

BALANCE OF TRADE AND ECONOMIC PERFORMANCE: COMPARATIVE ANALYSIS OF NIGERIA AND GHANA

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Abstract

The study empirically analyzed the nexus between balance of trade and economic performance between Nigeria and Ghana between 1981 and 2022, while adopting a comparative economic analysis approach. The study objectively validated the economic influence of balance of payment on the growth and stability of both economies for the period under review. Cross sectional secondary data was implored to address the linear relationship between trade balance and economic performance of both economies, with econometric tools of augmented dickey and fuller test for statistical stationarity being implored to regress for the stationarity and viability of the variables implored in the regression line, while Johansen test for cointegration was used to determine the nature of relationship existing between trade balance and economic stability and sustenance of both Nations. It was empirically obtained that; increasing balance of payment in Nigeria by one percent would boost the economic growth and stability of the nation by 11.1% which is in gross contrast to the Ghanaian economy, where similar gesture only resulted to 9.04% increases on economic growth. It was therefore recommended based on data driven decision coming from the empirical results obtained that, the government of Nigeria should endeavor to develop and implement a workable framework to enhance favorable trade policies, while boosting local content utilization through grass root industrialization strategy and enforcement of import substitution mechanisms. Furthermore, it is recommended on the basis of economic principles, backed with verified empirical facts, that the both economies develop measures to curtail deficit financing and outrageous borrowing over time. The study concludes that, trade is the soul of further economic integration in the twenty first century and the new world order will be charted by producers and not consumers.

Keywords: Trade Balance; Balance of Payment; Nigeria; Ghana; Economic Growth; West Africa; Exchange Rate.

INTRODUCTION

The economies of the world have become greatly connected through international trade and globalization. Foreign trade has been identified as the oldest and most important part of a country's economic relationship. The basis for foreign trade rests on the fact that nations do differ in their resource endowment, preferences, technology, scale of production

and capacity for growth and development. Over the past decades the volume of trade between nations of the world has increased considerably. Particularly, Nigeria has witnessed a sharp rise in the volume of trade and investment with other nations of the world. The relations between Nigeria and Ghana which cut across political, trade, investment, aid and military spheres have grown so much in recent years (Omoju and Adesanya, 2019).

Okolie and Chime (2019) underscored the inevitability of inter-state relations emanating from the inherent tendency of man for social relations, when they wrote: The world of a man is in a flux. The fluidity of social relations conduces into the search for social coalescence, partnership and cooperation. Naturally, man is created with inbuilt and ever elastic gregarious instincts which propel man to enter into social relations with other men basically to eke out a living.

Ghana and Nigeria have enjoyed tremendous cordial and friendly relations as they are foremost business partners in the West Africa region. Their combined population and GDP account for about 61 percent and 68 percent in ECOWAS respectively. They share common values; common vision for the sub-continent and Ghana always supported Nigeria on all major issues within and outside Nigeria as Nigeria also stand by Ghana anytime she has to do so. This relationship has made Nigeria to become one of Ghana's most cherished trading partners (Amsden, 2017).

Thus, the economy of the two countries are closely linked as bilateral non-oil trade between the two countries increasing from less than US\$15million before 2000 to more than US\$130 million in 2010. Beyond trade, substantial migration flows between both countries have existed for a long time. However, there are also some moments and periods of serious hiccups and diplomatic uproar between the two countries. A major economic disagreement occurred between both countries in 2012 when they tried to implement a law considered detrimental to Nigerians doing business in Ghana, raising concerns over ECOWAS treaties and protocols, which both countries are signatories to. Accra likewise has also complained about certain products being restricted from being imported into Nigeria (Akanni, 2018).

Although, intra-regional trade has greatly boosted the economies of the aforementioned economic blocs hence the need for Nigeria and her closest neighbour Ghana, to strengthen bilateral ties and develop structures for an effective transit trade agreement in which Nigeria opens her trade corridor to Ghana-bound merchandise and vice-versa. The researcher is therefore interested on investigating balance of trade and economic performance: a comparative analysis of Nigeria and Ghana.

Problems Associated with Trade between Nigeria and Ghana

Nigeria-Ghana trade relations has grown from the limited and intermittent contact that marked the immediate post-independent era to an increasingly complex and expansive engagement. From a less than \$ 2 billion in 2002, the volume of bilateral trade between Nigeria and Ghana grew to a yearly \$13 billion last year (2013) with bright prospects of its further growth in 2014 (Eni, 2013).

