Analyzing the Influence of Key Macroeconomic Variables on Trade Openness

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ABSTRACT

This study is set to examine the effect of selected microeconomic variables on trade openness from 1986 to 2019 in Nigeria. The research design adopted is expost-facto and nature of data is Secondary date, purely quantitative. Data is time series data covering a period of 33years. While the variables thought that has direct effect on selected macroeconomic variables for the study are Exchange rate, Inflation rate, External debt and Economic growth. Auto Regressive Distributed Lag Model (ARDL) was used as method of estimation. At the end of the estimation it was found that exchange rate, inflation rate and Economic Growth significantly affected trade openness in Nigeria over the sample period while External debt did not have significant effect on trade openness in Nigeria over the sample period. Specifically, trade openness was found to be a function of exchange rate, economic growth and inflation rate; while external debt shared no significant relationship with openness within the studied period. Since economic growth can positively drive openness, it implies that the country's products seem to enjoy foreign appeal and as such production to satisfy domestic and foreign demand can significantly catalyse the growth of the Nigerian economy. Increased investment in production of in-demand goods and services is recommended as a policy for government.

1. Introduction

International trade is known to influence the economy of a nation and a key component of globalization (Amin, 2011). Underdeveloped and developing countries need technical expertise, innovation in capital goods, capital flows, technological transfers and other basic raw materials to facilitate the production of goods and services, which in most cases is achievable through international trade. Thus, International trade helps to tackle problems of high unemployment and increasing poverty levels; trigger commerce, industry and multicultural tastes and lifestyles and as well promote world peace and integration. Emekekwue (2016) argues that when international trade is practiced properly, it opens up opportunities of global markets to the entrepreneurs of the developing nations, makes latest technology readily available to the businesses operating in these countries; hence increasing the level of competition both in the domestic and global fronts.

Samuelson and Nordhaus (2010) stress the various significance of international trade. First, it expands trading opportunities as it gives room for countries to enjoy different products produced around the world. Second, it regulates the flow of people, goods and finance across borders hence building up foreign exchange; and third, it encourages international finance and ensures a smooth flow of the exchange of dollars, pounds, yen, etc.

Trade liberalization policy was first introduced as part of Nigeria, Economic Recovery Program (ERP) called the Structural Adjustment Program (SAP) in 1986. The objective was to increase the free flow of goods and services amongst its trading partners. With the introduction of Structural Adjustment Program (SAP) in 1986, Nigerian's trade regime policies shifted towards more open, market-oriented and outward-oriented policies (Idun & Aboagye,2014; Sakyi, Villaverde & Maza, 2015). With the adoption of trade liberalization policies, it was believed that the country would derive the benefits already outlined above, which would work together to ensure macroeconomic stability and sustained economic growth (Sakyi, 2015). The economic impact of trade openness, however, remains persistent in most policy debates in Nigeria. Fundamental to these policy debates is the issue of macroeconomic growth on the trade openness. Openness increases an economy's susceptibility to external shocks and can lead to higher trade flows and economic growth. Therefore, the relationship between trade openness and the economy should not be limited to just economic growth, but also economic growth volatility as well as macroeconomic performance (Siddique &Igbal, 2005).

Besides, some economic experts further argue that one of the most important benefits associated with trade openness is the achievement of a faster and less volatile process of economic growth and development (Winters, 2004). For developing countries to catch up with the more advanced ones, a higher and more sustained economic growth is required in the former (Mobarak, 2005). This implies that these countries require a huge amount of resources, which, to a certain extent, have to be acquired from advanced economies. The need for developing countries to get these resources leads to their over reliance on foreign aid, grants, and loans. Nonetheless, the quantum, quality, and timing of overseas aid, grants, and loans are often not only dependent upon economic conditions of developing countries but also on conditions rich countries impose on them, in particular, on the high servicing charges and repayment obligations such aid, grants, and loans carry with them. Here trade arises as an alternative to enable these countries to obtain the needed resources. Arif and Ahmeed (2012) believe that trade openness has been considered as one of the main policies expected to allow developing countries alter both the pace, pattern, and structure of their participation in the international market scene, thereby overcoming balance-of-payments problems, accelerate technical progress, hence promoting economic growth and development. In sum, it is considered that openness to trade helps to improve economic performance by increasing competition and by giving domestic firms access to the best foreign technology, which is very helpful to raise domestic productivity, and to better Finance synergy.

