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Evaluating The Implications and Prospects of Nigeria's Participation in the African Continental Free Trade Agreement (AfCFTA): An Analysis of Trade Gains and Opportunities

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Abstract

Challenged by slow growth and development, there has been an increased need and search for avenues that will bring accelerated development to the African continent. Such attempts include the African Continental Free Trade Agreement (AfCFTA) entered into by some African countries including Nigeria. The AfCFTA promises benefits for regional development through individual benefits to member countries from trade. The study, thus, evaluated Nigeria's potential for trade gains from the AfCFTA. The gravity model of trade was applied to analyze data about the variable obtained for Nigeria and some African states. The major findings of the study show that the volume of Nigeria's GPD, the distance between Nigeria and the trading partners, Nigeria's population, the per capita income in the region, the degree of trade openness, and sharing a colonial link with a country are capable of increasing trade flows to Nigeria, thus increasing her chances of gaining from the AfCFTA. Other variables like the GDP of the trading partners, their population, and being a member of AfCFTA have the potential of lowing trade flow to Nigeria, all things being equal. It was concluded that Nigeria stands to benefit from her trade with these countries in the African continental free trade arena, all things being equal. Foreign trade policy actions should therefore be geared toward increased trade between these member states.

Keywords: Af CFTA, gravity model, trade gains, international trade, Nigeria

JEL Classification Code: C51,F17, F43, F53

1. Introduction

The African continent, according to Abrego, Amado, Gursoy, Nicholls, and Perez-Saiz (2019), has in recent times been recognized as a land of vast unexploited opportunities. Agenda 2063 is Africa's framework for structural transformation through various media including the African Continental Free Trade Area (AfCFTA) which has been created to exploit these Africa's opportunities through trade and support economic and structural transformation (Trade Law Centre (Tralac), 2019). The signing into being of the African Continental Free Trade Area Agreement in 2018, thus promises to significantly boost trade between countries of the African continent. AfCFTA came to address the long and persistent conundrum of African trade, which bothers on: the increasing trade between the countries of the continent and the rest of the world while that between the countries remains low – a situation for many African states, which according to Hartzenberg (2019), will not change shortly and neither will their commodity dependence; and the irony of the continent accounting for only about 2% of global trade despite the

Significant growth of its overall trade in terms of GDP over time. The solutions to these problems promise to significantly increase trade within Africa with the forecast that trade between countries of the continent will double within the first decade of its full implementation (Copeland, 2020), create jobs, and increase revenue. The AfCFTA agreement thus holds potential gains for member states collectively and individually.

Cloete (2019), like many others, shares the aspirations of the founders of AfCFTA by seeing it as critical for growth and job creation for Africa and its about 1.30 billion people; andas an opportunity for African countries and companies to help each other grow, as done in other regions. While African countries that have signed the agreement are full of hope for its benefits, analysts like Udegbunam and Onwuka (2019) contend that Nigeria also stands to benefit the most from the agreement. Amidst this bright potential**,** however, there are others like Ubi (cited by Udegbunam and Onwuka, 2019) who are skeptical and have argued that: 1) the AfCFTA is likely to undermine local manufacturers and entrepreneurs or make Nigeria a dumping ground for finished goods; 2) past and current trade agreements involving African nations, particularly Nigeria, have shown that Africa's development cannot be attained by free trade agreements as these have not had any significant impact on the Nigerian economy; and 3) most African countries are not matured enough for free trade, because of the lack of industrialisation. Despite these expressed fears, Nigeria, like others, is still optimistic about gaining from this arrangement.

However, certain questions like what impact will free trade have on the Nigerian economy?; how competitive will Nigeria be in trade with other African countries?; and what new market opportunities exist for Nigeria in AfCFTA***?;*** what policy options should be pursued? come to mind. This is so because the external sector is still dominated by trade in oil – a volatile commodity for trade. Oil still accounts for a greater percentage of the country's foreign trade (see Table 1 and Fig. 1).While oil exports increased steadily from 1970 to 2021, non-oil exports did not rise at the same rate. However, the opposite is the case when considering imports; non-oil imports rose faster than oil imports within the same period. More daunting is the net non-oil exports which have remained poor with most years accounting for negative values. This shows that the non-oil sector of the economy is a vent for leakages than injections.