In addition, the Nigeria-Ghana relation was initially dictated by ideology and political issues. Subsequently, it shifted course and tilted towards economic considerations and development needs in Nigeria-Ghana. Undeniably, Ghana's engagement in Africa and Nigeria in particular is not a sudden and recent event. In fact, Nigeria-Ghana relationship

was officially established on 10th February, 1971. However, the eye-catching event is the rapid and large expansion of trade and investment relations that has occurred between the two countries in the past few years (Ejelonu and Okafor, 2022).

However, what accounts for the increase in the volume of Ghana trade with Nigeria on one hand and the impact of the Nigeria-Ghana trade relations on economic development in Nigeria on the other hand, remain a subject of debate among scholars. Overtime, researchers such as Gregory (2009), Ogunkola (2006), Okolie (2009), Onuoha (2008), Taylor (2007), Egbula and Zheng (2012), Manroe, Bukarambe (2005) and several others, have variously contributed in the area of international trade, volume of trade, foreign aids, economic relations, trade and economic growth between Nigeria and Ghana. Most of them centered their explanation on the adverse effects of Ghana trade on the Nigerian trade balance, unraveling the trade imbalance between the two countries. The study:

- Ascertained if there is a significant difference between Nigeria and Ghana balance of payment on trade balance and economic performance of both countries.
- Evaluated if there is a significant difference between Nigeria and Ghana exchange rate on trade balance and economic performance of both countries.
- Determined the effect degree of trade openness between Nigeria and Ghana has on trade balance and economic performance of both Nations.

REVIEW OF LITERATURE

Nigeria-Ghana Trade Relations

Nigeria-Ghana relations dated from colonial time. Aluko describes the relations between Nigeria and Ghana as rooted in their history as colonies of the same British colonial power. The two countries shared similar interests as at the time of independence of Ghana in March, 1957 having inherited from the British government a common official language, common legal, administrative and educational systems. At independence, the two countries joined the Commonwealth of Nations. Economically, both countries have been faced with similar economic problems of mass poverty and misery. Also, Otoghile and Obakhedo (2016) noted that contemporaneously, both countries are 'practicing democracy', after seeing their democracies battered by a series of military interventions. Sports wise, both countries have a long history of soccer rivalry.

It is important to state that relations between the two countries have not always been a smooth one. In 1969-70, Ghana expelled large numbers of Nigerian residents. Nigeria responded by suspending oil exports to Ghana (this was before the discovery of crude oil in Ghana) and expelled around 1 million Ghanaians residents in Nigeria in 1983 and another 300,000 in 1985. Relations were restored but the Ghana Investment Promotion Council Act of 1994 brought the tempestuous relationship to the fore again in 2012 when Ghana tried to implement the act in which some Nigerian businesses were closed down (Olaniyi and Rasheed, 2015)

In the same vein, the bilateral relations between the two countries, Nigeria and Ghana, have come a long way. According to Kolapo, (2017) Ghana and Nigeria have been trading in various goods and services for the past 50 years. As the two largest economies in West Africa, the relationship between Nigeria and Ghana is a crucial one for the region. They are also the two biggest oil producers in the region, although with differences in output.

The cordial relationship between the two countries suffered a setback from 2007 to 2009 and again in 2012 when some of businesses owned by Nigerians in Ghana were closed by the Ghanaian Authorities for alleged non-compliance with the 1994 investment law which place restrictions and prohibits non-Ghanaians from engaging in retail trade and related business. This hitch has affected the volume of trade between the two countries, even though the problem has been solved through dialogue by the two Honorable Ministers of Trade and Industries of the countries. However, challenges have persisted in their trade relations.

The products Nigeria exports to Ghana, among others, include milk, cream, sesame seed, cocoa powder, oil cake, siliceous fossil meal, feldspar, petrol, electrical energy, chlorine, silicon dioxide, bottles and Jars. The total value of exports was ₦109,596,846,194 in 2007, increased to ₦217,742,088,484 in 2008 and declined significantly to ₦45,189,329,329, ₦66,490,320,468 in 2009 and 2010 respectively. However, it marginally increased to ₦137, 537, 443, 486 in 2011. The products Nigeria imports from Ghana, among others, include butter, dates, kolanuts, and glucose. The total value of imports ₦8, 950,463,578, in 2007, decreased to ₦5, 340,778,779, ₦ 4, 00,768,831 and ₦986, 154,588 in 2008, 2009 and 2010 respectively. However, it significantly increased to ₦79, 180,617,977 in 2011(WTO, 2015)

