Effects of International Trade on Economic Growth in Nigeria

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ABSTRACT
This study empirically analyzed the effects of international trade on the economic growth of Nigeria from 1981 to 2020 using the Ordinary Least Squares (OLS) technique. The fundamental factors limiting Nigeria’s trade include the country’s lean production and export base dominated by low value products such as raw materials and primary commodities, very high trade cost, tariff and non-tariff barriers to intra-Nigeria trade. The specific objectives of this study are; to ascertain the effects of exchange rate, trade policy changes and to examine how trade liberalization affects Nigeria’s economic growth. The study was anchored on the theory of comparative cost and the Factor Endowment theory. Independent variables such as, policy changes (dummy), exchange rates and liberalization/openness were regressed on real Gross Domestic Product (GDP) of Nigeria using secondary data from Central Bank of Nigeria Statistical Bulletin 2020. The econometric diagnostics for presence of unit roots in the series was conducted using the Augmented Dickey-Fuller technique and the tests indicate that the variables were integrated in order of 1(1).

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The Johansen co-integration test was conducted in determining the co-integration among the variables in the various equations which confirms the absence of long-run equilibrium. Findings from the study revealed that exchange rates in the country had negative but insignificant relationship with economic growth. However, the several trade policies in Nigeria have been seen to retard growth in economic
prosperity of the country’s economy, the impact of which is negative and significant on GDP growth. Economic growth, exports and imports, exchange rate, and Inflation all exhibit long-term co-integration, as determined by a co-integration test. Export positively impacted on growth while inflation and exchange rate were found to be negatively affecting growth in Nigeria. The study indicated that there is a beneficial association between international commerce and economic growth and supports the policy of encouraging exports and expanding Nigeria’s presence on global markets. Consequently, the study recommends that, federal government of Nigeria should embark on programmes and policies to promote local production and discourage importation of certain essential products for trade to have the desired impact on the growth of Nigeria’s economy.

INTRODUCTION

The role of foreign trade in economic growth and development of every nation in the world is of significant importance. There is no country which has grown without the useful tool of trade, however the significance of international trade to economic growth relies a great deal on the conditions in which it works and the purpose it serves (Lawal & Ezeuchenne, 2017).

International trade is concerned with the relationship that exist amongst nations in both the economic and financial sense; it plays a life-sustaining role in coordinating socio-economic performance and the possibilities for less developed countries to develop (Adelye et al., 2015). Muhammad and Akanegbu (2015) affirmed international trade as an important machinery of growth, which leads to steady improvement in human status by expanding the range of people's standard and preferences.

International trade is very important because a nation’s ability to obtain goods which cannot be locally produced in the country or which can only be produced at a greater expense lies in it. It also enables a nation to sell its domestically produced goods to other countries of the world. However, the performance of an economy in terms of growth rates of output and income per capita has not only been based on the domestic production and consumption activities but also on international supply of goods and services (Emehelu, 2021).

The exchange of goods and services across borders is an avenue through which countries are able to achieve and promote economic self-sustainability as well as a platform for transforming a country’s natural resources into economic wealth. The wealth acquired in this regard is used by the government to provide basic infrastructural facilities, which in turn enhances the living standards of the populace and consequently leading to economic growth and development (Owolabi-Merus et al., 2015).

Foreign trade affects the gross domestic product (GDP) of a country as well as the performance of industries and enterprises. The foreign trade balance is used as a starting point in clarifying the competitive advantages especially at the level of industries and sectors within the economic structure of the country. Competitiveness on the world market is the basis for the theory of international trade and economic growth. While in comparison with classical and neoclassical economic theory of international trade, it highlights innovative, realistic sources of trade, and economic development (Bobáková & Heˇcková, 2007).

According to Babatunde, Jonathan & Muhyideen (2017), international trade also affects the economic growth of nations via the attraction of Foreign Direct Investment (FDI). Babatunde, et al (2017) citing Lall (2004) and Te Velde (2001) stated that the main boulevards through which FDI impacts positively to economic growth are access to international market, job creation, technology transfer, capital
accumulation, marketing and managerial practices. This also underlines the assertion by Muhammad & Akanegbu (2015) that the economic growth of Nigeria to large extent depends on her trade with other nations, however, Nigeria as a developing country has been grappling with realities of developmental process not only politically and socially but also economically.

In the 1960s, agriculture was the mainstay of the economy and the greatest foreign exchange earner, and Nigerian government was able to execute investment projects through domestic savings, earnings from exports of agricultural products and foreign aids (Ezike & Amah, 2011).

With the advent of oil as the major source of foreign exchange earning in Nigeria since 1974, the picture has been almost that of general stagnation in agricultural exports. This led to loss of Nigeria's position as important producer and exporter of palm oil produce, groundnut, cocoa and rubber (CBN annual report, 2006). Between the year 1960 and 1980, agricultural and agro-allied exports constituted an average of sixty percent of total export in Nigeria, which is now accounted for, by petroleum oil export, (CBN annual report 2004). However the importance of international trade on the Nigerian economy has grown rapidly since 2002. Economic openness measured as the ratio of export and imports to GDP has risen from just above three percent in 1991 to over 70% in 2019; that is after plummeting to 11% in 2008 due to the unrest in Nigeria's oil producing Niger Delta region which resulted in significant disruption in oil production and shortfalls in oil export from Nigeria. All these and perhaps, the biggest source of intrigue is the big blow oil dependent economies like Nigeria received from the oil price crash of 2020 vis-à-vis the COVID-19 pandemic that engulfed the whole world and disrupted all forms of trade, most notable being the international trade and the accruals therein.

In the course of this study, some relevant questions naturally emerged:
1. Does export trade have significant effect on economic growth in Nigeria?
2. Does import trade have significant effect on economic growth in Nigeria?
3. To what extent does trade liberalization impact economic growth in Nigeria?

CONCEPTUAL FRAMEWORK

Promotion of economic growth is one of the major objectives of international trade, but in recent times, it has not been the case because the Nigerian economy is still experiencing some elements of economic instability such as price instability, high level of unemployment and adverse balance of payments (Babatunde, et al., 2017). Furthermore, the benefits of international trade had not been noticed in the economic growth of Nigeria because some of the goods imported into the country were those that caused damages to local industries by rendering their products inferior and being neglected, thereby reducing the growth rates of output of such industries which later spread to the aggregate economy. A major problem as to why the benefits of international trade cannot be found to have a positive effect on economic growth is the macroeconomic policy changes resulting from the trade which turned the country into an import-reliant economy.