Table 1: *Nigeria's Export and Imports (N Billion) 1981-2021*

Year	Exports		Imports	
	Oil	Non-Oil	Oil	Non-Oil
1981	10.68	0.34	0.18	11.55
1985	11.22	0.50	0.30	6.36
1991	116.86	4.68	7.77	69.08
1995	805.57	20.10	135.37	443.12
2001	1,973.22	28.01	215.47	1,018.79
2005	7,140.58	6,743.64	724.82	1,821.42
2011	14,326.52	12,674.13	2,952.51	7,236.69
2015	8,339.55	7,056.08	1,669.14	8,613.94
2016	8,093.41	6,912.72	2,261.68	6,643.09
2017	12,912.65	11,026.07	2,489.65	7,483.85
2018	17,844.35	15,722.53	3,534.40	8,918.92
2019	16,734.91	32,131.96	3,384.69	1,568.31
2020	11,058.15	1,555.44	2,717.01	17,802.18
2021	16,737.34	2,466.83	6,087.84	15,171.96

Source: Compiled from Central Bank Statistical Bulletin 2021

Figure 1 presents a graphical view of the behaviour of the variables in Table 1 for a more descriptive emphasis. This too depicts a clear picture of oil export rising faster and higher above non-oil exports; while on the contrary, non-oil imports have a higher trend than oil imports. This shows how highly dependent the Nigerian economy is on foreign goods/services, and this has negative consequences on the country in terms of foreign trade. It means then that the country is not competing effectively in the global market and cannot do so if this trend is maintained.

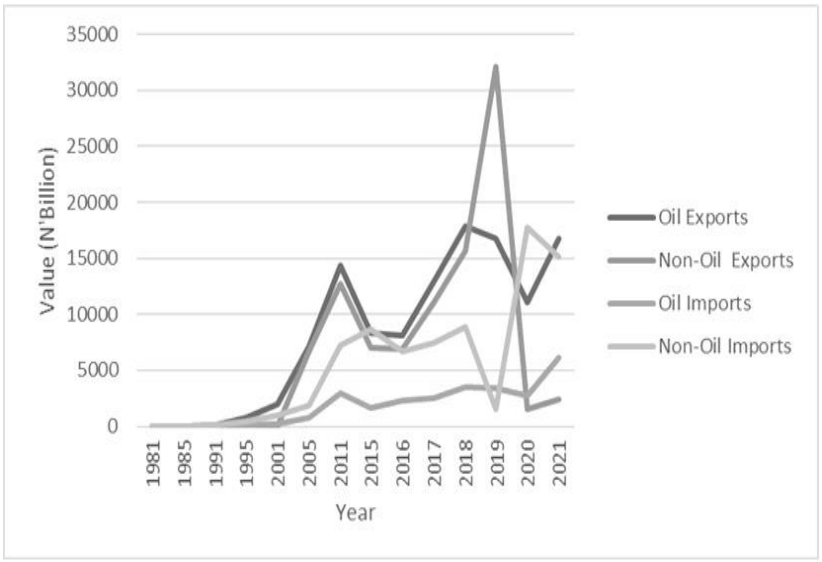

Fig. 1: *Oil vs Non-Oil Exports and Imports (1981-2021)*

Another disturbing feature of Nigeria's international trade is that it has been dominated by trading with advanced nations like the USA, France, Belgium, Spain, UK, Netherlands, and Germany and with Brazil, China, and India from the developing economies than the less developed countries of Africa. This equally shows Nigeria at the receiving end with less power to determine and influence the trading terms in her favour.