Politics of Nigeria-Ghana Trade Relations/Rivalry

Much had been said about the 'rocky' relations between Nigeria and Ghana but it has been difficult to pinpoint exactly the major reason or reasons for the warm and cool nature of Nigeria-Ghana relations. Competition between Ghana and Nigeria is nothing new. Ghana which in 1957 became black Africa's first independent state once enjoyed one of the highest per-capita incomes on the continent and provided employment for many Nigerians and other Africans. But in 1969, with Ghana in the throes of economic problems, the immigrants in Ghana were expelled by Prime Minister Kofi A. Busia in a move that ran counter to the Pan-African ideals of Kwame Nkrumah, Ghana's first leader and the acknowledged father of African Nationalism (Okom and Udoaka, 2012)

As the oil boom turned into gloom in early 1983, Nigerian government started to look for the people to blame. Corruption, mismanagement of resources and the drop in oil price were no longer the cause of the gloom. Ghanaian immigrants became an easy target. The Nigerian government passed an expulsion order that forced over 700,000 Ghanaians to leave Nigeria in less than 30 days. When the military came in and things had not improved, another 100,000 Ghanaians were also expelled in May of 1985.

Nigeria's action did not come out of nowhere. In 1969 as aforementioned, Ghanaian government expelled Africans, many of whom were Nigerians and the government had ready-made answers as to why they were doing so. One common reason was that migrants, especially Nigerians, were the cause of an increase in crime in Ghana. There are more reasons for this intense rivalry however. The two countries have always regarded themselves as primary figures. Nigeria was envious of Ghana's economic prosperity and political clout and then Ghana went down and Nigeria rose with its oil wealth and it treated Ghana as a country cousin (Alamba and Ejelonu, 2022).

Furthermore, some historical events have also shaped Nigeria-Ghana relations. For instance in 1960, Nigeria and Ghana were ruled by different political elites that had different attitudes and styles and in international relations, you cannot rule out the individual idiosyncrasies in foreign policy analysis. Ghana was ruled by the nationalist and

strong advocate of the unity of African states whereas Tafawa Balewa, the conservative Nigerian Prime Minister viewed the unity of African states with great caution. The speech made by the Prime Minister in 1965 that "In size, population and wealth there was nothing for which Nigeria could envy Ghana" showed the intense rivalry between the two countries such that when the Organisation of African Unity (OAU) was created, it equally turned out to be the theatre of leadership war between both countries (Bode Steve, 2013)

Trade Openness and Economic Performance

Ajayi (2001) noted that a more open economy based on a single but influential premise, economic integration, would improve economic performance; offer new opportunities via expanded market and the acquisition of new technologies and ideas. Uwatt (2004) examined the link between globalization and growth using panel data for forty-one (41) African nations for the period 1980-1999. Though the study had mixed results the author suggested that African nations must stand up to face the demands of trade openness through meaningful policies that would promote and engender increased trade and capital inflows.

Sachs and Warner (1995) argued that countries that were open had experienced economic growth at a rate of 4.5 percent annually in the 1970s and 1980s while countries that were closed, barely managed to grow at a rate of 0.7 percent. Using the Sachs and Warner (1995) binary measure of openness, Hoeffler (2002) confirmed that openness to trade had a significant and positive impact on growth of nations via increased investment.

In the same vein, Ndiyo and Ebong (2004) using vector auto-regressions (VARs) model empirically investigated the dynamic influence of trade openness, foreign direct investment (FDI), and other macroeconomic influence on growth, established a negative influence of openness, exchange rate, fiscal deficit, average world prices and balance of payments disequilibria on growth in Nigeria. It is, however, believed that higher degree of openness ensures better flow of foreign investment from developed countries to their developing counterpart. It is equally evident that the latter (especially the ECOWAS Members) have not fully aligned their economies to allow the investment to stimulate satisfactory growth (Igudia, 2004).

Alege and Ogun (2005) explored the link between openness to trade and industrialization by examining the impact of various indices of globalization such as degree of openness, volume of trade, inflow of foreign direct investment and increased technological innovations on aggregate manufacturing production in Nigeria. The study indicated that openness to trade, volume of trade, and increased information technology (IT) had significant influence on the level of manufacturing output.

Theoretical Review - Mercantilist Trade Theory

Mercantilist provided the earlier idea on foreign trade. The doctrine was made up of many features. It was highly nationalistic and considered the welfare of the nation as of prime importance. According to the theory, the most important way for a nation to become rich and powerful is to export more than its import. Some of the mercantilism are; Jean Baptiste Colbert and Thomas Hobbes. It was understood then, that, the most important way in which a country could be rich was by acquiring precious metals such as gold. This was achieved by ensuring that the volume of export was better than the volume of import.