Although trade openness has become an important policy variable for developing countries over the last few decades, its impact on microeconomic variables has recently received a great deal of attention from academic researchers and policy makers alike, this has become necessary as many developing countries continue to embark

on the liberalization of their trading system, signing bilateral, regional, and multilateral trade agreements with other countries all over the world (Kalmamaui, 2013).

Statement of the Problem

There is a dearth of literature on responsiveness of economic growth to trade openness especially in a developing economy. Understanding the relationship between trade openness and economic growth can create insight into how internal issues can shape the international especially in emerging economies like Nigeria. None of these to the best of our knowledge has focused on trade openness and economic growth. It is against this backdrop that the study tries to fill the gap in literature by carrying out a study on responsiveness of economic growth to trade openness in Nigeria. Until recently, many literatures have focused mainly on the impact of trade liberalization on macroeconomic variables, with others dwelling on the impact of relationship of trade openness with macroeconomic variables. Some authors worked on the short and long-run relationship of trade openness and other indicators of financial liberalizations on macroeconomic variables, while few scholars established a unidirectional or bidirectional relationship existing between trade openness and GDP. Indeed, these studies have analyzed the channels through which export, import and other financial development policies may help to increase, for example, the saving rate or the average productivity of capital and in exportation or importation statistics. Nigeria is presently going through a cycle of change in almost all sector of the economy, including the external sector. Of recent, there have been emergence of several literature on the topical issue that trade openness has impact on output growth in Nigeria. Some believe there is a positive correlation between trade openness and economic growth; and the implication being that government should reduce or remove trade barriers. The central point of this study is to recognize the short comings and benefits of this argument as well as check the impact of external debt on the level of trade openness in Nigeria holding the existence of various internal and external shocks constant.

Objectives of the Study

The broad objective of this study was to measure the effect of selected macroeconomic variables on trade openness in Nigeria, 1986 – 2019. The specific objectives of the study are to;

1.   Examine the effect of Exchange rate on trade openness in Nigeria.

2.   Evaluate the degree of responsiveness of Inflation rate to trade openness in Nigeria.

3.   Determine the effect of External debt on trade openness in Nigeria.

4.   Measure the effect of economic growth on trade openness in Nigeria.

Research Questions

The following research questions shall be answered in the course of this study

1.   To what extent did Exchange rate affect trade openness in Nigeria?

2.   To what degree did inflation rate respond to trade openness in Nigeria?

3.   To what extent did External Debt affect trade openness in Nigeria?

4.   To what extent did Economic growth affect trade openness in Nigeria?

1.4   Statement of Research Hypotheses

Ho1 Exchange rate did not affect trade openness in Nigeria.

Ho2 Inflation rate did not affect trade openness in Nigeria.

Ho3 External debt did not affect trade openness in Nigeria.

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Ho4 Economic growth did not affect trade openness in Nigeria.

Significance of the Study

The result of this study "Effect of selected Macroeconomic Variables on trade openness in Nigeria will be of benefit to the following groups and institutions,

Government and Business Organizations:

The study will assist in providing government policy makers with the necessary information needed at formulating economic policies that will enhance the current drive for sustainable financial sector development in Nigeria through coordinated foreign direct investment strategy. Some business organization can equally mop up funds in the capital market through the foreign direct investment when there is reasonable level of trade openness.

The Researchers:

Researchers and Students who wish to carry out a related study will find this study useful since it will add to the existing body of knowledge on the subject area. The findings of the work will serve as reference materials for further research activities on the subject matter or related areas in the future, thereby adding to the literature on the impact of financial liberalization on capital market performance indicators and other macroeconomic indicators. The study is important to the Researcher in partial fulfillment of the requirements for the award of Masters of Science Degree in Banking and Finance.

Investors and Shareholders:

These are direct participants and actors in the international market who monitor their investments regularly in order to ascertain when to sell or buy with a view to earning profit. Trade openness also includes high net-worth individuals, companies, organizations and foreign investors with huge capital base and large Foreign Direct Investments. Extent of trade openness can assist these investors to expand their business by allowing foreign investors to buy their shares for investment. The capital market will be acting as an intermediating unit between the surpluses to the deficit unit when a country is enjoying high level trade openness.