Given these worrying situations, the study, therefore, sought specifically to; assess the impact of determinants of trade flows on the Nigerian trade with partners ,evaluate the competitiveness of Nigerian free trade with other African countries, *andidentify new market* opportunities for Nigeria in the AfCFTA.

2. Literature Review

Discourse bothering on issues relating to trade among nations abounds in economic literature. Many of these expositions (covering the essence of trade between nations, the benefits of such exchanges, their nature, to their composition) have passed the test of time. Mercantilism (1500-1800) is one of these theories which, though with time, has retained some relevance in modern thinking and practice, in some modified forms. It is a trade theory that favours exportation against importation. Therefore, in practice, most countries adopt the tenets of this theory where they tend to favour exportation and discourage importation through the use of protectionist trade policies aimed at generating trade surplus through the accumulationof reserve. Their perception of trade as a zero- sum game together with other flaws was questioned thereby giving rise to Adam Smith's Absolute Advantage Theory of 1776, which itself was refined by David Ricardo's (1817) Theory of Comparative Advantage which centred on the relative opportunity cost of production rather than absolute cost as Smith had advanced; and the Heckscher-Ohlin Factor Endowment Theory(the celebrated modern theory) of free trade doctrine with its focus on the role of endowment of factors of production(whether it is capital-abundant or labor-abundant) as the basis for international trade. The general treaty of these country-based theories is that countries stand to gain from engagement in bilateral or multilateral exchanges as such they should create conditions that will foster such interactions. And by extension, Nigeria equally stands to benefit from trade with other African countries

and the world in general by keeping to the principles of these theories.

At the level of inter-industry trade (i.e., the firm-based trade), we have the Country Similarity Theory by Steffan Linder developed in 1961;the Product Life Cycle Theory developed in the 1960s by Raymond Vernon; Paul Krugman and Kelvin Lancaster Global Strategic Rivalry Theory of the 1980s; and the Porter's National Competitive Advantage Theory in 1990. This set of theories analysed international trade at the level of interaction that occurs between the firms of countries and not the whole country directly put in perspective.

In terms of economic integration, Viner's *Theory of Customs Unions*, which came into place in 1950, argued that regional trade agreements did not necessarily result in trade gains despite the elimination of trade barriers (Lipsey, 1960). Viner's theory of economic integration concludes that regional agreements can only be beneficial to partner countries if it leads to trade in commodities that were not previously traded (trade creation); but detrimental, for both partner countries and the rest of the world as well, if the union results to shifting locus of production from low-cost third country to higher-cost partner country.Another theoretical perspective on economic integration is the Balassa Dynamic Theory of Economic *Integration* of 1962, which questioned the static nature of Viner's theory. This sees economic integration as having dynamic effects on member states in terms of large-scale economies, technological change, as well as the impact of integration on market structure and competition, productivity growth, risk and uncertainty, and investment activity (Hosny, 2013). This portends that, countries stand to gain the aforementioned from economic integrations.

Other studies have classified the static effects and developments of the theory of economic integration as *Old Regionalism* and the dynamic effects as *New Regionalism*. Whereas the old regionalism is characterized by import substitution, planned allocation of resources, governments' leadership, and mainly industrial products; new regionalism emphasizes export orientation, market allocation of resources, private firms' leadership, all goods, services, and investment (Hosny, 2013; &Marinov, 2014).

Another international trade (integration) theory is the *Received Theory* that came from Harry Johnson's works of 1953 and 1954. According to Ethier (2006, p.2), the central premise of the theory is that "trade agreements arise solely because countries with market power are concerned, to at least some degree, with the fact that trade barriers, imposed for whatever reason, can move the terms of trade in their favor, shifting real income there from the rest of the world". So, there is a tendency that economic integration may be for the benefit of countries with the market-power, while those with weak or no market-power derive no benefits.