Trade has to be controlled, regulated and restricted. The country was expected to achieve favorable balance of payment. Tariffs, quotas and other commercial policies were proposed by the mercantilism to minimize imports in order to protect a nation's trade position. Mercantilism did not favor free trade. Mercantilism believed in a world of conflict in which the state of nature was a state of war. The need for regulation to maintain order in human affairs and economic affairs were taken for granted. To the mercantilist, the world wealth was fixed. A nation's gain from trade was at the expense of its trading partners that are, not all nationals could simultaneously benefit from trade (Omoju and Adesanya, 2012).

Towards the end of 18th century, the economic policies of mercantilism came under strong attack. David Hume criticized the favorable trade balance as being short run phenomenon which could be eliminated automatically overtime. The other nation is likely to retaliate. Mercantilism was also attacked for their static view of the world economy. Adam Smith also criticized the notion that the world wealth is fixed with the advantages of specialization and division of labor. With specialization and division of labor, the general level of productivity within a country will increase.

Empirical Review

Li, Chen and San (2020) conducted a research on the relationship between foreign trade and the GDP growth of East China for a period 1981 -2008. Adopting the unit root test,, co-integration analysis and error correction model, they found out that foreign trade is the long term and short-term reason of GDP growth, but no evidence proved that there exists long-term stationary causality between import trade and GDP.

Sun and Heshmati (2020) evaluated the effects of international trade on China's economic growth through examining improvement in productivity. Both econometric and non-parametric approaches were applied based on a 6 years balanced panel data of 31 provinces of China from 2002-2007. The study demonstrated that increasing participation in the global trade helped China reap the static and dynamic benefits, stimulating rapid national economic growth. Also, it revealed that both international trade volume and trade structure towards high-tech exports resulted in positive effects on China's regional productivity.

Omoju and Adesanya (2020) examined the impact of trade on economic growth in Nigeria using data from 1980 to 2010. Adopting Ordinary Least Square (OLS) technique, the study showed that trade, foreign direct investment, government expenditure and exchange rate have a significant positive impact on economic growth. Saibu (2012) investigated the direct and interactive effects of capital inflow, trade openness and economic growth using data from Nigeria over the period 1960 to 2011. The study employed the composite indicator derived from principal component analysis (PCA) in the Autoregressive Distributed Lag (ARDL) bound testing model. It found statistically significant effect of capital inflow and trade on economic growth. The study further provided new evidence in support of the modernization hypothesis that capital inflow and trade policy are complementary and growth enhancing in developing economies like Nigeria and that trade liberalization policies tend to enhance effectiveness of capital inflow and jointly promote higher economic growth in Nigeria.

Javed, Qaiser, Mushtaq, Saif-ullaha and Iqbal (2019) examined the impact of total exports to GDP ratio, import to GDP, terms of trade, trade openness, investment to GDP ratio and inflation on the Pakistani economy using time-series data from 1973-2010. Employing Chow test and Ordinary Least square method, he estimated results revealed that

all the explanatory variables have positive and significant impact on Pakistan. The study further discovered that an increase in the import of raw-materials boosted production, employment and output of Pakistan.

RESEARCH METHODOLOGY

The design adopted for this research was ex-post-facto research design. The ex-post-facto research approach allowed the researcher to utilize a secondary data. Thus the research design enables the researcher to observe the effects of the explanatory variables on the dependent variable. A cross sectional data was used to capture the stationarity of the variables using panel data analysis method

Model

The model of this study is anchored on the model adopted by Javed, Qaiser, Mushtaq, Saif-ullaha and Iqbal (2019) that implored; total exports to GDP ratio, import to GDP, terms of trade, trade openness, investment to regress the effect of balance of trade on economic growth. The study therefore adopt the model with major modifications coming from regressing; gross domestic product growth rate (GDPGR) against trade openness (TOP) exchange rate (EXHR), balance of payment (BP), trade contribution to gross domestic product (TGDP) and balance of trade (BT).

- **Nigerian Economy**

Model Specification

$$GDPGR = f(TOP, EXCHR, BP, BT, TGDP) \dots \dots \dots SRM$$

- **Ghana Economy**

Model Specification

$$GDPGR = f(TOP, EXCHR, BP, BT, TGDP) \dots \dots \dots SRM$$

- **Econometric Model for Nigeria**

$$GDPGR_{t-1} = \beta_0 + \beta_1 TOP_{t-1} + \beta_2 EXCHR_{t-1} + \beta_3 BP_{t-1} + \beta_5 BT_{t-1} + \beta_6 TGDP_{t-1} + \epsilon$$

- **Econometric Model for Ghana**

$$GDPGR_{t-1} = \beta_0 + \beta_1 TOP_{t-1} + \beta_2 EXCHR_{t-1} + \beta_3 BP_{t-1} + \beta_5 BT_{t-1} + \beta_6 TGDP_{t-1} + \epsilon$$