Scope of the Study

The study will be based on the effect of selected macroeconomic variables on trade openness in Nigeria. The Study covers the period of 1986 – 2019. The sample range is chosen on the basis of availability of data and to ensure robustness of the analyses and findings. The choice of 1986 was made because it was the first base year to trade liberalization era called Structural Adjustment Program. Hence, SAP was known for its impact in trade liberalization Driven. The choice of 2019 was made so that the research will be more current.

Limitations of the Study

The study seeks to examine the effect of selected macroeconomic variables on trade openness in Nigeria. This study is limited by the following factors;

Paucity of materials: Materials for the study were not adequate and consistent thereby resulting to extra effort by the researcher to validate the date.

Inaccessibility of Data: Difficulty in accessing data for the study was yet another limitation. This had its own toll on the research work because it limited the data that was used for the study.

Financial Constraint: Lack of adequate funds on the part of the researcher constituted another problem. However, amidst all these enumerated constraints faced by the researcher, effort was adequately made by the researcher to ensure the reliability of the result by subjecting the research to many advance econometric tests to fish out any possible spurious result among others.

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2. Review of Related Literature

2.1   Conceptual Review

2.1.1   Trade Openness

Trade openness is the degree to which an economy opens up to the outside world (Wikipedia). Baldwin (2002) sees trade openness as a measure of international competitiveness of a country in the global market represented by international trade. In calculating trade openness, we use the addition of imports and exports over GDP. Increased openness facilitates greater integration into global markets. Trade openness is interpreted to include import, export taxes, exchange-rate policies, and domestic taxes and subsides, competition and other regulatory policies, education policies, the nature of the legal system, the form of government, and the general nature of institution and culture. (Baldwin, 2002).

Yanikkaya, (2003) in his study referred trade openness as the outward or inward orientation of a given country's economy. Outward orientation refers to economies that take significant advantage of the opportunities to trade with other countries, while Inward orientation refers to economies that overlook taking or are unable to take advantage of the opportunities to trade with other countries.

Trade has long been identified as a veritable way through which the quest of nations for improved well-being of their citizens could be achieved. Adam Smith recommended division of labour and specialization, and the pursuit of foreign trade as a way of increasing the wealth of nations (Obadan, 2008). He further states that division of labour is limited by the size of the domestic market (Bakare, 2011). In recent years, openness has played an increasingly important role in the growth. The Adam Smith and Ricardo traditional models explained that openness would promote specialization. Thus, countries specialize in the production of goods and services that they have advantages and export such goods and services. On the other hand, countries without such advantages will import from those countries and specialize in other types of goods and services. As a result, resources are more optimally allocated. In the early and mid-1980s Nigeria made important changes in trade policy, aimed at reducing trade barriers and fostering export activities. This was in striking contrast to trade policies followed in the 1960s and 1970s, when they followed the policy of import substitution which, given its failure to promote sustainable growth and employment, fell prey to growing criticism in the 1980s.

One of the Nigerian governments' main reasons for pursuing this trade-oriented policy was to foster growth and productivity (Tamayo,2004). These changes in trade policies included a tariff reform, important reductions in import restrictions, export promotion laws, the modernization of trade institutions, and the simplification of trade procedures. These aspects of increased trade liberalization are called trade openness –a tariff reform designed to lower tariffs, reduce their dispersion, and simplify their application– brought about changes in import patterns that had significant effect on the manufacturing industry of the country. Imports of capital goods for industry and agriculture, consumption, goods and manufacturing capacity tends to benefit with the relaxation of trade tariff. These trade liberalization policies set up in Nigeria were expected to have a positive effect on productivity.

However, trade liberalization as well as openness of economy is seen as driving force to accelerate economic growth. Of course, openness of borders for trade leads to reap the benefits of expanded demand for exports. For this reason, most of the countries, particularly the developing ones, introduced reforms to open up the foreign sector and also reformed the domestic economy too. The international financial institutions such as WTO, World Bank and IMF also encouraged trade liberalization and openness. In addition to above, one of the main objectives behind the openness and liberalization has been to promote efficiency, competition and discourage distortions. The more barriers on trade we have, the lesser will be exports expansions. For a country like Nigeria, which introduced rapid economic reforms and ended up with expanding imports and meager impact on its exports expansion, the result is trade balance worsened. Thus, trade openness might have beneficial, as well as harmful, effects for a country. If trade openness leads towards higher exports and more efficient allocation of resources, it is beneficial and could potentially accelerate growth by ensuring needed foreign exchange and attracting foreign investment. Nigeria has

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not generated efficiency and competition at domestic level and relied heavily on imports which could turn out as worsening economic conditions.