From the politico-economic angle, Maggi and Rodríguez-Clare (1998) put forth a *Political-Economy Theory of Trade Agreements*. This theory views politics as being the main fulcrum of any trade agreements by which governments use trade agreements to deal with a time-inconsistency problem (which may emerge in a small open economy when capital is fixed in the short run but mobile in the long run) in their interaction with domestic lobbies. The displays of political powers through trade ties to influence and commandeer of exploit resources from other nations and sanction erring members of an economic integration validate this theory. The use of such sanctions to punish members for non-economic but rather political actions of theirs points to the fact that economic integration was put in place as means of political control.

From these trade theories, it is clear that countries stand to gain from international trade, hence the benefits promised by AfCFTA to its members may hold true, ceteris paribus. However, the theories of economic integration present dual effects with an equal-probable state of occurrence. It now behooves participating members to critically evaluate the conditions and put strategies in place to derive the positive effects. This is why this work seeks to, in part, achieve for Nigeria.

The assertions of trade and integration theorists have stimulated a large number of empirical and theoretical studies on the impact of trade and integration on a country's economic growth/development, especially in developing countries that arefreely open to these international interactions. Such studies include those by Vamvakidis (1998); De Benedictis and

Tajoli (2008); Bikker (2009); Jato and Gbashima (2009); Jato (2015); Kalu and Agodi (2015); Tumwebaze and Ijjo (2015); Afolabi, Danladi and Azeez (2017); Çam Karakaº, Karakaº and Topal (2019); Nguyen, Bui, and Vo (2019); and Lien, Doan, and Bui (2022). For instance, Vamvakidis (1998) in his study of regional integration and economic growth concludes that countries with open, large, and more developed neighboring economies grow faster than those with closed, smaller, and less developed neighboring economies. However, the result from the analysis of the impact of five regional trade agreements during the 1970s and 1980s finds that none led to faster growth. The main reason seems to be that most of these agreements were among small, closed, and developing economies.

Kalu and Agodi (2015) examined if trade openness has any impact on Nigeria using the Autoregressive Conditional Heteroscedasticity (ARCH), Generalized Autoregressive Conditional Heteroscedasticity (GARCH), and Pairwise-Granger causality methodology, and found that trade openness has a significant impact on economic growth. The pairwise Granger causality test showed a unidirectional causality between economic growth and trade openness. De Benedictis and Tajoli (2007) looked at the similarity of the trade structures toward the EU market between four CEECs and the EU15 by examining how the export composition of a country has changed over time and how the export composition has changed with respect to the EU15 export composition. Their findings show that processed trade is crucial in explaining changes in the overall structure of exports of transition countries and that greater economic integration in terms of trade flows and processing trade does not always lead to greater export similarity.

Nguyen *et al*.(2016) examined the relationship between economic integration and growth in Vietnam using the Autoregressive Distributed Lag (ARDL) and the Granger causality testfocusing on three types of economic integration – overall integration, financial integration, and trade integration –from 1986 to 2015. Their results revealed that considered holistically, economic integration had positive impacts on economic growth, but financial integration was found to generate economic growth the most.Tumwebaze andIjjo (2015) found no significant empirical support for a positive growth impact from economic integration on the COMESA region. This was through their study of the contribution of COMESA integration to economic growth in the region using instrumental variables GMM regression in the framework of a cross-country growth model using the 1980–2010 annual panel dataset. It was revealed rather that growth in capital stock, population, world GDP, and the level of openness to international trade turned out to be the most robust drivers of growth in the COMESA region over the period.

The study by Afolabi*et al.* (2017) is one of the studies in the negative, which revealed that international trade is negatively insignificant to the growth process of the Nigerian Economy. In another study by Çam Karakaº et al. (2019), where the economic growth effects of economic integration were investigated in terms of the Turkish economy integration into the European Union (EU) and Shanghai Cooperation Organization (SCO).It was found that trading with both blocs influenced Turkey's economic growth with all the variables showing a meaningful relationship in both the short and long term. They concluded that economic growth and foreign trade have a bi-directional causality between the two trading blocks.