International Trade

The history of international trade has gone hand in hand with the development of civilization. From ancient times, international trade has brought about the exchange of products and raw materials between one nation and another. However, such trade was often conducted in barter form and was of small volume when compared to today’s standard. This interchange of products was very critical in
economic and historical development of every nation. International trade in its early beginnings was very important, not just because it provided one society or country with products it does not have, but also led to cultural interchange, thus diversifying trading not only on product, but also on lifestyles, customs and technology (Emehelu, 2021).

Yakubu & Akanegbu (2018) are of the view that international trade can promote the development of monetary systems of record keeping and accounting and the entire vocation of commerce. One can safely say that the economic and political development of the entire western world was spurred and enhanced by international trade. Ideomobi (2011) defined international trade or international business as a term used collectively to describe all commercial transactions (private and government, sales, investments, logistics and transportation) that take place between two or more nations. Usually, private companies undertake such transactions for profit; governments undertake them for profit and political reasons.

Bakari (2017) defines international trade as the exchange of capital, goods, and services across international borders or territories. In most countries, such trade represents a significant share of gross domestic product (GDP). Pritchett & Smith (2016) said that a growing body of work argues that, dismantling labour market segmentations internationally would be wealth generating and pro-poor and lead to more egalitarian distributional outcomes. Ajayi & Araoye (2019) averred that international trade/regional integration appears to be a logical way to enable an economy to produce at lower unit costs for a larger (regional) market. In order to know what is happening in the course of international trade, governments keep track of the transactions among nations. The records of such transactions are made in the balance of payment accounts. International trade and balance of payment are therefore two important aspects in the relationship between nations (Elias, et al., 2018).

In Nigeria, international trade has been found to be paramount to the growth of the economy because it generates a significant amount of revenue particularly from the agricultural and oil sectors. Prior to the discovery of crude oil, a significant portion of Nigeria’s revenue emanated from the exportation of agricultural products such as palm oil, groundnut, rubber and cocoa. However, the discovery of crude oil resulted to the neglect of the agricultural sector as Nigeria’s major export sector. From the import perspective, due to Nigeria’s status quo of being underdeveloped, it highly depends on technologically advanced countries such as Germany, the United States and the United Kingdom for the importation of products which it lacks the capacity and technical know-how to produce for instance, automobiles, equipment and machinery. The importation of these commodities helps to stimulate technical efficiencies and meet the productive needs of the local industries as well as that of the teeming population (Owolabi-Merus, et al., 2015).

**Balance of Trade and Balance of Payments**

The balance of payments of a country is a systematic record of its receipts and payments in international transactions in a given year. Each transaction is entered on the credit and debit of a balance sheet.

Balance of trade, on the other hand, is the difference between the value of goods and services exported and imported (Muhammad & Akanegbu, 2015).

In equation form, the balance of payments of \(Y = C + I + G + (X-M)\) which includes all transactions which give rise to exhaust national income.

In the equation, \(Y\) = national income, \(C\) = consumption expenditure, \(I\) = investment expenditure, \(G\) = government expenditure, \(X\) = exports of goods and services and \(M\) = imports of goods and services.
The expression \((X-M)\) denotes the balance of trade. If the difference between \(X\) and \(M\) is zero, the balance of trade balances. If \(X\) is greater than \(M\), the balance of trade is favorable, or there is surplus balance of trade. On the other hand, if \(X\) is less than \(M\) the balance of trade is in deficit or is unfavorable (Enu, et al., 2013).

Economic Growth

Economic growth means the steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income. In the views of Elias et al., (2018), economic growth could be said to comprise three component; capital accumulation, growth in population and eventual growth in the labor force, and technological progress.

Capital accumulation results when some proposition of personal income is saved and invested in order to augment future output and income. Capital accumulation involves a trade-off between present and future consumption, giving up a little now so that more can be had later (Muhammad & Akanegbu, 2015).

Population growth, and the associated increase in the labor force, has traditionally been considered a positive factor in stimulating economic growth. A larger labor force means more productive workers, and a large overall population increases the potential size of domestic markets. Technological progress results from new and improved ways of accomplishing traditional tasks. Technological progress could be neutral, labor-saving, and capital-saving.

Economic performance and growth at a macroeconomic level is measured by the gross domestic product (GDP) and the foreign trade balance is one of the components of GDP (Andrea, et al., 2021). This means that trade balance can have a positive or a negative effect on economic performance of the country, industry, or enterprise.

The comprehension that economic growth consists of a number of aspects is very factual but the three most essential elements are: economic, social equity and environmental; and hence they are regarded as the Sustainable Development Triangle (Daud & Nor Azam, 2011). Economic sustainability is concerned about sound poverty alleviating growth, macroeconomic management, role of the state, appropriate agricultural policies, and cost. Sustainable social development is concerned with equity in the allocation of wealth, opportunity and resources to all citizens at all levels and it implies amongst other things access to minimum human rights, social benefits including food, education, health, standards of security, shelter and self-development opportunities. Environmental sustainability on the other hand is concerned with environmental protection and thus demands the employment of environmental goods and services in a way that their productive capacity are not countermined, nor their overall contribution to human wellbeing subverted (Ite, 2003). Based on the target of this study, all three dimensions are relevant but emphasis is laid on economic sustainability used interchangeably for economic growth.

Challenges of Economic Growth and Trade Theories in Nigeria

Giving a scathing but realistic assessment, Babatunde, et al (2017) blurted out that almost nothing is efficiently operating in Nigeria and so also the tenets of trade theories are not much valued in the nation. For instance, the classical trade theory had emphasized on attaining economic growth via international trade on the foundation of comparative economic advantages and disadvantages. Harnessing the principles of this trade theory, Nigeria was expected to major in agriculture, especially taking cognizance of her enormous abundant labour resources and unexploited cultivatable land.
(Babatunde, et al., 2017). Regrettably, since the oil price windfall of the early 1970s, the nation jettisoned the industrial and agricultural sectors of the economy. The economic agents of both public and private sectors of the economy devote their resources in the oil and gas sector so much that the key sectors of the economy are deprived of funding, managerial capabilities and even required investment. Thus, the keystone economy has been rendered uncompetitive internationally while the nation has become a trading settlement for foreign firms (Sanusi, 2010). The petroleum sector in Nigeria is bedeviled by wastage, low productivity, unchecked dominance of foreign multinationals and corruption (Hassan, et al., 2002). The nation has been kicked downstairs to a mono-product economy with the lion share of government income emanating from oil exports which is vulnerable to volatility and shocks in the oil market internationally. Besides, several other solid minerals with which the nation is abundantly blessed remain generally undeveloped. More fundamentally, the economy has disproportionately focused on the primary sector (extractive industry and subsistence agriculture) with the dearth of any significant value addition. In view of this, the growth recorded in the economy is negligible which has thus far been devoid of corresponding positive attitudinal change, employment, equitable income distribution, and value re-orientation, to mention but a few.