The equation is represented in logarithmic form to enable the researcher standardize all the values and interpret the variables' coefficients as elasticity.

$$LnGDPGR = \beta_0 + \beta_1 LnTOP_{t-1} + \beta_2 LnEXCHR_{t-1} + \beta_3 LnBP_{t-1} + \beta_5 LnBT_{t-1} + \beta_6 LnTGDP_{t-1} + \epsilon$$

A priori Expectations

Based on economic a priori, the parameter estimates are expected to reflect the following signs over the dependent variable in the model;

$$\beta_1 - \beta_6 > 0$$

Thus, all the coefficients of explanatory variables are expected to reflect a positive significant relationship with economic performance in both Nigeria and Ghanaian economy over the period of this investigation.

Definition of Variables

Proxy	Definition of Variables	Scope of Measurement
GDPGR	gross domestic product growth rate for Nigeria AND Ghana	Percentage
TOP	Trade openness for Nigeria AND Ghana	Percentage
EXCHR	Exchange rate between Nigeria and Ghana	Percentage
BP	Balance of payment	Billion Naira and Cedis
BT	Balance of trade for Nigeria and Ghana between 1981 and 2021	Billion Naira and Cedis
TGDP	Trade contribution to gross domestic product for both countries	Billion Naira and Cedis

Apriori Expectation for Nigeria and Ghana

It is expected that the proxy for trade performance indicators provides a positive effect over economic performance between Nigeria and Ghana.

Estimation Technique

Multiple regression approach would be utilized to ascertain the relationship between the dependent and independent variables in the model. In the preliminary test, the following tests shall be conducted. They include: Unit Root Test, Co-integration Test, Error correction Mechanism Test (ECM), Durbin-Watson Test, and T- Test among others.

RESULT AND DISCUSSION

Unit Root Test

The description of the statistical properties of the series is individually expressed below for the both Nation over the period under empirical evaluation being 1981 through the year 2021. The study is interested in knowing the degree and intensity of volatilities witnessed in the parameters implored for regression, hence the need to carry out unit root test of statistical stationarity using augmented dickey and fuller test requirement for both Nations. Aggregation of the data collected during the succeeding data analysis period is called unit of analysis (Sekaran, 2000). Furthermore, Sekaran (2000) stated that the unit of analysis can be individuals, groups, division, industries, organization or countries.

	NIGERIA			GHANA		
	ADF	Prob**	Decision	ADF	Prob**	Decision
Variables	Trace Statistics	Critical Val@ 5%	Decision	Trace Statistics	Critical Val@ 5%	Decision
GDPGR	-3.768020	-3.526609	0.0290 1(0)	-3.659977	-3.533083	0.0378 1(0)
TGDP	-6.514298	-2.941145	0.00000 1(1)	-4.638140	-3.540328	0.0036 1(1)
BP	-5.549271	-3.529758	0.0003 1(1)	6.073851	-3.533083	0.0001 1(1)
BT	-11.46727	-2.938987	0.0000 1(1)	-3.650567	-3.557759	0.0411 1(0)
EXCHR	-3.912188	-3.529758	0.0209 1(1)	-5.455123	-3.529758	0.0003 1(1)
TOP	-8.262923	-2.938987	0.0000 1(1)	-7.761417	-3.529758	0.0000 1(1)

Source: Extract from econometric view 12

The result of augmented dickey and fuller test for unit root is presented above for both nations in a comparative form. It is evident that the statistical properties of gross domestic product growth rate (GDPGR) being the proxy and measure of economic performance for the Nation's under investigation for the period 1981 and 2021 proved the absence of unit root for both countries at levels, given the trace statistics in absolute values being greater than the critical values at 5%, while the probability values satisfying the criteria for acceptance of null hypothesis at less than 0.05% as proven above with the probability values for economic growth rate of 0.03% for Nigeria and 0.4% for Ghana. Trade contributions to gross domestic product (TGDP) witnessed stationarity only after the first difference equation was regressed, judging from the probability values of 0.00% for Nigeria and 0.0036% for Ghana during the period under consideration.

The coefficient for balance of payment (BP) also indicated stationarity for Nigeria and Ghana between 1981 and 2021 only after the first difference equations were taken, given the significant probability values of 0.0003% for Nigeria and 0.0001% for the Ghanaian economy, while the coefficient of trade balance only became free from the influence of unit root after the first difference were taken at the probability values of 0.00% for Nigeria and 0.0411% for Ghana. Exchange rate, which determine the value of a domestic currency in comparison with a foreign one was not-stationary for both economies at levels, but became stationary after the first difference equation was regressed, judging from the probability values of 0.021% for Nigerian economy and 0.0003% for the economy of Ghana. Trade openness, being the degree of trade inflow and output flows over the period under consideration for both economies became stationary at first difference as juxtaposed in the above table.