Chakraverty and Singh (1988) argue that openness is a multidimensional concept, apart from trade, a country can be open or not so open with respect to financial and capital market, in relation to technology, science, culture, education, inward and outward migration. Moreover, a country can choose to be open in some direction (say trade) but not so open in other such as foreign Direct Investment(FDI).Their analysis suggests that there is no unique optimum for or degree of openness which holds true for all countries at all time. Therefore, in real sense of it, no country is open and no country is closed. There are several measures of trade openness as listed by Rodriquez and Rodrik (2001), Trade Dependency Ratio, the growth rate of exports over the specified period. Growth Rate of Export: The growth rate of exports over the specified period. Tariff Averages: A simple or trade weighted average of tariff level include Collected Tariff Ratio: The ratio of tariff revenues to import. Coverage of Quantitative Restrictions: The percentage of goods covered by quantitative restrictions. Black Market Premium: The black-market premium for foreign exchange, a proxy for the overall degree of external sector distortions. Trade Bias index: The extent to which policy increase the ratio of importable good price relative to exportable goods prices compared to the same ratio in world market. The make-up of trade openness includes export, import and economic growth.

Exports

Mohamed (2008) sees exportation as function of international trade whereby goods produced in one country are shipped to another country for future use, sale, or trade. The sales of such goods add to the nations GDP. The process of sales of goods where the goods moves from one based country of residence to oversee and are sold to finance import is called exportation. Amadeo (2018) sees Exports as goods and services produced in one country and purchased by residents of another country. Goods that are produces locally and sold internationally are called exports goods. Exportation creates a very laudable effect because it helps the country to create global competitive advantage, this is because they gain expertise in producing the goods and also gain knowledge about how to sell to the foreign market. Government encourages exports because it increases jobs, brings in higher wages and raises the standard of living of a country.

Imports

Amadeo (2018) defines imports as foreign goods and services bought by residents of a country that are produced in a foreign country. Resident of a country includes citizens, businesses and the government. It does not matter what the imports are or how they are sent, they can be shipped, sent by e-mail or even plane. If they are produced in a foreign country and sold to domestic residents, they are called imports. Onayemi (2013) opines that if a country imports are more than exports, it run a trade deficit in their balance of payment. These countries will prefer to import less and export more so as to encourage the growth of their reserve. In other words, a country would prefer to be a supplier to other countries. Their leader encourages export drivers' economics. One of the advantages of pursing an import driven economy is that it boasts economic output as measured by the GDP, creates job and increases wages, it equally raises the standard of living of residents. Besides, import makes a country dependent and also decreases their foreign currency reserve. It is from these reserves that they pay for their importation. Hence, it affects currency value, inflation and interest rate. One of the ways of increasing export is by practicing trade protection which is done by insulating companies from global competition, Government also raises tariff (taxes) on imports making them more expensive. Other countries react by hurting global trade in the long run. Therefore, importation is the process of bringing goods into a country for consumption.

2.1.2 Macroeconomic Variables

Akani and Yellowe (2016) define Microeconomic variables as those macroeconomic factors which not only influences the economic condition of a country but also the working of the financial industry in the country. Oleka and Ezema

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(2017) opined that all the economic factors at the national level influencing the economic condition of a country can be stated as the macroeconomic aggregates. Kalyanaraman and Al –Tuwanjiri (2014) identifies the following as proxies of macroeconomic aggregates: savings, investment, economic growth, capital formation, capital output ratio, population growth, growth of foreign trade called trade openness, balance of payment, external debt, external reserve, employment level, capital flows, per capita income as an indicator of economic development etc.

