTA?
2. What is the relationship between tariffs and the GDP in Nigeria since the introduction of AfCFTA?
3. Does exchange rate affect GDP performance after the introduction of AfCFTA?

Literature Review

Conceptual Framework

The study adopts a general approach, focusing on exports of Nigeria to other African countries. The analysis will examine the interplay between these sectors and the broader macroeconomic environment, including trade policy, infrastructure development, and investment climate.



Source: Nairalytics (2023)

An analysis reveals that in 2019, Nigeria's import trade stood at ₦1.11 trillion, while exports surged to ₦3.92 trillion, resulting in a total trade value of ₦5.03 trillion. This period marked a peak in Nigeria's intra-African trade, as reported by the NBS (2023).

However, the onset of the global pandemic in 2020 significantly disrupted trade, leading to a sharp contraction. Import values plummeted to ₦406.88 billion, a dramatic decline from the previous year. Exports, though less severely impacted, dropped to ₦2.37 trillion, bringing total trade down to ₦2.78 trillion. This period highlighted a retreat in economic activity and disruptions in supply chains across the continent (NBS, 2023).

In 2021, trade began a cautious recovery. Imports rose to ₦551.31 billion, while exports saw a slight improvement to ₦2.41 trillion. The total trade value climbed to ₦2.96 trillion, signaling the start of a rebound, albeit with significant ground yet to cover (NBS, 2023).

The upward trend continued in 2022, with imports increasing to ₦738.26 billion and exports reaching ₦2.66 trillion, resulting in a total trade value of ₦3.4 trillion. This indicated a gradual return to trade stability. By 2023, trade figures showed further growth. Imports rose to ₦896.05 billion, and exports reached ₦3.71 trillion, lifting the total trade value to ₦4.61 trillion. While this growth is noteworthy, a comparison with the 2019 baseline reveals a recovery gap of approximately ₦420 billion (NBS, 2023).

Although Nigeria's 2023 export figures approached the 2019 levels, imports remained below the pre-pandemic threshold, likely constrained by the country's ongoing foreign exchange challenges.

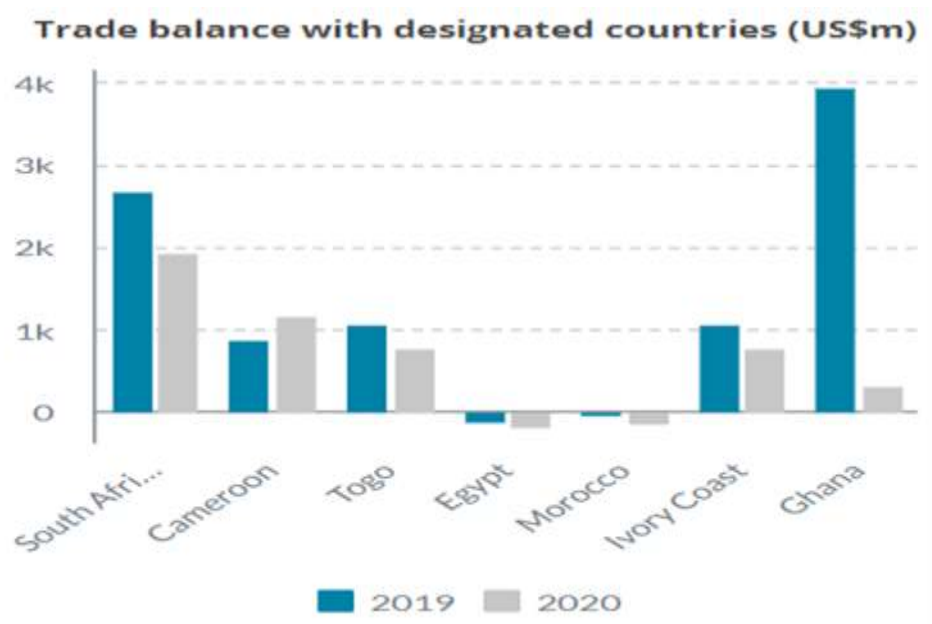


Fig 2: Trade balance with designated countries

Sources: ITC TradeMap and MacMap for trade in goods and tariffs; World Bank for nontariff trade costs; UNCTAD for transportation costs; and WTO for trade in services (2023)

Figure 2 shows that in 2020, 19% of Nigeria's global exports were directed to other African countries. Beyond South Africa, Egypt, and Cameroon, the primary African export destinations include other CEN-SAD and ECOWAS member states. The value of intra-African exports for that year amounted to \$6.4 billion, with crude petroleum oils, vessels, and aircraft being the leading export products.