Test of Long Relationship (Johansen Criterion)

To access the nature of relationship between the series implored in the regression line for the period 1981 to 2021. Johansen test for cointegration was regressed to ascertain the exhibiting relationships between the variables; hence the study is interested in having a short run comparison of both economies in terms of trade contributions to economic performance.

NIGERIA			GHANA				
	Trace Statistics	Critical Val@ 5%	Probability		Trace Statistics	Critical Val@ 5%	Probability
None *	114.3576	95.75366	0.0014	None *	157.8306	95.75366	0.0000
At most 1 *	66.52217	69.81889	0.0891	At most 1 *	87.12005	69.81889	0.0011
At most 2 *	34.83553	47.85613	0.4567	At most 2 *	54.60824	47.85613	0.0102
At most 3	17.46857	29.79707	0.6054	At most 3	29.70854	29.79707	0.0512
At most 4	5.435379	15.49471	0.7610	At most 4	9.636642	15.49471	0.3097
At most 5	1.069234	3.841466	0.3011	At most 5	0.055683	3.841466	0.8134

Source: Extract from econometric view 12

The result of Johansen test for long run relationship presented above is indicative of the existence of a long relationship between the series for the both economies. In Nigeria, flowing the probability values of 0.0014% and the trace statistics being greater than the critical values at 5% (trace 114.3576 > critical values 95.75366). The study concludes on the existence one long run relationship between the series which would be corrected using vector error correction mechanism. In the other hand, the Ghanaian economy experienced more long run relationship that her counterpart with three cointegrating equation at the probability values of 0.0000% at none*, at most 1* 0.0011% and at most 2* 0.0102% respectively. The study therefore comparatively asserts that, there exist a long run relationship between trade performance indicators in Nigeria and Ghana for the period 1981 to 2021 and economic performance of both West African States.

Vector Error Correction Model (VECM)

The result of Johansen test, having indicated the presence of long run association between the variables explored to comparatively elucidate if there is a significant difference between trade and economic performance of two West African giant, we therefore proceed to regress for the speed of self-adjustment back to short run for both nations between 1981 and 2021.

NIGERIA				GHANA			
Coefficient	Std. Error	T. Statistics	Probability	Coefficient	Std. Error	T. Statistics	Probability
-1.179426	0.269301	-4.379576	0.0002	-0.532353	0.240700	-2.211683	0.0368

Source: Extract from econometric view 12

The coefficient of error correction model for Nigeria is indicative of a negative sign, which satisfies the statistical expectation that, long run equilibrium relationships will return back to short run following the same direction it left, while the probability values of 0.0002% justifies that our error correction model is significant and therefore applicable in Nigeria for the period 1981 through 2021. However the coefficient shows that it would take approximately 11.79% per annum for every long run adjustment in Nigeria to be returned to short run equilibrium. In the other hand, Ghana also justifies these requirements, while long run relationship is expected to return back to short run more speedily than in Nigeria with 53.23% speed of annual adjustment and a significant probability value of 0.04%.

NIGERIA					GHANA				
Variable	Coefficient	Std. Error	T. Statistics	Probability	Variable	Coefficient	Std. Error	T. Statistics	Probability
C	-2.208418	1.897558	-1.163821	0.2526	C	1.676102	1.431302	1.171033	0.2497
BP(1)	1.11E-10	1.05E-10	1.050350	0.3010	BP(1)	-9.04E-10	6.24E-10	-1.447740	0.1568
BT(1)	-5.83E-08	5.27E-07	-0.110585	0.9126	BT(1)	-0.206228	0.249133	-0.827780	0.4136
EXCHR(1)	0.018298	0.019211	0.952495	0.3476	EXCH(1)	0.574100	0.701258	0.818672	0.4187
TGDP(1)	-0.000227	0.000275	-0.827100	0.4139	TGDP(1)	-0.158893	0.108369	-1.466224	0.1518

Least Square (NLS and ARMA)

Source: Extract from econometric view 12

R-squared = 0.352096

F-statistic = 3.695382 Prob = 0.008881

Durbin-Watson stat = 1.338449

R-squared = 0.316751

F-statistic = 3.152455 Prob*(F-statistic) = 0.019161

Durbin-Watson stat = 1.142247

A comparative analysis of Nigeria and Ghana has been regressed above, using ordinary least square method with statistical data obtained from the various countries apex bank reports for the year 2021 and 2022 respectively. Based on the obtained evidence above in the Nigerian setting, the coefficient of economic growth rate (GDPGR), which measure the degree of influence the regressors exerts over the Nigerian economy for the period 1981 to 2021 indicated a negative position. This result of -2.208418 therefore justifies that trade in the economy has not significantly spurred economic growth in the country. In the other hand, Ghana with 1.676102 values in the coefficient of economic performance measured with gross domestic product growth rate, proved a positive sign.