**Foreign Direct Investment (FDI)**

The term FDI refers to the cross-border investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise resident in another economy. Amadi (2013) sees it as a distinctive feature of multinational enterprises. According to him, FDI is not simply an international transfer of capital but rather, the extension of enterprise from its home country which involves flows of capital, technology and entrepreneurial skills to the host economy where they are combined with local factors in the production of goods for local and for export markets. Mwilima (2003) described FDI as investment made to acquire a lasting management interest (usually at least 10% of voting stock) and acquiring at least 10% of equity share in an enterprise operating in a country other than the home country of the investor.

Foreign Direct Investment (FDI) is a key element in international economic integration. FDI creates direct, stable and long-lasting links between economies. It encourages the transfer of technology and know-how between countries, and allows the host economy to promote its products more widely in international markets. FDI is also an additional source of funding for investment and under the right policy environment it can be an important vehicle for development (OECD Factbook, 2012).

The FDI-Growth nexus has gained importance in growth literature in its varied dimensions. Overview of studies confirm various dimensions such as fundamental theories of FDI, various macro-economic variables that influence FDI, the impact of economic integration on the movements of FDI followed by advantages and disadvantages of FDI (Adedeji, 2021).

**Trade Liberalization**

Trade liberalization brings about investment in a country by drawing both domestic and foreign investment and thus increases the rate of capital accumulation, which in turn generates more employment in the country and hence improves economic growth (Ogunkola et al., 2006).

Trade liberalization is often proxied by degree of openness (Open) which refers to total external trade as a proportion of GDP, that is, (export + import)/GDP. If a country is open to trade, the country attracts foreign investment which will increase the level of output, and hence growth rate of the GDP is expected to increase. The more the ratio is closer to unity, the more the economy is opened while in a closed economy, the ratio is close to zero. Degree of openness is expected to be positively related with
economic growth.

THEORETICAL FRAMEWORK

Heckscher – Ohlin Factor Endowments Theory

In contemporary economics, the dominant model of comparative cost advantage is known as Heckscher – Ohlin model. As pointed out by Sodersten and Reed (1994), this is a theory of long term general equilibrium in which two factors of production – labour and capital – are both mobile between sectors. The Heckscher – Ohlin theory postulates that international trade – of which exports are expected to constitute the major component – will significantly reduce the gap between the rich and poor countries. The theory contends that inter-country differences in factor endowments are the basis for foreign trade.

The Heckscher-Ohlin theory also implies that free trade specialization in production based on relative factor endowments will tend to bring about factor price equalization and thus will increase the returns to labour in poor countries to the levels in rich countries; this suggests that international trade in general and exports in particular have the ability to mitigate inequality in income and wealth distribution between and within nations as well as the ability to bring about a convergence in absolute poverty incidence between the rich and poor countries (Ozughalu & Ajayi, 2004).

The theoretical foundation of this study is anchored on the Factor Endowments Theory, propounded by Heckscher-Ohlin. The Heckscher-Ohlin model (H-O model) is a general equilibrium mathematical model of international trade, developed by Eli Heckscher and Bertil Ohlin at the Stockholm School of Economics. It builds on David Ricardo’s theory of comparative advantage by predicting patterns of trade and production based on the factor endowments of a trading region. The Heckscher-Ohlin theorem shows the relation between relative factor endowments and comparative advantage. This theorem states: If two countries have the same constant returns to scale, technology with no factor intensity reversals then the country has a comparative advantage in (and therefore exports) the commodity that uses intensively the factor in which the country is relatively well endowed (Akeem, 2011).

The H.O theory also known as (the factor proportions) model, is recognized as one of the most important models of international trade. It was developed upon the Richardian model largely by introducing a second factor of production. In its two-by-two-by two variant, meaning two goods two factors, and two countries, it represents, one of the simplest general equilibrium models that allows for interactions across factor markets, goods markets and national markets simultaneously. These interactions across markets are one of the important business lessons displayed in the results of this model. With the H.O model, we learn how changes in supply or demand in one market can feed their way through the factor markets and with trade, the national markets can influence both goods and factor markets at home and abroad (Emehelu, 2021).

In other words all markets are everywhere interconnected. Therefore, since the H.O. theory is of the view that all the markets are interconnected, that means that the trade relationship between Nigeria and other countries of the world in one way or the other adds value to the world’s economic growth through market activities.

This theory is relevant to this study as The Heckscher–Ohlin trade theory claims that countries will tend to have comparative advantages in producing the goods that use their abundant factors more intensively; for this reason, each country will end up exporting its abundant factor goods in exchange for imported goods that use its scarce factors more intensively (Enu et al., 2013) and an adaptation of
the posit of this theory will benefit the Nigerian economy immensely (if the revenues generated are put to judicious use).

**Classical Theory of Trade**

Classical theory of trade postulated that countries are better capable to gaining and sustaining development if each commits resources to the generation of goods and services in which economic advantage is being enjoyed by them (Smith, 1776; Ricardo, 1817 cited in Morgan & Katsikeas, 1997 by Babatunde, et al., 2017).

Economic advantages and disadvantages usually emanate from country differences in factors such as capital, labour, technology resource endowments, or entrepreneurship. The theory, therefore, contends that the fundamentals for sustainable development and international trade can be traced to differences in resource endowments and production characteristics founded on domestic differences in naturally inherent economic advantages (Morgan & Katsikeas, 1997 cited by Akeem, 2011). Specifically, the theory was predicated on the principles of specialization and comparative cost advantage, which lead to benefits for the trading collaborators (Umo, 2007). One of the weak points of this theory is that investment resources are not internationally mobile, i.e. only commodities are movable and investment decisions are undertaken on a national basis. Capital, in today's world is very mobile across national frontiers, and so also technology (Ray, 2011).

**Export-Led Growth (ELG) Hypothesis**

The so-called Export-Led Growth (ELG) hypothesis is at least as old as the classical school, as both Adam Smith and David Ricardo supported it (Richards, 2001). After several decades and the accumulation of an ever-expanding body of research literature, however, no consensus has emerged on the theoretical appropriateness of the export-led growth hypothesis. Theoretical disagreement on the role of exports is matched by mixed empirical evidence (Jin, 2002; Richards, 2001). To this respect, it must be taken into account that attempts to show econometrically that exports are a crucial cause of growth face two basic problems. First, exports are themselves a component of GDP, and thus evidence of a correlation is insufficient to prove consistently any actual causal relationship which might in fact exist. Second, other relevant macroeconomic variables, and especially other components of aggregate demand, are also correlated with GDP growth, and thus a missing variables problem of model misspecification inevitably arises (Sheehey 1990).