The AfCFTA aims to connect 1.3 billion people across 55 countries with a combined GDP of \$3.4 trillion (World Bank, 2020). Beyond its unprecedented scale, the AfCFTA represents a paradigm shift, reflecting Africa's commitment to deeper integration by concurrently negotiating trade in goods and services. It is widely regarded as an economic game-changer for Africa's development, with the potential to significantly boost intra-African trade, enable competitive integration into the global economy, reduce poverty, and promote inclusivity. By 2035, the agreement could lift an additional 30 million people out of extreme poverty and 68 million out of moderate poverty (World Bank, 2020).

The AfCFTA also creates a large, unified market, addressing challenges posed by small, fragmented, and uncompetitive national markets, thereby attracting more investments (Muchanga, 2020b). Immediate benefits are expected from the reduction of tariffs and non-tariff barriers (NTBs) and the establishment of a continental framework for trade in goods and services. Additionally, the AfCFTA offers a platform to harmonize regulations in critical trade-related policy areas, such as investment, competition, intellectual property rights, and e-commerce—areas that have been under-addressed at the regional level. These regulations shape how economies function and grow. For example, trade and investment regimes influence the level of economic integration, competition rules impact efficiency, and intellectual property protections drive innovation (World Bank, 2020).

The preamble of the AfCFTA also highlights the importance of broader objectives, such as international security, human rights, democracy, gender equality, and the rule of law, in fostering trade and economic cooperation. This suggests that the AfCFTA's implementation has the potential to address these non-trade goals as well (WTO, 2015).

By 2035, the implementation of the AfCFTA is projected to increase intra-African trade volume by 81% and total African exports by 29% (World Bank, 2020). Through enhanced trade, the agreement is expected to drive Africa's structural transformation by fostering regional value chains and production networks. Wages are predicted to rise by 10%, with unskilled workers and women seeing the most significant gains. The AfCFTA is also anticipated to address gender inequality by creating more employment opportunities for women and narrowing the gender wage gap (Pasara, 2020).

Given this potential, the AfCFTA is being heralded as Africa's economic stimulus to counter the devastating impacts of the COVID-19 pandemic as well as other unfriendly Western Economic policies that have limited trade in Africa (WTO, 2015). The greatest benefits are expected from the reduction of trade barriers and trade facilitation measures, which could increase intra-African trade by 50–132% and yield GDP gains of 1–4%. The AfCFTA also supports the implementation of the WTO's Trade Facilitation Agreement (TFA), which has been ratified by 40 African countries. Full implementation of the TFA could reduce global trade costs by an average of 14.3% and up to 23.1%, with Africa and least-developed countries (LDCs) experiencing the largest reductions (WTO, 2015).

The AfCFTA as a Catalyst for Industrialization and Export Diversification

The AfCFTA is poised to significantly enhance African trade, particularly intra-regional trade in manufactured goods. According to the World Bank (2020), while total exports are expected to increase by almost 29% compared to a business-as-usual scenario, manufacturing exports are projected to benefit the most. Intra-African manufacturing trade could rise by 110%, while manufacturing exports to the rest of the world may increase by 46%. These figures highlight the AfCFTA's potential to open new opportunities for African manufacturers and workers, underpinning hopes that it will drive industrialization across the continent.

Implementing the AfCFTA is anticipated to result in a nearly 10% rise in wages, with greater gains for unskilled workers and women, thereby narrowing the gender wage gap. This shift reflects a growing consensus that African economies must move away from over-reliance on raw material exports, diversify into value-added products, and leverage a more integrated continental economy to provide larger markets for such exports (Onwuka & Udegbonam, 2019).