Therefore, in contrary to the Nigerian economy where the component of trade expresses a negative effect over economic growth, the Ghanaian economy experienced a positive effect of trade components for the same period. Consequently, balance of payment for Nigeria was positively related to economic performance with 11.1% additive increase in economic performance, while balance of payment was negative -9.04% and insignificant in explaining economic performance in Ghana for the same period. However, both countries experienced a negative balance of trade (BT) at first difference respectively, with Nigeria having a negative trade balance of -58.3%, while Ghana had less negative balance of payment when compared to the Nigerian agrarian economy for the same duration at -20.62%.

Furthermore, the coefficient of exchange rate indicated a positive sign for both economies for the period under review. In the Ghanaian economy, exchange rate was positively relating to economic performance in the country for the period, indicating that, increasing the values of Ghanaian cedi's by one percent between 1981 and 2021, the

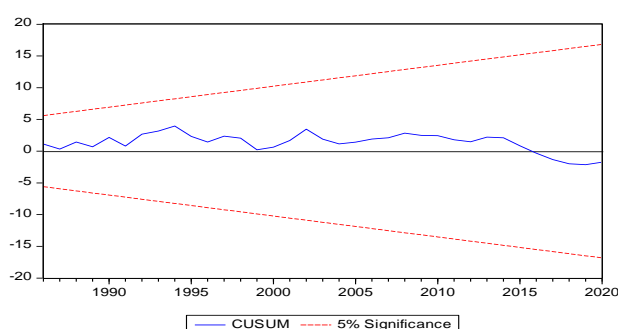
Ghanaian economy will receive a boost of 57.41%, while in Nigeria, increasing the values of the naira by one percent during the same period would result to an 18.29% boost to the Nigerian economy. However, the probability values for both economies indicates that this positive signs has no significant effect on economic performance of the countries under review. This could be linked to the agrarian and import dependent nature of the Nigerian economy according to (Ejelonu and Okafor, 2022).

Also, the contribution of trade to gross domestic product was regressed for both countries, with Nigeria experiencing a negative and unsubstantiated contribution of trade to economic performance, following the negative sign for the coefficient of trade contribution to gross domestic product at -0.000227 . Ghana also had a negative contribution of trade sector to economic growth with -0.158893 , however comparatively Nigeria had less deficit trade when compared to the Ghanaian economy with 15.88% deficit of trade contribution to GDPGR.

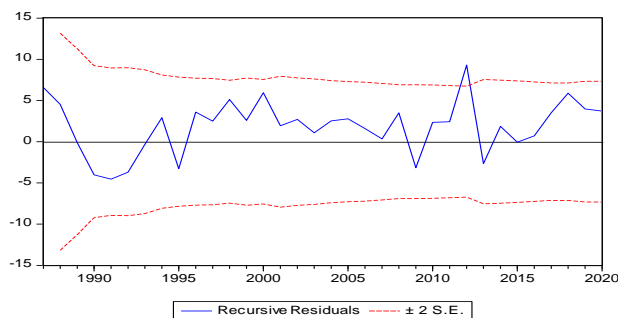
Trade openness being the degree of inflows and outflows of goods and services for both economies expressed a positive sign in Nigeria. This implies that increasing trade openness degree in the Nigerian economy would reflect to a 14.33% increase in economic growth rate in the country, while the probability values in Nigeria indicates that trade openness degree is a sufficient parameter to define and determine changes in the Nigerian economic progress over time at 0.0259%. However, trade openness witnessed a negative sign with economic performance of the Ghanaian economy over time, thus increasing the degree of openness in Ghana would contrast the performance of the economy by 19.15%. The result is supported by the empirical outcome obtained by Javed, Qaiser, Mushtaq, Saif-ullah and Iqbal (2019) examined the impact of total exports to GDP ratio, import to GDP, terms of trade, trade openness, investment to GDP ratio and inflation on the Paskitani economy using time-series data from 1973-2010 and found out that trade openness has a positive significant impact in Paskitani economy.