2.1.3   Exchange Rate

An exchange rate is the rate at which one currency will be exchanged for another. Exchange rate is defined as the value of one currency for the purpose of conversion to another. The Exchange rate of the dollar against the Naira. There are two types of exchange rate, namely Real exchange rate and Nominal exchange rate. Nominal exchange rate is defined as the number of the domestic currency that can purchase a unit of a given foreign currency. Nominal exchange rate is the representation of one currency in terms of the other. Whereas, the Real exchange rate is the weighted average of a country's currency in relation to an index of other major currencies. It is also the ratio of foreign prices to domestic prices, measured in the same currency. Ayodele (2009) opined that Real Exchange Rate (RER) is the rate of traded weighted average of real exchange rate between two countries and these trading partners. The weight reflects the proportion of imports over exports. This type of exchange rate is used by CBN as official exchange rate. Nominal Exchange Rate (NER); this is the weighted average of nominal exchange rate between one country and its partners. For policy makers, exchange rate policies in practice require the adjustment of the nominal rate to achieve real effective exchange rate equilibrium. While this possible in the short run, it is debatable if the long run equilibrium value to the real exchange rate can be properly targeted govern the fact that the long-run equilibrium.

2.1.4   Inflation Rate

Inflation is defined as the persistent and appreciable increase in the price level of goods and services over a prolonged period of time. Inflation rate is the rate at which the price of goods increases over prolonged period of time, resulting in a fall in the purchasing value of money. According to Economic Times (2017) inflation is the percentage change in the value of the wholesale price index no a year basis. It effectively measures the change in the prices of a basket of goods and service in a year. Inflation accurse cue to an imbalance between demand and supply of money, changes in production and district on cost or increase in taxes on products when economy will experience inflation. Hence, when the price level of goods and service rises, the value of currency reduces means now that each unit of currency buys fewer goods and services.

Orji (2016) advocated that the impact of inflation was felt mainly by the consumers. High prices of day to day goods make it difficult for consumers to afford even the basic commodities in life. This leaves them with no choice but go ask for high incomes. Hence the government tries to keep inflation under control by using the foreign resume. Constancy to the negative effect of inflation is good for the economy. If the rate of inflation of 2%, it encourages people to but more and borrow more the level of interest rate also remain low. Therefore, government strives to achieve a limited level of inflation. Inflation can mean either an increase on the money supply or an increase in the price level when we hear about inflation, we are hearing about a rise in price compared to some benchmark. If the money supply has been increased, these usually manifest itself in higher price level. However, inflation is measure using consumer price index (CPI) hence, the relationship between inflation and economic output plays on self-reforming feedback lops. Decrease in GDP causes inflation which begets hyperinflation thereby making people to spend more.

2.1.5   External Debt

External loan is the total debt a country owes to foreign creditors; its complement is internal debt which is owed to domestic lenders. It refers to money borrowed from a source outside a country, External debt has to be paid back in

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the currency in which it is borrowed. It is also known as foreign debt. The issue of External borrowing as a one of the government policies to promote economic growth births serious argument between economists and policy makers. The main reason is if external borrowing brings about economic growth in debtor countries. The result of the argument was in two main perspectives for explaining the relationship between external debt and economic growth. The Endogenous growth theory and Neoclassical model on the other hand, advocate that there is a positive relationship between external debt and economic growth. They emphasized that debt is one of the sources of financing capital formation by this means impacts positively on investment, it could promote economic growth. On the other hand, other scholars contradicted this view by mentioning external debt as one of the factors hampering economic growth Krugman (1988). While Kalonji (2003) sees heavy external debt as the cause of poverty in the debtors' country and Chongo (2013) opined that public debt is a double edge sword.Ali and Mshelia (2007) argued that in Nigeria, external borrowing is often considered the best way out of embarrassing economic situations. External debt is found to be a driver of economic growth if properly managed, its servicing rather than repayment is an inhibiting factor to economic growth.

2.1.6   Economic Growth

Ndebbio (2004) sees economic growth as the increase in physical production in all the three sectors of the economy: agricultural, production industry and various services were referred as economic growth. An increase in economic growth need not bring an increase in economic development. This is because; the increased production may be consumed by the increased population. Hence, Okonkwo (2011) increase in production experienced in all the three sectors should be sufficient not only to cater to the needs of population but also provide some surplus for the economy to grow. The financial services have to play a supportive role in channeling the savings and investment so that growth can be achieved.

Bakang (2015) defines economic growth as the increase in the capacity of the economy to produce goods and services from one period of time to another. This exists when the productive capacity of a country increase. Based on the fact that economic growth measures total production for a country, it therefore connotes the market value of all the final goods and services including personal consumption, government purchases, and private inventories paid in construction costs and their foreign trade balance.