According to Gammadijbe (2021), the agreement could also stimulate foreign direct investment (FDI), particularly in the manufacturing and services sectors, as investors seek to capitalize on Africa's growing continental market. This diversification of FDI would reduce dependence on traditional extractive industries (AfDB, 2017).

Lessons from the COVID-19 Pandemic

The COVID-19 pandemic underscored the vulnerability of many African economies to external shocks, such as disruptions in global supply chains for critical items like food, fuel, and manufactured goods. This has renewed discussions around regional value chains and domestic industrialization. Albert Muchanga, the AU Commissioner for Trade and Industry, emphasized the importance of expanding manufacturing and agro-processing sectors to meet the demand for high-quality and competitively priced products (AU, 2020). The postponed AU Summit on Industrialization and Economic Diversification, now set for 2021, was expected to build on these discussions, reviving commitments made under the 2008 Accelerated Industrial Development for Africa (AIDA) initiative (AU, 2020).

Regional and Cross-Border Industrialization Strategies

Although some Regional Economic Communities (RECs) have adopted industrialization strategies, their success has been uneven due to conflicting national and regional priorities. This has prompted calls for regional and cross-border special economic zones, which can create jobs, transfer technology, and drive industrial growth. Initiatives like the SKBo triangle (Burkina Faso, Côte d'Ivoire, and Mali) provide useful models for regional collaboration, which the AfCFTA could further bolster (AU, 2020).

Promoting the Green Economy

As the global shift toward green industries gains momentum, Tröster & Janechová (2021) suggests that the AfCFTA could facilitate Africa's transition to a green economy by keying into this momentum. Agenda 2063 and the Africa Renewable Energy Initiative (AREI) highlight the continent's potential to leapfrog to renewable energy systems and low-carbon industrial processes. Policies promoting FDI openness, eco-industrial estates, and green manufacturing initiatives, like Ghana's AKOBEN Programme, can position Africa as a leader in sustainable industrialization (Simola et al, 2022).

Overcoming Challenges

Despite its potential, Africa faces significant hurdles to industrialization as pointed out by Fofack et al (2021). Infrastructure deficits, particularly in the energy sector, contribute to productivity losses and increase business costs. The African Development Bank (AfDB) estimates that infrastructure gaps account for 30–60% of productivity losses, with energy deficits responsible for up to 80% of these losses. Additionally, unfavorable business environments, as highlighted by the World Bank's *Doing Business 2020* report, and a lack of institutional and human capital further impede progress (Adeboje et al, 2022). Political economy concerns, such as balancing import substitution with regional industrial strategies, also complicate the implementation of industrialization policies (Melo & Twum, 2021).

The AfCFTA offers a unique framework to address these challenges, fostering collaboration, attracting investment, and driving Africa's industrial and economic transformation. With these initiatives, and backed political will, it is expected that the challenges of infrastructure and power will be drastically reduced following the implementation of AfCFTA (Aniche, 2023).

Theoretical Framework

The study draws upon various economic theories, including:

New Trade Theory

This theory emphasizes the role of economies of scale, product differentiation, and network effects in shaping international trade patterns (Nachum et al., 2022).

Porter's Diamond Model

This theory highlights the importance of factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry in determining national competitiveness (Mahuni, 2024).

Dependency Theory

This theory analyzes the historical and structural factors that have constrained economic development in developing countries, including Nigeria (Murshed, 2021).

Empirical Review

The study draws on existing literature, including academic research, government reports, and industry analyses, to understand Nigeria's export performance, the challenges and opportunities presented by the AfCFTA, and the experiences of other African countries in leveraging regional trade agreements. However, no study to our knowledge, has empirically researched the contributions of AfCFTA within the period of its existence. This is the gap this research has attempted to bridge, providing a pathway for further studies in this area.