Model Stability Test

Nigeria



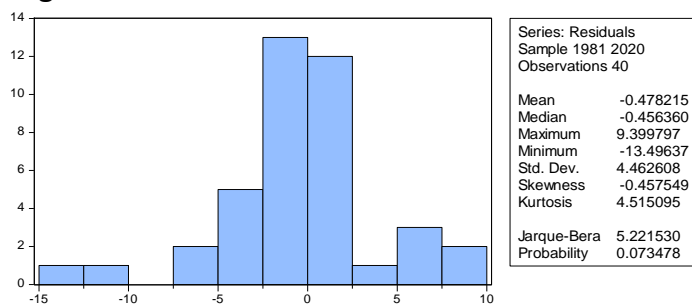
Ghana



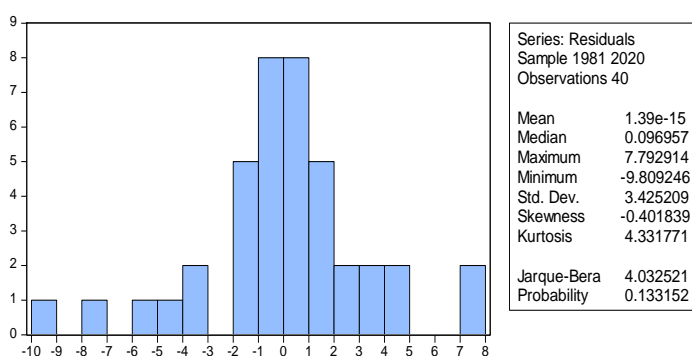
The need to assess the stability of the models implored to comparatively analyze the effect of trade balance on economic performance of Nigeria and Ghana, provides evidence that, the model for Nigeria was stable for the period, following the trend lines abiding within the boundary lines in the above figure, while the trend lines for Ghanaian economy proved abortive and unstable for the same period under investigation.

Normality Test

Nigeria



Ghana



We employed the Jarque-Bera test for the normality of the residual of our OLS estimate. The null hypothesis is that the residual of the OLS result is normally distributed. The result of normality test shown above reveals that Jarque-Bera values for Nigeria was 5.22 and Ghana 4.03, while their respective probabilities were greater than 0.05%, indicating that the errors in the model were not normally distributed for the period under investigation for both countries.

Implications of Result

The economic implications of the results obtained are explained below.

- i. Increasing balance of payment in Nigeria by one percent would boost the economic performance of the country by 11.1% and contrast that of Ghana by 9.04%.
- ii. Balance of trade for both economies expressed a negative relationship with economic growth, thus a percent increase in balance of payment would result to a 5.83% contraction in the Nigerian economic strive towards growth and also a percentage increase in balance of trade for Ghana would result to a 20.62% decline in economic growth.
- iii. Exchange rate for the period indicated a positive effect over economic performance for Nigeria and Ghana, thus a percent increase in exchange rate for Nigeria and Ghana would result to 18.29% and 57.41% respectively for the both economies.

- iv. Trade contribution to Nigeria and Ghanaian economy was negative and insignificant for the period, thus a unit increase in trade results to proportionate decline in economic growth in both West African States.
- v. Trade openness expressed a positive additive relationship with economic growth in Nigeria at 14.33%, while in Ghana there was a negative relationship at -19.15%.

Conclusion

The study comparatively analyzed the effect of trade balance on economic performance of Nigeria and Ghana for the past forty year (1981-2021), with statistical evidence obtained from annual bulletin of the respective economies apex bank, the World Bank and statista 2022. The objectives of the study were to empirically examine; ascertain if there is a significant difference between Nigeria and Ghana balance of payment on trade balance and economic performance of both countries, evaluate if there is a significant difference between Nigeria and Ghana exchange rate on trade balance and economic performance of both countries and determine the effect degree of trade openness between Nigeria and Ghana has on trade balance and economic performance of both Nations. The study regressed for Unit root test for stationarity using augmented dickey and fuller test, Johansen test for cointegrations to assess the nature of relationship between the series, error correction model to evaluate the speed of adjustment from short run to long run for the period and ordinary least square to ascertain the degree of effect trade balance for Nigeria and Ghana has on economic growth of both Nations. It was observed that; increasing balance of payment in Nigeria by one percent would boost the economic performance of the country by 11.1% and contrast that of Ghana by 9.04% and that balance of trade for both economies expressed a negative relationship with economic growth, thus a percent increase in balance of payment would result to a 5.83% contraction in the Nigerian economic strive towards growth and also a percentage increase in balance of trade for Ghana would result to a 20.62% decline in economic growth. The study recommended that, the government Nigeria pursue more favorable trade policies to enhance economic growth in the country, while the Ghanaian economy should address the effect of deficit trade and enact policies that would favour private sector performance in other to gain proper balance of payment and spur economic growth in the Nation. The study concludes that, trade is the live wire of economic integration and hence the corner stone of a sustainable global integration growth available to African countries.

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