3. Methods

3.1. Data and variables

Secondary data (see Table 2 for description) wereutilised for analysis. **Longitudinal data wereobtained from the IMF (2021) direction of trade statistics, the World Bank (2021), and the CBN (2021).** The **gravity model was employed for analysis.**

3.2. Model Specification

i. The gravity model (GM)

The gravity model which is analogous to Newton's of gravity has been successfully applied to flows of the most widely varying types, including interregional as well as international trade (Bikker, 2009; Ferwerda, Kattenberg, Chang, Unger, Groot, & Bikker, 2011).The traditional gravity model of international trade explains the trade flow by home and partner's GDP and trade impediment in the form of distance between the countries. According to Krugman, Obstfeld, and Melitz

(2012) "just as the gravitational attraction between any two objects is proportional to the product of their masses and diminishes with distance, the trade between any two countries is, other things equal, proportional to the product of their GDPs and diminishes with distance." This is expressed algebraically as:

$$TF_{ij} = A * \frac{(Y_i * Y_j)}{D_{ij}} \quad \text{Eqn. 1}$$

where A is a normalizing constant term, TF_{ij} is the value of trade flows between country *i* and country *j* (otherwise known as trade flows), Y_i is country *i*'s *GDP*, Y_j is country *j*'s GDP(i.e., the economic strength of a country), and D_{ij} is the distance between the two countries(i.e., geographical proximity). That is, the value of trade between any two countries is proportional, other things equal, to the product of the two countries' GDPs, and diminishes with the distance between the two countries (Krugman *et al*, 2012).

In its more general form, the gravity model can be stated as follow:

$$lnTF_{ij} = \ln(A) + \alpha \ln GDP_i + \beta \ln GDP_j - \delta \ln D_{ij}$$

Adding the stochastic term component gives:

$$lnTF_{ij} = \ln(A) + \alpha \ln GDP_i + \beta \ln GDP_j - \delta \ln D_{ij} + \varepsilon_{ij}$$

where áand â parameters are interpreted as coefficients of elasticity of exports with respect to changes in independent variables (GDP and distance). This change of dependent variable is not in absolute terms, it is rather a relative change due to the interpretation of log structure and percentage changes that persist in thecoefficients.

Once the sizes of GDP of trading countries are accounted for and the transportation cost between them in terms of distance in the gravity model, it is possible and safe to extend the model to capture other variables that could also possibly measure the economic strength of a country. The nature of the model makes the addition of other variables free from estimation problems like omitted variable bias and collinearity between the main variables and those added. Based on this, Eqn. 4 has been extended to include Population (*POP*), GDP per capita (*PY*), and degree of openness (*TO*), in addition to whether the country is a member of *AfCFTA (MA) and whether they share the same colonial history (CL). This gives rise to equation (5) as*:

$$lnTF_{ij} = \alpha + \beta_1 \ln GDP_i + \beta_2 \ln GDP_j - \beta_3 \ln D_{ij} + \beta_4 lnPOP_i + \beta_5 \ln POP_j + \beta_6 TO_{ij} + \beta_7 PY_{ij} + \beta_8 MA + \beta_9 CL + \varepsilon_{ij} \quad \text{Eqn. 5}$$

Table 2:

The study variables, acronyms, measurements, and sources of data for the gravity model.

Variable	Acronyms	Measurement	Source
Dependent			
Trade Flows	TF	This is captured by the sum of exports and imports between Nigeria and the trading partner measured in millionsof US$.	IMF (2021) Direction of Trade Statistics
Independent			
GDP of Nigeria	GDPN	This is the gross domestic product of Nigeria	World Bank (2021) data
GDP of trading partner	GDPTP	This is the gross domestic product tradine partner.	World Bank (2021) data
Distance	DIST	This measures the distance between Nigeria and a trading partner.	Computed from google maps data
Trade Openness.	TO	This is the rate of trade flows between Nigeria and a trading partner. It is measured as the ratio of the trade flows to Nigeria's GDP.	IMF (2021)
Population of Nigeria	POPN	The populations of Nigeria	World Bank (2021)
Population of trading partner	POPTP	Population of trading partners.	World Bank (2021)
Per capita Income	PY	Square of the difference in per capita incomes between Nigeria and its trading partner.	World Bank (2021)
Dummy for Membership of AfCFTA	MA	1 was assigned to a member of AfCFTA and 0 if not.	AfCFTA membership records as at 2021
Dummy for Colonial links	CL	1 was assigned to a country of the same colonial link and 0 if not.	Colonial history