Obeng-Odoom (2020) highlights the dominance of monopolies in global trade, which maintain control over production and distribution chains. Despite efforts through free trade and fair-trade systems, these structures remain intact, with recent trends in nativism and pseudo-protectionism failing to address the core issues. The African Continental Free Trade Area (AfCFTA), heralded as the largest free trade area globally, seeks to break away from classical, neoclassical, and Marxist trade theories, embracing a pan-African approach rooted in non-aligned ideologies. AfCFTA aims to counter the residual effects of slavery, colonialism, and neocolonialism by fostering continental trade. However, its focus on continental Africa, limited systemic redistribution, and privatization of land rents may hinder its effectiveness. Instead of reducing inequality, it risks perpetuating disparities, combining progress with persistent poverty. Obeng-Odoom suggests Henry George's (1886) "true free trade" model, emphasizing land rent socialization, as a more potent framework for achieving decolonized trade and pan-African goals.

Apiko et al. (2020) provide an optimistic view of AfCFTA, which officially commenced on January 1, 2021, with over 30 countries ratifying the agreement. AfCFTA connects 55 African nations, creating a market of 1.3 billion people. The agreement promises opportunities in manufacturing, agriculture, services, and e-commerce while addressing challenges posed by COVID-19. The AfCFTA envisions a positive feedback loop where expanded market access fosters trade and investment, enabling value addition, productivity growth, job creation, and social inclusion. However, achieving these outcomes requires critical policy enablers, including infrastructure development, improved logistics, and enhanced business environments. The study emphasizes the importance of full ratification, implementation, and compliance with AfCFTA provisions by member states. It also underscores the need for external support to address infrastructure gaps and foster political and economic alignment, as these factors are pivotal for the agreement's success.

Pasara (2020) examines the challenges and prospects of AfCFTA, signed in 2018 to enhance intra-African trade and improve economic welfare. The study identifies historical obstacles to African economic integration, including the uneven distribution of benefits favoring larger economies, inadequate models for welfare distribution, and traditional trade frameworks that fail to stimulate intra-African trade. Non-tariff and institutional barriers, lack of political will, and political instability further hinder integration. Legal issues such as non-standardized product and procedural regulations lead to subjective interpretations of trade agreements. The study also integrates non-orthodox theories like intergovernmentalism, neofunctionalism, and neorealism to explain the complexities of regional integration. To address these challenges, Pasara provides tailored recommendations aimed at enhancing the effectiveness of the AfCFTA, emphasizing the importance of political commitment, harmonization of legal frameworks, and fostering stable economic environments.

Gammadigbe (2021) explores the role of Regional Trade Agreements (RTAs) in stimulating economic growth through enhanced trade, economies of scale, and knowledge transfer. Analyzing panel data from 1979 to 2018, the study evaluates the impact of regional trade integration (RTI) on economic growth and income convergence in Africa and its Regional Economic Communities (RECs). The findings, based on instrumental variable and panel fixed-effects estimation, indicate that RTI contributes to economic growth but exacerbates income divergence, favoring more developed economies within the region. To enhance the equitable benefits of the African Continental Free Trade Area (AfCFTA), the study underscores the need for complementary policies to reduce non-tariff barriers and improve infrastructure, ensuring balanced growth across all member countries.

Tröster & Janechová (2021) analyze the AfCFTA, which officially commenced on January 1, 2021, as a milestone toward African economic integration. The paper emphasizes that while the AfCFTA holds the potential for trade and welfare gains, its overall impact depends on numerous factors, including the pace of negotiations, implementation challenges, and the structural characteristics of African trade. The authors provide a critical review of economic impact studies, highlighting the importance of coordinated industrial policies to address limitations and maximize benefits. They argue that achieving the AfCFTA's goals, in line with the African Union's Agenda 2063, requires strategic efforts to overcome integration challenges. Additionally, they recommend that the European Union adjust its trade regime to support Africa's integration process, thereby fostering a mutually beneficial partnership.