**EMPIRICAL LITERATURE REVIEW**

Emehelu (2021) empirically analyzed the effects of international trade on the economic growth of Nigeria from 1981-2018 using the Ordinary Least Squares (OLS) technique. The specific objectives were to ascertain the effects of; exchange rate, trade policy changes and to examine how trade liberalization affects Nigeria's economic growth. Independent variables such as, policy changes (dummy), exchange rates and trade liberalization/openness were regressed on real Gross Domestic Product (GDP) of Nigeria using secondary data from Central Bank of Nigeria Statistical Bulletin 2018. The econometric diagnostics for presence of unit roots in the series was conducted using the Augmented Dickey-Fuller technique and the tests indicated that the variables were integrated in order of 1(1). The Johansen co-integration test was conducted in determining the co-integration among the variables in the various equations which confirms the absence of long-run equilibrium. Findings from the study revealed that exchange rates in the country had negative and insignificant relationship with economic growth. The study recommends that since import and export trade have no significant effects on growth in Nigeria, the federal government should embark on programmes and policies to promote...
local production and discouragement of certain essential products for trade to have the desired impact on the growth of Nigeria’s economy.

Sujav, et al., (2021) analyzed the influence of foreign trade on economic performance in the wood processing industry (WPI) of Czech and Slovakia. The multivariate regression method (MLR), assumption tests for MLR models, and Granger causality test were applied to identify association between foreign trade economic performance, and indicators were formed to measure the effects of foreign trade at the industry level. The Granger test revealed the unidirectional causality in the Slovak WPI and bidirectional causality in the Czech WPI. The results revealed that the net export growth has a positive effect on the economic performance of the industry, but only if the growth in imports is lower than in exports. The balanced trade balance indicated no influence of foreign trade on economic performance. The paper contributes to existing knowledge with indicators for evaluation of foreign trade effects on the performance of the industry. The paper also brings new empirical knowledge in trade balance effects on the economic performance of industries.

Iwuoha and Awoke (2019) investigated the impact of international trade on Nigeria’s economic growth using Johansens’ co-integration and Vector error correction (VECM) methods to analyze time series data for the period 1981-2017. This is to evaluate the impact of international trade on Economic growth of Nigeria so as to understand how international trade has impacted on Nigeria’s economy within the period under the study.

Given the peculiar nature of regime change in Nigeria, new government is sworn in on the 5th month of the fiscal year, in which period, the trade policy direction has been spelt out by the outgoing government. This was not accounted for in previous studies and therefore forms the significant contribution of the study. It was found that all variables of interest were stationary at I(1). The lag length was confirmed to be 1 lag. The result of the Johannes’ co-integration indicates the existence of long run relationship among gross domestic product and net export, trade openness, real exchange rate, interest rate and foreign direct investment in Nigeria. The vector error correction model result showed that while net export had a positive insignificant impact on economic growth of Nigeria, trade openness, real exchange rate, interest rate and foreign direct investment had significant negative impacts on economic growth in Nigeria within the period under the study. The speed of adjustment is found to be 0.59% taking place each year with these variables accounting for 62% of the changes in the level of economic growth in Nigeria within this period of study. It is recommended that exports should be encouraged with exporters being encouraged to add value to primary products before exporting, openness of the economy should be regulated to protect local firms and discourage dumping and reckless importation, confidence building for investors is key to increase the inflow of foreign direct investments into Nigeria, stop regulating the exchange rate, reduction of interest rate should be pursued especially for those engaged into productive activities in the economy to increase the growth of Nigerian economy.

Elias, et al., (2018) evaluated the impact of international trade on the Nigeria economic growth. The objectives of this study were to ascertain the impact of export trade on the Nigerian economy and to determine the impact of import trade on the Nigerian economy. Multiple regression analysis technique was employed in estimating the various components of foreign trade. The data used for the study was extracted from the 2012 edition of the CBN statistical bulletin, covering the period from 1980 – 2012. The results of the study showed that there is a significant impact of Export trade on the Nigerian economic growth. The study also revealed that there is no significant impact of import trade on the Nigerian economic growth. The researchers among other things recommended that conscious efforts
should be made by government to fine-tune the various macroeconomic variables in order to provide an enabling environment to stimulate foreign trade by engaging in more of export trade and in effect curtail on import trade which has a negative effect or strain the economy. It was also recommended that the government should encourage export diversification, e.g. non-oil sector exports should be encouraged and concentration on oil sector export should be minimized.

Iyoha and Okim (2017) used panel data regression analysis to investigate the relationship between trade and growth in ECOWAS countries. They formulated the model $PCY = f(XPORT, INV, HK, POGR, EXRT, INFL)$ with $PCY$ being per capita real income, $XPORT = \text{total exports}$, $INV = \text{real gross domestic capital formation}$, $HK = \text{human capital}$, $POGR = \text{growth rate of population}$, $EXRT = \text{nominal exchange rate}$ and $INFL = \text{inflation}$. Their result shows that exports, exchange rate and investment are significant determinants of per capita real income growth, thus confirming exports to be impacting positively on economic growth of ECOWAS countries. Among others, they recommended that imports should be reduced by assisting infant industries to produce more of imported goods and services in the selected countries.

Mogoe and Mongale (2014) studied the impact of international trade on economic growth in South Africa using the Johansens’ co-integration approach and Vector error correction model to analyze the model $\text{GDP} = f(\text{EXCRAT, EXPT, IMPT, INF})$ where: $\text{GDP}$ is gross domestic product; $\text{EXCRAT}$ is exchange rate; $\text{EXPT}$ is export; $\text{IMPT}$ is import and $\text{INF}$ is inflation. The result of their stationarity test confirms that the variables had unit root problems, while the co-integration test showed the existence of a long run relationship between the variables. Their Empirical investigation reveals that inflation rate, export and exchange rates are positively related to GDP whilst import is negatively related to GDP. They concluded that there is a correlation amongst GDP and its regressors and recommended that policymakers should improve and strengthen competitiveness of export sector with the aim of striving for a balance with the import sector.

Nageri, Ajayi, Olodo, and Abina, (2013) applied OLS regression method of statistical analysis on a formulated multiple econometric model \( \text{GDP} = F(\text{TOTRD, FDIF, EXCR, OPEN, POST}) \) to examine the impact of trade on the Nigerian economic growth using relevant secondary data collected from CBN bulletins, National Bureau of Statistics and UNCTAD covering periods from 1975 to 2012. Their findings show that international trade contribute positively to economic growth but Nigeria’s trade policies, and implementation is still not growth friendly. They therefore recommend that trade policies in Nigeria need to be reviewed, reappraised and reinvigorated to encourage the gain of trade in order to foster growth, through diversification of the economy to areas such as agriculture, industrialization, privatization of the power sector.