Source: Authors' construction theoretically, it is expected that the signs of $\hat{a}_1$-$\hat{a}_7$and $\hat{a}_8$coefficients of GDP variables, using regression

analysis, should comply with the signs in Table 3:

Table 3: *Expected Signs of âiCoefficients*

β_i	Expected sign of β_i
β_1 - β_7	+
B_8	-

Source: Authors' construction

Positive signs in Table 3 arise from the positive impact of higher income, population, and rate of openness on imports of the country's trade partner under constant marginal propensity to import and other variables. As Krugman *et al*. (2012) rightly pointed out; **large economies tend to spend large amounts on imports because they have large incomes. They also tend to attract large shares of other countries' spending because they produce a wide range of products. So, with other things equal, as the trade between any two economies gets larger, the larger their economy.**

An impact of geographical proximity on trade is negative and suggests that distance affects trade oppositely $\left(\frac{\partial TF_i}{\partial Z_i} < 0\right)$ due to transport costs. Hence, the expected sign of parameter $\hat{a}_8$for variable Distance is negative ($\hat{a}_8 < 0$).

Parameter $\acute{a}_{ij}$ is taken to account for all other unobservable variables that are not explained directly through the gravity equation and includes cultural, historical, political, and language differences among countries.

4. Results and Discussion

This section presents the data, the results from the estimation of the relationships and the tests (as set out in the preceding section), and a discussion of findings from the analyses. The analysis is based on the relationship between the dependent variable – **trade flows (TF***) between Nigeria and her trade partners – and* the independent variables – **GDP of Nigeria (GDPN), GDP of trading partner (GDPTP), Distance (DIST), Per capita Income (PY), Trade Openness (TO), Population of Nigeria (POPN), Population of trading partner (POPTP), Dummy for Membership of AfCFTA (MA), and Dummy for Colonial links (CL).**

4.1 Cross-Sectional Dependence Test

*The Pesaran cross-sectional dependence test in Table 4shows a rejection of the no cross-sectional dependence in all the variables across countries hypothesis at 5% level of significance. Meaning thatthere i*scross-sectional dependence in the panel dataset on all the variables except for DIST, MA, and CL which are not a panel.

Table 4:

Pesarantest for cross-sectional dependence

Source: Authors' computation.

Variable	C-D Test	*p*-value
TF	23.414***	0.000
GDPN	26.567***	0.000
GDPTP	33.446***	0.000
DIST	-	-
POPN	37.350***	0.000
POPTP	37.279***	0.000
PY	16.876***	0.000
TO	7.890***	0.000
MA	-	-
CL	-	-

Note: The null hypothesis is that there is no cross-sectional independence across countries in the panel****, **, and * indicate rejection of the null hypotheses at the 1%, 5%, and 10% significance levels respectively.*

4.2 Unit Root Test

After determining that the variables in the panel have cross-sectional dependence, the cross-sectionally augmented unit root was conducted to ascertain the stationarity or otherwise of the panel. The results, which are based on thecross-sectional augmented Dickey-Fuller (CADF) test results are shown in Table 5. The results indicate that only for

TO series in their levels when tested without trend was the null hypothesis of no stationarity rejected. For POPN and POPTP, they became stationary at level only with trend. As for the other variables stationarity was achieved on at first difference. It was discovered that all the variables became stationary at 1% level of significance when tested at the first difference (with and without trend). This indicates that differencing be done while carrying out the analysis to achieve optimal results.