Simola et al. (2022) evaluate the potential impacts of the African Continental Free Trade Area (AfCFTA) on Africa's agri-food sectors and food security using the MAGNET global Computable General Equilibrium model. The study provides a detailed ex-ante analysis, reflecting the diversity of African economies and trade policy strategies. The findings indicate that the AfCFTA can lift approximately 1.0 million people out of hunger and increase national

incomes. However, the benefits are unevenly distributed, with food price increases offsetting income gains in certain regions. While total food production rises under the AfCFTA, some regions reduce local production and rely more on imports, signaling varying impacts on agricultural sectors. The study highlights that reductions in non-tariff measures have a more significant effect on trade and food security than tariff cuts. Additionally, a subset of countries may face adverse food security outcomes, necessitating targeted policies to mitigate potential negative impacts and ensure the agreement benefits all member states equitably.

Research Methodology

Research Design

Ex post facto or quasi experimental research design was used in the study, as it analyzes events that have already occurred. This approach is well-suited for research focused on identifying cause-and-effect relationships between independent and dependent variables according to Onwumere et al. (2013).

Data Collection Methods and Sources

The secondary data sources for this study include Central Bank of Nigeria (CBN) database provides data on trade balances and the GDP performances on quarterly basis over the years.

Model Specification

The study aims to determine the effect of trade among Nigeria and selected African countries on the GDP of Nigeria between 2019Q1-2023Q4. To achieve this, the researcher estimated the GDP using a linear regression equation:

$$GDP = a_0 - a_1TRB + a_2TAR + a_3EXR + e_1 \text{-----}(1)$$

Where:

GDP is the gross domestic product, capturing the performance of the economy within the period.

TRB is the trade balance between Nigeria and selected African countries of South Africa, Cameroon, Togo, Egypt, Morocco, Ivory Coast, and Ghana.

TAR is the tariff

EXR is the exchange rate

E_1 is the error term

a_1 - a_3 = the coefficient of inflationary pressures measuring the slopes.

a_0 = intercept parameter estimate

Pre-estimation Test

Unit Root Test

To ensure that the data for the variables used in the model does not produce spurious results, a unit root test is conducted to determine the stationary status of the variables, using the Augmented Dickey-Fuller (ADF) technique. Running a regression with non-stationary data series can lead to spurious results that may not be reliable (Obasaju et al, 2021).

Cointegration Test

Cointegration implies the presence of a long-term relationship between economic variables. This statistical concept suggests that if variables are integrated to the same order, a linear combination of them will also be integrated to that order. The underlying principle of cointegration analysis is that while individual macro variables may exhibit trends over time, groups of variables may move together (Udeagha & Ngepah, 2021).

Data Analysis Techniques

The research employs the use of time series data for a period of 20quarters, ranging from 2019Q1-2023Q4. The study is analysed using regression analysis. The choice of regression analysis is due to its BLUE (Best Linear Unbiased Estimator) properties.

Post Estimation Tests

The study conducts the following post estimation tests:

Normality test: In order to test if the residuals of the analysis are normally distributed, the Jarque-Bera test statistic was employed. In this study, a normality test can help assess if the residuals from the regression analysis follow a normal distribution. Deviations from normality could indicate that the model may not be appropriate or that there are underlying issues affecting the data.

Serial correlation test: Serial correlation, also known as autocorrelation, occurs when the residuals from a regression model are correlated with each other. This violates the assumption of independent residuals, which is necessary for the validity of statistical inferences.

Heteroscedasticity test: Heteroscedasticity occurs when the variance of the residuals in a regression model is not constant across all levels of the independent variables. This violates the assumption of homoscedasticity, which is necessary for the efficiency of OLS estimates. heteroscedasticity could indicate that the variability of HDI explained by inflationary variables is not constant.