Umoru (2013) using vector error correction method (VECM) investigated the impact of international trade flows on employment generation in Nigeria. The major findings show that the volume of international trade has no significant positive impact on employment generation in Nigeria. He argues that this is as a result of the structural adjustment program (SAP) induced trade liberalization forced on the country by the IMF and World Bank as a pre-condition for loan procurement and possible debt cancellation. He therefore recommended that the Nigerian government makes the country’s export competitive by broadening the horizons of production and reduce her volume of importation in order to make the negative trade balance positive.

Enu, Havi, and Hagan, (2013) examined the effects of foreign trade on economic growth in Ghana by using Johansens’ co-integration analysis. They found that all the variables of interest: real gross domestic product, foreign direct investment exports, imports and foreign direct investment are
stationary at I(1). The results of Johansens’ co-integration test indicated that there exist a long run and short run relationship among real gross domestic product, exports, imports and foreign direct investment in Ghana. They also found out that in the long run, exports had a positive effect on real gross domestic product and as a result, an increase in exports leads to an improvement in real gross domestic product. Imports and foreign direct investment had a negative effect on real gross domestic product, respectively. Therefore, a decline in both variables causes an improvement in real gross domestic product. In the long run all the variables were found to be statistically significant at 5% significance level. The researchers observed that the speed of adjustment was 4.57 percentage point taking place at each year towards the long run periods. They advised that exports should be encouraged, diversified, raw materials processed before export to improve the real gross domestic product.

Eravwoke and Oyovwi (2012) employed ordinary least squares (OLS), augmented dickey fuller (ADF) statistics and the co-integration method to examine the impact of international trade on the Nigerian economy with annual series data covering 1970 to 2009 collected from various issues of the Central Bank of Nigeria (CBN) annual report and statement of accounts. They presented gross domestic product as a dependent variable while the independent variables are total trade, exchange rate and export. The results of their analyses suggest that exchange rate is statistically significant in explaining economic growth via trade in Nigerian economy, while total trade is not statistically significant in explaining economic growth in Nigeria. They therefore, recommended that the government should look beyond petroleum product as major tradable goods that will develop the economy.

Empirical studies reviewed show that the debate on the effect of international trade on economic growth is far from being conclusive. The relative scarcity of local research that take into account the variables of interest in this study and inconclusive findings of other researchers forms a research gap, and by taking the scope down to the pre-SAP era and into the post-SAP era to date (1981 – 2020), this research work will be unique, in the sense that, there has been no study carried out that covers such scope. These are the gap in literature this study will fill.

METHODOLOGY

This section deals with the processes and procedures employed in accomplishing this study. It explains the nature of the research design, data collection methods, model selection/specification, diagnostic tests conducted and the analytical tools for data analysis.

The research design adopted for the study was the ex-post facto; this was because the research relies on historical data (1981-2020).

This study employed annual time series data on the variables considered, covering a total the Central Bank of Nigeria (CBN) statistical Bulletin annual report and statement of Account, and the National Bureau of Statistics (NBS).

METHODS OF DATA ANALYSIS

Economic criteria: this was guided by the principles of econometric theory and shows whether the coefficients of the variable conform to the economic a priori expectation, while the statistical criteria test were used to assess the significance of the overall regression.

Unit root test: The unit root test is necessary in this study so as to verify if our time series data is stationary or non-stationary. This is because non-stationary time series data will be unreliable in making economic predictions. This may lead to incorrect and spurious regression results from which further inferences becomes meaningless using the Augmented Dickey Fuller (2081) tests (Gujarati, 2004).
Johansen co-integration test

After checking univariate time series, properties of each of the variables in the specified model were found to be integrated of same order, the study was proceeded with testing of co-integration among the variables of interest. As pointed out by Harris (1995), if two series are integrated of order I(1) and the residuals from regressing the mare I(0), then the two series are co-integrated, this implies that although both series may individually be non-stationary, their linear combination can be stationary. A co-integration relationship may however only be observed in the long run, as it is possible that the series deviate in the short run but in the long run regain their trends (see Gujarati 2004). Therefore, this motivates the use of co-integration approach in this study as it aims at investigating the possibility of long run relationship between international trade and economic growth in Nigeria. The verification of this long run relationship is crucial because most economic relationship are said to hold true in the long run, therefore modeling variables without verifying the existence of such long run relationship is indeed a rob on the supporting theory.

Granger causality test: We shall conduct the Granger Causality test to observe the direction of cause-effect relationship among the variables in the analysis by considering the F probabilities in the result. This provides the basis for determining which variable provide the lead for responses by other variables.

METHOD OF EVALUATION

The economic a priori criteria: This evaluation technique is guided by the principle of economic theory. It centers on verifying the conformity of our result to economic a priori expectations in terms of size and signs. Only results which conform to a priori expectations are accepted. In regressing this variable on their sportive dependent variables to show the impact of trade on economic growth in Nigeria, a positive relationship is expected save for exchange rates which is expected to yield either a positive or negative nexus.

Statistical criteria: This evaluation technique is guided by the principle of statistical theory and applies to the following test statistics:

\[ R^2 \]: The \( R^2 \) is a coefficient of determination. It is a statistical measure of how well the regression line approximates the real data points (goodness of fit). An \( R^2 \) of 1 indicates that the regression line perfectly fits the data or explains 100% variation in the dependent variable (Gujarati, 2009). In real sense \( R^2 \) can only yield a value range of 0 to 1 when used to measure the agreement between an observed and modeled values, Wikipedia (2015).

\[ \text{Adjusted } R^2 (R^2) \]: \( R^2 \) attempts to take into consideration the phenomenon where \( R^2 \) automatically and spuriously increase when additional explanatory variable are brought into the model. It is a modification due to the ill of \( R^2 \) which adjusts for the number of explanatory variable in a model when compared to the number of data points. The adjusted \( R^2 \) is either equal to or less than \( R^2 \). In practice it is expected to be less than \( R^2 \) (Gujarati & Porter, 2009).

\[ F \text{-test} \]: This was named after Ronald A. Fisher who was a statistician. F-test is a test commonly used to check the overall significance of the included explanatory variables in a regression model. It will help us check on the overall significance of our model mainly at 5% significant level.

\[ T \text{-test} \]: To know the individual effect of each explanatory variable on the dependent variable, our statistics will be a useful tool. This will enable us know in certainty those variables which significantly affect the dependent variable using 5% level of significance.
Econometric criteria

Second order test: This is guided by the principle of econometrics theory and aims at the investigation of how consistent our model is with econometrics assumptions.