Table 5:

Results of Panel Unit-Root Tests

	@ Levels		@ First Difference	
C-S Augmented Dickey-Fuller (CADF) Test				
Variable	Without Trend	With Trend	Without Trend	With Trend
TF	11.649	14.364	140.975***	119.486***
GDPN	8.861	13.377	77.551***	74.308***
GDPTP	6.840	22.080	77.986***	56.809***
POPN	23.440	516.400***	106.824***	76.386***
POPTP	27.143	458.360***	71.047***	202.550***
PY	24.361	18.545	104.958***	75.9464***
TO	77.989***	82.526***	190.078***	150.359***

4.3 Correlation Analysis Results

The outcomes of the analysis of the correlation between the relevant variables are presented in Table 6. Trade flows (TF) have a positive correlation (r = 0.6241, 0.0628, 0.4757, 0.2964, 0.2112, 0.2027, 0.1918) with GDPN, GDPTP, POPN, PY, TO, MA, and CL respectively. This means that trade flows between Nigeria and her trading partners have a positive joint movement with these factors demonstrating a positive relationship between TF and these explanatory variables. And only that between TF and GDPTP that is not significant with others significant at 5% level of significance. This is as theoretically expected. On the other hand, the correlation between TF and DIST, and POPTP is negative and significant (r = -0.1522 and -0.1731). The relation between TF and DIST equally follows theoretical proposition.Correlations between explanators vary in strength and significance, and they are moderate, raising concern about multicollinearity between regressors. However, the gravity model is designed to take care of this

Table 6:

Pairwise Correlation Analysis Results

	TF	GDPN	GDPTP	DIST	POPN	POPTP	PY	TO	MA	CL
TF	1									
GDPN	0.6241*	1								
GDPTP	0.0628	0.3688*	1							
DIST	-0.1522*	0.1957*	0.5851*	1						
POPN	0.4757*	0.7597*	0.3620*	-0.0009	1					
POPTP	-0.1731*	0.2795*	0.5615*	0.6468*	0.2071*	1				
PY	0.2964*	0.2291*	0.2873*	-0.2373*	0.2205*	0.1215*	1			
TO	0.2112*	-0.0460	-0.1409*	-0.2825*	-0.0697	-0.2628*	-0.0460	1		
MA	0.2027*	0.0052	-0.1763*	-0.2348*	0.0064	-0.7993*	-0.1989*	0.1874*	1	
CL	0.1918*	0.1807*	0.4190*	0.5419*	-0.0105	0.2835*	0.0530	-0.2065	-0.0985	1

shows significance at the 0.05 level.

Source: Authors' computation.

Note: ***, **, and * indicate rejection of the null hypotheses at the 1%, 5%, and 10% significance levels respectively. C-S stands for cross-sectional.

4.4 Discussion of Results

4.4.1 Results of the gravity model

Using the panel least squares method, the gravitational effect of Nigeria's GDP and that of the trading partners, the distance between Nigerian and her trading partners, the population of Nigeria and that of the partners, the
per capita income, trade openness, membership of AfCFTA, and colonial links on trade flows in Nigeria was estimated with the values of the variables at first difference. The estimates are shown in Table 7.

Table 7:

The Estimates of the Gravity Model between Nigeria and trading partners

Dependent Variable: LNTF
Method: Panel Least Squares
Sample: 1990 2021 (Total panel observations: 310)

Variables	Coefficient	Std. Error	t-statistic	Prob.
LNGDPN(-1)	1.292108	0.072401	17.84646	0.0000
LNGDPTP(-1)	-0.328907	0.050834	-6.470227	0.0000
LNDIST	0.816792	0.242586	3.367017	0.0009
LNPOPN(-1)	1.064453	0.317647	3.351054	0.0009
LNPOPTP(-1)	-0.186007	0.099746	-1.864814	0.0632
PY(-1)	2.33E-09	7.48E-10	3.118758	0.0020
TO	0.191771	0.017825	10.75842	0.0000
MA	-0.188109	0.161536	-1.164505	0.2452
CL	0.305422	0.110390	2.766758	0.0060
C	-41.22098	4.608486	-8.944582	0.0000
R-squared	0.852271			
Adjusted R-squared	0.847638			
F-statistic	183.9717			0.000000

Source: Authors' computation.