Data Presentation and Result Analysis

Descriptive Statistics

	GDP	TRB_	TAR_	EXR
Mean	9.380403	2.647081	2.922566	2.958027
Median	10.05372	2.542080	2.882008	3.087930
Maximum	10.82824	4.288204	3.454738	4.056643
Minimum	6.048927	1.684176	2.440879	0.254642
Std. Dev.	1.320868	0.641813	0.195191	0.879205
Skewness	-1.093993	1.129214	0.341263	-1.349072
Kurtosis	3.106498	3.715948	3.987149	4.910533
Jarque-Bera	6.398168	7.484102	1.920408	13.66265
Probability	0.140800	0.123705	0.382815	0.001079
Sum	300.1729	84.70661	93.52211	88.74080
Sum Sq. Dev.	55.07266	12.76965	1.181088	22.41704
Observations	20	20	20	20

Source: Author's computation using Eviews (2024)

Descriptive statistics provide an overview of the dataset used in any data analysis, allowing for an initial understanding of the data's characteristics and confirming its relevance for further analysis (George, 2018).

In this model, the descriptive statistics indicate that the variables used are generally normally distributed, as reflected by the probabilities associated with their Jarque-Bera statistics. Additionally, the data shows a leftward skew, and kurtosis values reveal that GDP, TRB, and TAR have moderate kurtosis (mesokurtic), while EXR is leptokurtic, with a value above 3. This suggests that, apart from EXR, the variables are free from significant outliers and generally follow a normal distribution, reinforcing their suitability for the study's analysis.

Unit Root Analysis

Unit root tests, according to Yilanci & Pata (2020), refer to statistical tests used to determine if a time series has a unit root or not. The presence of a unit root indicates that the time-series is not stationary. Unit root also means that the variable is not deterministic in nature.

Also, the presence of non-stationary time-series poses some challenges in the statistical analysis. This is because the mean and the variance of the series may change over time. This makes it difficult to identify patterns or trends according to Nishi & Kurozumi (2023). With unit root tests, assessing the stationarity of time series becomes easier for researchers (Nishi & Kurozumi, 2023).

Variables	At levels (Prob)	First difference (Prob)	Comments
GDP	0.0250	0.0048	I(0) Stationary at levels
TRB	0.1429	0.0010	I(1) Stationary at first difference
TAR	0.4717	0.0000	I(1) Stationary at first difference
EXR	0.2200	0.0021	I(1) Stationary at first difference

Source: Author's computation (2025)

The unit root tests show that the variables are stationary at both levels and first difference. This suggests that the use of AutoRegressive Distributed Lag Model (ARDL) is the most appropriate model and analytical procedure for the analysis. This is in line with the study of Rehman et al (2020) who also used the ARDL for the analysis due to the mixture of both the levels and first difference in the unit root analysis.

Bounds Test for Cointegration

The bounds test for cointegration tests for long term relationship between the dependent and the independent variables used in the study (Rehman et al, 2020).

Table 1: Bounds test for Cointegration

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	11.29554	10%	3.47	4.45
k	3	5%	4.01	5.07
		2.5%	4.52	5.62
		1%	5.17	6.36

Source: Authors computation from Eviews (2025)

The bounds test for cointegration for the model examined showed that all the models showed long-term relationships amongst the variables used. Using their F-stat at 5% confidence interval, the model revealed that the F-statistics are higher than their 5% asymptotic variables, indicating that there is a long run relationship amongst the variables used in the model.

ARDL ECM Tests

ECM Regression

Case 5: Unrestricted Constant and Unrestricted Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.303465	1.298958	2.543165	0.0198
@TREND	0.006789	0.009295	0.730428	0.4740
D(TRB_(-1))	2.246640	0.585801	3.835159	0.0000
D(TAR_(-1))	3.376093	0.978201	3.451328	0.0000
D(EXR(-1))	-0.720113	0.231223	-3.11436	0.0000
CointEq(-1)*	-0.178239	0.081623	-2.183681	0.0417
R-squared	0.658675	Mean dependent var		0.122236
Adjusted R-squared	0.560252	S.D. dependent var		0.316059
S.E. of regression	0.252798	Akaike info criterion		0.253121
Sum squared resid	1.405946	Schwarz criterion		0.493091
Log likelihood	1.582870	Hannan-Quinn criter.		0.204476
F-statistic	4.660258	Durbin-Watson stat		1.865558
Prob(F-statistic)	0.007071			

Source: Author's computation using Eviews (2025)

The ARDL ECM results of the models shows the relationships between the dependent and the independent variables over the period. The result reveals that the R-square, which shows the goodness-of-fit, is 65.8%. This shows that 65.8% of the changes in the dependent variables are caused by the changes in the independent variables. The f-test also shows that the model, taken as a whole, is statistically significant. This implies that the model is reliable for the current analysis. The model equally shows that the error correction mechanism (ECM) is -17.8%. This implies that there is 17.8% annual speed of adjustment of the variables to equilibrium.