As a rule of thumb, if does found to be 2, in application one may assume that there is no first-order autocorrelation, either positive or negative. But if $p = +1$, perfect positive serial correlation exist. On the other hand when the value of $p = -1$, there exist perfect negative correlation among successive residuals. Hence the closer $d$ is to 4, the greater the evidence of negative serial correlation (Gujarati & Porter, 2009).

Description of Research Variables

The model consists of four (4) variables, Real Gross Domestic Product (RGDP), Export Trade (EXPT), Import Trade (IMPT) and Official Exchange Rate (OEXR):

Real GDP Growth Rate: Real GDP is an inflation-adjusted measurement of a country’s economic output over the course of a year.

Export Trade: is a measure that examines the aggregation of the monetary value accrued from sending (selling) out goods produced in Nigeria to other countries of the World. It is calculated by adding up the total export of goods and services (in current U.S dollars). It is expected to have a positive sign.

Import Trade: it is a measure that examines the aggregation of the monetary value incurred from bringing in goods produced in other countries (of the world) into Nigeria.It is calculated by adding up the total imports of goods and services (in current U.S dollars). It is expected to have a negative sign.

Trade Liberalization: is a measure that examines the degree of trade openness a country boasts in the international market. It is calculated by taking the ratio of import plus export to GDP, that is, $\{(X+M)/Y, \text{where } X \text{ is exports, } M \text{ is imports and } Y \text{ is GDP}\}$. It is expected to have a positive sign.

Exchange Rate: This is the value of one country’s currency to another. It is expected to have a negative sign.

Foreign Direct Investment: Foreign Direct Investment is the total value a country benefits from investment in its economy by investors from other countries. The proxy used for FDI is the annual FDI data in US$. Data for this variable is taken from the Central Bank of Nigeria (CBN) Statistical Bulletin. The expected sign for foreign direct investment is positive.

MODEL SPECIFICATION

The model expresses the Real Gross Domestic Product as the dependent variable while the independent variables will be Export Trade (EXPT), Import Trade (IMPT), Trade Liberalization (TRDL), Official Exchange Rate (OEXR) and Foreign Direct Investment (FDIN). The linear expression was:

$$ \text{RGDP} = f(\text{EXPT, IMPT, TRDL, OEXR, FDIN}) $$

These equations can be transformed into a linear function as follows:

$$ \text{RGDP} = \beta_0 + \beta_1 \text{EXPT} + \beta_2 \text{IMPT} + \beta_3 \text{TRDL} + \beta_4 \text{OEXR} + \beta_5 \text{FDIN} + \mu $$

Where:

$$ \text{RGDP} = \text{Real Gross Domestic Product (Dependent Variable)}; \text{EXPT} = \text{Export Trade (Independent}$$
Variable)
IMPT = Import Trade (Independent Variable)
TOP= Trade Openness (Proxy for Trade Liberalization)
TRDL = Trade Liberalization (Independent Variable) OEXR = Official Exchange Rate (Control Variable) FDIN = Foreign Direct Investment (Control Variable)
μ = Stochastic Error terms
f= Functional relationship.
β0 = intercepts
β1 – β4 = Coefficients of the independent variables.
μ= Stochastic error term (representing the combined effect of omitted variables)it = Dated Panel data.

DATA PRESENTATION AND ANALYSES

Unit Root Test
The tests used for observing the stationary of the ex-post series data for analysis in this study was the Augmented Dickey Fuller (ADF) test as shown in Table 1:

Table 1: Unit Root Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF-T-Stat</th>
<th>Critical Value @5%</th>
<th>PP T-Prob</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln (RGDP)</td>
<td>-5.429</td>
<td>-2.951</td>
<td>1(1)</td>
<td>5%</td>
</tr>
<tr>
<td>ln (TOP)</td>
<td>-4.270</td>
<td>-2.951</td>
<td>1(1)</td>
<td>5%</td>
</tr>
<tr>
<td>ln (IMP)</td>
<td>-6.000</td>
<td>-2.951</td>
<td>1(1)</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: 2020 Compilation

The ex-post facto properties of the variables were conducted using the Augmented Dickey Fuller (ADF) Test and the results from this test shows that all the indicators were stationary at I(1). This therefore implies that this model can be relied upon for suitable and non-spurious policy making since the means and variances of the data follow a constant trend.

Table 2: Lag length selection for the study

<table>
<thead>
<tr>
<th>Lag</th>
<th>LogL</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>143.168</td>
<td>315.924*</td>
<td>9.01e-10*</td>
<td>-6.657*</td>
<td>-5.310*</td>
<td>-6.198*</td>
</tr>
<tr>
<td>2</td>
<td>164.893</td>
<td>29.392</td>
<td>1.21e-09</td>
<td>-3.995</td>
<td>-3.995</td>
<td>-5.622</td>
</tr>
</tbody>
</table>

Table 2 shows the lag length summary selected for the study
To determine the optimum lag length, a lag of twenty was started with, but finally selected an optimum lag of one. Sequential modified LR test was employed, the final prediction error (FPE) test, Akaike information criterion (AIC) test, Schwarz information criterion (SIC) test and Hannan Quinn (HQ) information criterion at 5 percent level of significance to carry out the selection. All the test results indicated a lag order of one.
Table 3: Unrestricted Cointegration Rank Test (Trace)

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Eigenvalue</th>
<th>Trace Statistic</th>
<th>0.05 Critical Value</th>
<th>Prob.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0.580</td>
<td>76.141</td>
<td>79.819</td>
<td>0.054</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.389</td>
<td>23.206</td>
<td>29.797</td>
<td>0.236</td>
</tr>
<tr>
<td>At most 3</td>
<td>0.118</td>
<td>6.482</td>
<td>15.495</td>
<td>0.639</td>
</tr>
<tr>
<td>At most 4</td>
<td>0.063</td>
<td>2.213</td>
<td>3.841</td>
<td>0.137</td>
</tr>
</tbody>
</table>

Table 4: Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Eigenvalue</th>
<th>Max-Eigen Statistic</th>
<th>0.05 Critical Value</th>
<th>Prob.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0.580</td>
<td>29.480</td>
<td>33.877</td>
<td>0.153</td>
</tr>
<tr>
<td>At most 1</td>
<td>0.498</td>
<td>23.455</td>
<td>27.584</td>
<td>0.155</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.389</td>
<td>16.724</td>
<td>21.132</td>
<td>0.185</td>
</tr>
<tr>
<td>At most 3</td>
<td>0.118</td>
<td>4.269</td>
<td>14.265</td>
<td>0.830</td>
</tr>
<tr>
<td>At most 4</td>
<td>0.063</td>
<td>2.213</td>
<td>3.842</td>
<td>0.137</td>
</tr>
</tbody>
</table>

Co-Integrated Test

The result of the Johansen co-integration presented in tables 2 and 3 were carried out assuming linear deterministic trend in co-integrating equation. The trace test indicates one co-integrating equation at 5% significance level likewise. In line with this, there is no long-run equilibrium relationship that exists between international trade and economic growth in Nigeria. From the findings, the regression results were obtained. Trace and maximum eigenvalues tests indicates no co-integration(s) at the 0.05 level.