The results in Table 7 show GDPN, DIST, POPN, PY, TO, and CL as having significant positive effects on TF; and GDPTP, POPTP,and MA having negative effects on TF, with only that of GDPTP being significant. This means that, while a unit change in GDPN, DIST, POPN, PY, TO, and CL will lead to an increase in TF, a unit change in GDPTP, POPTP, and MA will worsen TF, ceteris paribus. This implies that the own GPD, the distance between Nigeria and the trading partners, the own population, the per capita income in the region, the degree of trade openness, and sharing a colonial link with a country are capable of increasing trade flows to Nigeria, thus increasing her chances of gaining from the AfCFTA. On the other side, the results show that the GDP of the trading partners, their population, and being a member of AfCFTA have the potential of lowing trade flow to Nigeria, all things being equal. The signs of DIST, GDPTP, POPTP, and MA are at variance with theoretical and empirical expectations. Whereas the distance between Nigeria and the trading countries is expected to have a negative influence, the estimate shows otherwise. This, if sustained by further verifications, could mean that distance between countries in the AfCFTA zone does not constitute a hindrance to trade between them. And while the GDP and population of the trading partners and their membership of AfCFTA serve as enhancers to trade flow to Nigeria from the partners, the estimates show the contrary. Generally, magnitudes of the estimated coefficients are reasonable to warrant a policy concern.

The model statistics of adjusted R squared (Adj. R^2) and F-statistics all point to the model as being strong (85%) in accounting for variations in the dependent variable (TF) and good fit, revealing the overall significance of the parameter estimates of the model.

The positive effects are in line with previous studies such as Vamvakidis (1998), Kalu and Agodi (2015), Nguyen *et al.* (2016), Tumwebaze and Ijjo (2015), and Karakaº and Karakaº (2019), who have variously, found a positive link between trade variables. Likewise, the negative effects are in line with studies like that of De Benedictis and Tajoli (2007), and Afolabi *et al.* (2017), who established a negative or meaningless impact of international trade on an economy. However, our findings tilt more to the positivity of trade, with more of the determining factors portraying signs of trade gains between Nigeria and the sub-Saharan African states. Consequently, Nigeria stands to benefit from her trade with these countries in the African continental free trade arena, should things go as predicted by the estimates.

5. Conclusion and Policy Implication

The need to promote regional ties and development between African countries has been pushed on many fronts including the African Continental Free Trade Agreement (AfCFTA). This promises to not only benefit the region but the individual member countries equally. The study, thus, evaluated Nigeria's potential for trade gains from the AfCFTA. The gravity model of trade was applied to analyze data about the variable obtained for Nigeria and some African states.The major findings of the study show that the volume of

Nigeria's GPD, the distance between Nigeria and the trading partners, population, the per capita income in the region, the degree of trade openness, and sharing a colonial link with a country are capable of increasing trade flows to Nigeria, thus increasing her chances of gaining from the AfCFTA. Other variables like the GDP of the trading partners, their population, and being a member of AfCFTA have the potential of lowing trade flow to Nigeria, all things being equal. Also, the study found that the distance between Nigeria and the trading countries poses no threat to trade between Nigeria and sub-Saharan African countries the AfCFTA. Consequently, it is concluded that Nigeria stands to benefit from her trade with these countries in the African continental free trade arena, all things being equal.

Given Nigeria's GPD, the distance between Nigeria and the trading partners, Nigeria's population, and the degree of trade openness, the country should gain from participating in the African Continental Free Trade (AfCFT). Foreign trade policy actions should therefore be geared toward increased trade between these member states.

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