Serial Correlation Tests

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.001220	Prob. F(2,33)	0.1512
Obs*R-squared	4.434844	Prob. Chi-Square(2)	0.1089

Source: Author's computation using Eviews (2024)

The serial correlation helps to understand how (and if) a variable affects itself when lagged. The implication is that if a variable affects its self over time, this will result to spurious results and cannot be used for predictive purposes (Schork, 2022). The serial correlation results for the two models reveals that there are no issues of serial correlation among the variables used. This is shown by the probability of the F-stat being more than 0.05.

Heteroskedasticity Tests

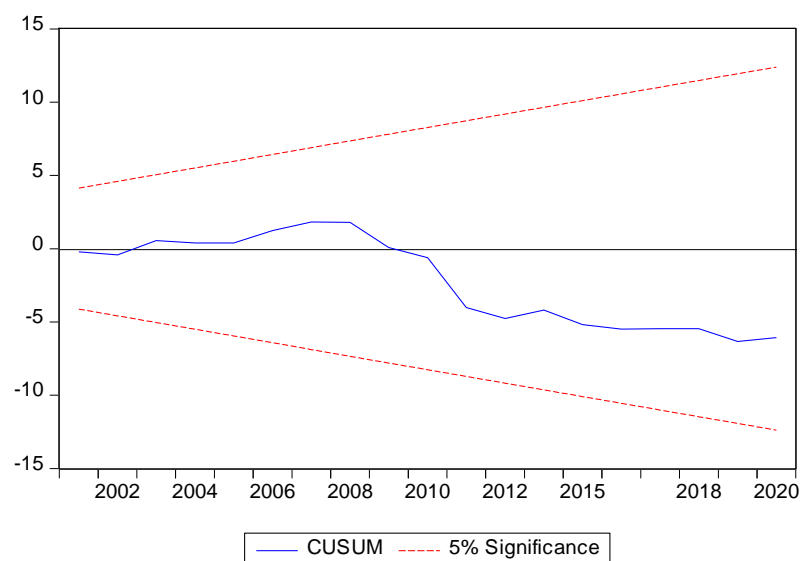
Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.302349	Prob. F(7,19)	0.3019
Obs*R-squared	8.754450	Prob. Chi-Square(7)	0.2708
Scaled explained SS	4.276486	Prob. Chi-Square(7)	0.7474

Source: Author's computation using Eviews (2025)

The heteroskedasticity test reveals the variability of the variance or error term of the time series over the period. As one of the assumptions of regression analysis, heteroskedasticity shows that the error terms of the variables are not the same (and cannot be) if the analysis will be reliable (Daryanto, 2020). As the results shows, the probabilities of the f-stat are greater than 0.05. This shows that there is no reason to believe that the variables are homoskedastic.

CUSUM Test



CUSUM test reveals the stability of the model and its applicability in the analysis. All the models reveal that the models are stable and therefore, applicable in the current analysis.

Tests of Hypotheses

The results of the ARDL ECM are used for the tests of hypotheses.

H₀₁: There is no significant relationship between Nigeria's exports within Africa and the GDP since the introduction of AfCFTA

The analysis shows that there is a positive relationship between GDP and TRB. The result shows that as TRB increases by a unit, GDP increases by 2.246640 and vice versa. The analysis reveals that TRB is statistically significant as shown by the t-value prob (0.0000). We will therefore accept the alternative hypothesis, reject the null and conclude that there is a significant relationship between TRB and GDP over the period.