*denotes rejection of the hypothesis at the 0.05 level


Tables 3 and 4 show the Johanson Co-integration Test Result (Trace and Maximum Eigenvalue).

Table 5: Regression Result (Dependent Variable: LRGDP)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>3.169</td>
<td>0.157</td>
<td>20.216</td>
<td>0.000</td>
</tr>
<tr>
<td>D (EXP)</td>
<td>-0.085</td>
<td>0.059</td>
<td>-1.430</td>
<td>0.163</td>
</tr>
<tr>
<td>D (EXR)</td>
<td>0.178</td>
<td>0.095</td>
<td>1.878</td>
<td>0.070</td>
</tr>
<tr>
<td>D (PLC)</td>
<td>-0.141</td>
<td>0.062</td>
<td>-2.277</td>
<td>0.030</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.587</td>
<td>Mean dependent var</td>
<td>3.785</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.518</td>
<td>S.D. dependent</td>
<td>0.116</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.080</td>
<td>Akaike info criterion.</td>
<td>-2.054</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>0.194</td>
<td>Schwarz criterion</td>
<td>-1.790</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>42.966</td>
<td>Hannan-Quinn criter</td>
<td>-1.962</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>8.514</td>
<td>Durbin-Watson stat</td>
<td>1.511</td>
<td></td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Compilation from e-views 9 (2020)
Regression Result

** Significant at 5%

*Significant at 1%

Analysis of regression results for the three models and the interpretation was based on

i. Economic criteria

ii. Statistical criteria

iii. Econometric criteria

Discussion of Result

Table 6: Evaluation based on economic criteria

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>EXPECTED SIGN</th>
<th>OBTAINED SIGN</th>
<th>CONCLUSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXR</td>
<td>+</td>
<td>+</td>
<td>Conform</td>
</tr>
<tr>
<td>PLC</td>
<td>+</td>
<td>-</td>
<td>Does not conform</td>
</tr>
<tr>
<td>TOP</td>
<td>+</td>
<td>+</td>
<td>Conform</td>
</tr>
</tbody>
</table>

In the model, the intercept term of -1.682 implies that the mean value of the real GDP growth for the period would be put at -1.682 when all the variables determining RGDP are also held constant. In the model however, the positive coefficient of 0.05 for IMPT means that an increase in importation into Nigeria, will increase economic growth by about 5%. This implies that importation for Nigeria is an influence of growth in her real GDP. This however may have resulted due to the import substitution policies of the federal government in tackling shortages of important commodities in the country for the betterment of the economy. For trade openness, the TOP coefficient of 0.185 implies that a unit increase in trade openness across the country will further increase growth in the economy by a rate of about 19%. By implication, the policy of trade openness has shown to be a positive growth determinant in Nigeria’s economy. This further implies that as Nigeria continues to engage more in international trading with little or no barriers to trade, her economy will be better for it. The export trade coefficient of 0.017 means that an increase in export will increase economic growth by a rate of about 2%. This is in conformity with several trade theories (Absolute cost advantage, Hecksher Ohlin theory, Comparative cost advantage, etc) which stipulate that export influences economic growth positively. In the same vein, a unit change in the transactions across EXR payments will change increase growth by about 45% given the coefficient of 0.450. Nigeria as an import dependent economy, has most of its import bill and international trade transactions settled in dollars. This practice has heavily impacted the foreign currency earnings and reserve of the country positively thereby translating into economic growth for Nigeria. However, this impact is not significant on growth in Nigerian economy. Lastly, with the dummy policy change variable (PLC) having a negative and significant coefficient of -0.0272, it implies that the various trade policies change in Nigeria has not shown to help Nigeria’s economy greatly. From the result shown in table 4, a unit change in trade policy, Nigeria’s economy will significantly contrast by about 3% (all other things being equal).

Evaluation Based on Statistical criteria Coefficient of Determination:

The R² (R-Squared) measures the overall goodness of fit of the entire regression, for the result obtained, it shows the value of 0.587 (approximately 59%) for the model. This indicates that the independent variables accounts for about 59% of the variations in the dependent variable – real GDP,
whereas the remaining variations are accounted for by variables outside of the model but taken care of by the error term. The implication of the findings is that LRGDP is strongly determined by trade and that any other factors outside of the model are negligible and considered not significant.

The Student’s T-test: The test is carried out, to check for the individual significance of the variables. Statistically, the t-statistics of the variables under consideration is interpreted based on the following statement of hypothesis.

H0: The individual parameters are not significant.
H1: The individual parameters are significant

**Decision rule**

If t-prob< 0.05 at 5% level of significance, we reject the null hypothesis \( \{H0\} \) and accept the alternative hypothesis \( \{H1\} \), and if otherwise, we accept the null hypothesis \( \{H0\} \) and reject the alternative hypothesis \( \{H1\} \). Level of significance = at 5% = 0.05 the t-test is summarized in the table

<table>
<thead>
<tr>
<th>Variables</th>
<th>{t-prob}</th>
<th>Critical t- prob value at 5% level of significance</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(XPT)</td>
<td>0.163</td>
<td>0.05</td>
<td>Not significant</td>
</tr>
<tr>
<td>D(EXR)</td>
<td>0.070</td>
<td>0.05</td>
<td>Not significant</td>
</tr>
<tr>
<td>D(PLC)</td>
<td>0.030</td>
<td>0.05</td>
<td>Significant</td>
</tr>
</tbody>
</table>

The t-statistics is used to test for individual significance of the estimated parameters \( \{\beta_1, \beta_2, \beta_3\} \). This further implies that imports, exports, trade openness and exchange rates do not have significant impact on economic growth in Nigeria. This is revealing especially as it relates to the import dependent nature of the Nigerian Economy. However, the various trade policies of the federal government of Nigeria have helped the country’s GDP with respect to the growth of her economy.

**F-Statistics:**

The F-statistics was used to test for simultaneous or overall significance of all the estimated parameters. The hypothesis is stated;

H0: \( \beta_1 = \beta_2 = \beta_3 = 0 \)
H1: \( \beta_1 \neq \beta_2 \neq \beta_3 \neq 0 \)

Level of significance: \( \alpha \) at 5%

**Decision Rule:**

If the f-probability is less than the 0.05 at 5% level of significance, we reject the null hypothesis \( \{H0\} \) that the overall estimate is not significant and conclude that the overall estimate is statistically significant; if otherwise, we accept the null hypothesis. From the results, the F-prob = 0.000042. This is less than the critical value (0.05) at 5% level of significance. Hence, we reject the null hypothesis \( \{H0\} \) and accept the alternative hypothesis that there is a joint significance of the whole variables. This further goes to tell that the models are robust and can be used to capture the impact of trade on economic growth of Nigeria. Evaluation Based on Econometric Criteria.

Test for Autocorrelation: This sub section shall treat only the serial correlation test given that test for
stationarity and co-integration as stated in the methodology section of this study has been carried out in the pre-mortem analysis. To accomplish the aim of testing for autocorrelation, we shall employ the Durbin-Watson test. Using the rule of thumb, we shall compare the DW statistics with an approximation of two (2) to accept or reject the hypothesis of presence or absence of autocorrelation. The Durbin-Watson stat. of 1.510602 for model one indicates evidence of no autocorrelation. Evaluation of Research Hypotheses After a careful analysis of the various econometric tests employed in the study and based on our results, we now proceed to validate the hypothesis of this study.

**Hypothesis One:**

**H₀**: Exchange rate does not significantly influence the economic growth of Nigeria  
**H₁**: Exchange rate has significantly influence the economic growth of Nigeria.

Further findings from our OLS result in table 4, indicates that the variable representing exchange rate (EXR) does not have significant impact on Real Gross Domestic Product (RGDP) in Nigeria. Hence, we accept the null hypothesis and reject the alternative hypothesis indicating that Exchange rate does not significantly influence the economic growth of Nigeria. This finding is in alignment with the postulations of Akpansung (2013) who held that the main thesis of the monetary approach to exchange rate is that a country’s exchange rate dynamics is essentially a monetary phenomenon, and that any observed disequilibrium in the balance of payments can be eliminated through an adroit manipulation of monetary variables especially domestic credit, under controlled exchange rate, absence of sterilization by the monetary authorities, and stable demand for money function. Therefore, the economic performance of any country should be neutral to the exchange rate mechanism in the country.

**Hypothesis Two:**

**H₀**: Trade policy changes do not significantly influence the economic growth of Nigeria  
**H₁**: Trade policy changes have significantly influenced the economic growth of Nigeria

In line with the findings from our OLS result in table 4, the variable representing trade policy changes (PLC) have significant impact on Real Gross Domestic Product (RGDP) in Nigeria. Hence, we reject the null hypothesis and accept the alternative hypothesis indicating that trade policy have significantly influenced the economic growth of Nigeria. This finding is in alignment with the postulations of Yohanna, Irfan and Huseyin (2019) who held that Nigeria will sustainable grow faster with policies aiming at improving external balance of payments or reducing the import components of demands, increasing export share to products with high elasticity of demand as well as keeping budget, deficit within the universally acceptable limits.

**Hypothesis Three:**

**H₀**: Trade liberalization does not significantly influence Nigeria economic growth  
**H₁**: Trade liberalization has significantly influence Nigeria economic growth

In line with the findings from our OLS result in table 4, the variable representing trade liberalization (TOP) does not have significant impact on Real Gross Domestic Product (RGDP) in Nigeria. Hence, we accept the null hypothesis and reject the alternative hypothesis indicating that trade liberalization does not significantly influence the economic growth of Nigeria. This finding is in alignment with the views of Oluwaleye (2014) who held that trade liberalization policy has not had a positive impact on Nigeria’s economic growth and development.
Summary of Findings

The study is on the effects of international trade on Nigeria’s economic growth from (1981-2020). The OLS multiple regression model was used to test the impact of the subject of our interest using three models. However, before applying the regression analysis, we stated the stationary of the various variables using the Augmented Dickey Fuller test. The summary of the findings are itemized below:

All the variables were stationary at first difference. In addition the Johansen co-integration test was used to determine the presence or otherwise of a co-integrating vector in the variables. The trace statistics indicated no co-integrating equations at 5 per cent level of significance likewise the maximum eigen test, pointing to the fact that the variables do not have long run relationships in the selected model. More so, from our estimated results; trade openness has a positive and insignificant impact on economic growth in Nigeria. The result further indicated that a unit increase in trade openness also increase in economic growth of Nigeria. Import trade and exchange rates also has a positive relationships with economic growth in Nigeria However, their impact on growth has been minimal and insignificant over the years. The study also revealed that export trade in the country has had negative and insignificant relationship with economic growth. However, the several trade policies in Nigeria have been seen to retard growth in economic prosperity of Nigeria’s economy since the impact is negative and significant on LRGDP growth. Further findings revealed that international trade does not have long run relationship with economic growth in Nigeria. The strength of the model as measured by the R² showed that the variations in economic growth is determined up to 59 per cent whereas the remaining variations are determined by the Factors outside of the model.

Conclusion

International trade has been observed to be a good tool in influencing economic growth of Nigeria, especially in relation to the various trade policies in the country over the years. In conclusion, findings from the study indicate that a shift towards free trade policy will help grow the economy and emancipate Nigeria from the economic recession in which the country found herself. The research has revealed that international trade would enhance Nigeria’s economic growth through the effect of some variables associated with external trade. This is so because trade openness which is expected to influence economic growth both in the long run and short run have been seen to possess only short run relationship on economic growth in Nigeria. This is worrisome owing to the fact that since trade liberalization is not significant on Nigeria’s economic growth despite all the efforts of the present and past governments, there is now need to suspect the pattern of trade between Nigeria and her trading partners. Conclusively, trade has no significant impact on economic growth in Nigeria.

Recommendations

In the wake of the above findings, the following were recommended:

1. Following the significant nature of trade policies in Nigeria’s economic growth, there is great need for the federal government to diversify her trade pattern. This can be done by placing emphasis not only on the petroleum sector (which has shaped the trade policy of Nigeria), but on other non-oil sectors so as to really reap the full benefits of trade in the country.

2. In line with the findings, since Nigeria’s naira exchange rate is usually determined by the availability and utilization of the US dollar, it is however recommended also that the federal government should maintain trade ties with several other countries like China, Taiwan, Japan, and other buoyant Asian economies, this will help to deemphasize on the dollarization of the Nigeria economy and help reduce the high demand for dollar for the betterment of naira’s value.
3. The co-integrated behavior of our explanatory variables suggests that in the short-run, movement in trade liberalisation could be used to raise the GDP of Nigerian economy. For this reason, efforts must be made to ensure that there is efficiency in all areas that have something to do with the liberalising trade so that full benefits will be reaped on the economy in the short run.

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Consortium (AERC), Nairobi, Kenya.