H₀₂: There is no significant relationship between tariffs and the GDP in Nigeria since the introduction of AfCFTA

Further, the analysis shows that there is a positive relationship between TAR and GDP. The result reveals that as TAR increases by a unit, GDP increases by 3.376093 and vice versa. The analysis reveals that TAR is statistically significant as shown by the t-value prob (0.0000). We will therefore reject the null hypothesis, accept the alternative and conclude that there is a significant relationship between GDP and TAR over the period.

H₀₃: There is no significant relationship between exchange rate and GDP performance after the introduction of AfCFTA

The analysis shows that there is a negative relationship between EXR and GDP over the period. The result shows that as EXR increases by a unit, GDP decreases by -0.720113 and vice versa. The analysis reveals that EXR is statistically insignificant as shown by the t-value prob (0.0000). We will therefore reject the null hypothesis, accept the alternative and conclude that there is a significant relationship between GDP and EXR over the period.

Discussion of findings

The results of the analysis reveal that the introduction of AfCFTA has significantly influenced the performance of the GDP over the 20quarters reviewed, suggesting a positive outcome when the entire project is adopted, upheld, and implemented by African leaders. The research reveals that exports from Nigeria to African nations have improved the GDP over the years, since the introduction of AfCFTA, implying that the program will be economically significant for African countries. The findings of Wapmuk & Ali, (2022) also agree with the findings of this study, insisting that such regional economic programs have positive and significant impact on the economy of participating countries.

Again, the study found a positive and significant relationship between tariff and GDP. The study shows that tariffs appreciate the GDP when it increases and vice versa. The implication is that a reduction in the tariffs will push down the GDP and vice versa. Although not specified in the study, it is suggested that indirect tariffs on goods and services will help boost the GDP. The findings agree with the findings of Gammadigbe (2021) and Simola et al (2022) who found that tariffs have a positive and significant relationship with the GDP.

Finally, the study reveals that exchange rate negatively affects GDP over the period. With a percentage increase in the exchange rate, GDP decreases by a percentage and vice versa. This may be as a result of the dollar exchange which is heavily influenced by forces outside the control of any African economy. Since the African countries are still import-dependent using the US dollar, major financial changes, including financial speculations outside Africa, will influence the exchange rate, thereby affecting the GDP. The findings is also in line with the findings of Byiers & Woolfrey (2023), who noted that exchange rate has a negative and significant influence on the GDP.

Conclusion and Recommendations

Conclusion

The African Continental Free Trade Area (AfCFTA) is a transformative initiative with the potential to reshape Africa's economic landscape by fostering industrialization, diversifying exports, and deepening intra-African trade (Onwuka & Udegbonam, 2019). It provides a robust platform for addressing the continent's overreliance on raw material exports, creating value-added products, and building resilient regional value chains. Moreover, by integrating African economies, the AfCFTA offers significant opportunities for job creation, poverty reduction, and gender equality, alongside driving innovation in sectors like manufacturing and green industries. However, realizing this potential will require concerted efforts to address key challenges, including infrastructure deficits, policy misalignments, and institutional capacity gaps.

This study focused on the effect of exports, exchange rates, and tariffs on the GDP since the inception of AfCFTA, covering 20 quarters (2019Q1 – 2023Q4).

Recommendations

Based on the findings, the study recommends that more improved export processes be developed to help more businesses take advantage of markets outside Nigeria. Data has shown that exports have positive and significant impact on the GDP, adding more goods and or services to the export basket will generally improve the GDP.

As a result of expanding the export basket, the direct and indirect tariffs will consequently increase and vice versa. Therefore, there is need to make exportation of goods and services a key part of the government's policy.

Finally, the use of dollar as a major currency in trade in Africa will be a key hinderance to the success of AfCFTA. From the political and economic points of view, the use of foreign currency by African countries for the sole purposes trade amongst the countries will limit their bargaining power when negotiating as a body with an outsider. The scarcity of the currency will also limit the manufacturing strength of the continent, thereby defeating the major goals of the program.

By addressing these areas, African countries can harness the full potential of the AfCFTA to drive sustainable industrialization, economic diversification, and inclusive growth, setting the continent on a transformative path to long-term prosperity.

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