Aghion and Howith (2009) identify two main measures which examines the level of economic growth. The first is the Gross national product (GNP) which measures the total value of goods and services produced by all nationals within and outside the country over a given period of time; the second is called the Gross Domestic Product which is the veritable indicator of economic output and growth of a country. The Gross Domestic Product (GDP) is expected to measure the value of production of these activities that existed within the boundary of the national accounting system. GDP also measure economic growth in monetary terms and look at no other aspect of development (Patimi, 2016). It can be expressed in a nominal term which relates to inflation or real terms adjusted inflation. Short term GDP is the annual percentage change in real national output. Long term GDP is increase in trend or potential GDP. In order to compare countries of different production size, GDP per capita is generally employ (Dimitris & Efthymious, 2003).

2.2   Theoretical Reviews

2.2.1   Comparative Advantage Trade Theory

This is a trade theory propounded by Ricardo in 1958. Traditional trade theory predicts growth gains from openness at the country level through specialization, investment in innovation, productivity improvement, or enhanced resource allocation. The role of trade policy in economic development has been a key matter of debate in the development literature. Ricardo's theory suggests that openness abroad allows a country to reorient its scarce resources to more efficient sectors. The neoclassical growth models drawn from Solow's in 1957 model consider technological change as exogenous and suggest that, consequently, trade policies do not impact economic growth.

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However, new economic growth theories assume that technological change is an endogenous variable and that trade policies can be combined with those on international trade.

2.2.2   Mercantile Theory of Absolute Advantage

This is a theory propounded by Adam smith in 1776. Mercantilist theory stated that national wealth should be increased through trade. Adam Smith proposed the absolute advantage theory in 1776. He favored the opinion of free trade as more beneficial instrument for countries. The theory advocated that specialization of resources for producing a specific good could give more output, from which other nations can be benefited by free trade. A classical trade theory, presented by David Ricardo, was based on comparative advantage and relative prices. The objective of Ricardo was to describe the benefits of trade among states and the significance of trade liberalization policy. Labour was the only variable which was considered as an immovable factor according to the Ricardian Model. The major element that was discussed in Ricardo's Model was the advantage of producing a good with specialized factor rather than consuming it for any other good for which it was not specified. This theory describes the scarcity of resources that leads to the trade-off among the manufacturing of commodities. Trade- off is related to the opportunity cost.

2.2.3   Endogenous Growth Theory

This theory propounded by Paul Roomer in 1980 is called the new growth theory. It was developed in response to criticism of the neoclassical growth model. The endogenous growth theory holds that trade policy measures such as trade openness can have an impact on the long run growth rate of an economy. For example, a subsidy on research and development or education increases the growth rate in some endogenous growth models by increasing the incentive to innovate. The main implication of recent growth theory is that policies which embrace openness, competition, change and innovation will promote growth. Conversely, policies which have the effect of restricting or slowing change in trade by projecting or favoring particular industries or firms are likely over time to slow growth to the disadvantage of the community. The theory of endogenous growth assumes that technology is developed internally. As an aftermath of openness, developing countries build their profit and productivity by utilizing new advances, consequently bringing about an expanded production (Jin, 2000). According to the endogenous growth theories, an increment in trade openness would positively improve technology and thus increase production. Additionally, trade openness may prompt an increment in development through a country information stock (Rivera-Batiz & Romer, 1991). For example, developing countries can promote their growth by transferring knowledge from rich countries. Countries that are more open are more exposed to the advancement on the planet (Grossman &Helpman,1995). A study by Levine and Renelt (1992) indicated that openness to trade would encourage foreign direct investment as a result of reduced tariffs, thus increasing long-term growth. In another previous study, Grossman and Helpman (1995) states that a reduction in tariffs would positively affect the resources allocated to R&D. In a microeconomic framework, exporting firms are more expert and technology oriented than non-exporting firms because exporting firms are more exposed to more intense competition as compared to those firms that focus only on the domestic market (López, 2005). Based on the various empirical reviews, this study adopted this growth theory because the level of trade openness determines economic growth. When trade openness is low, economic growth will be affected but when openness is high, growth rate will equally be high. Because trade openness theoretically improves economic growth, this study was anchored on Endogenous growth theory.

2.3   Empirical Review

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Anyanwaokoro and Kalu (2020) assessed the effects of exchange rate on the international trade in mono-product economy in Nigeria from 1986 to 2018. The study employed (ADF) Augmented Dickey Fuller, (VECM) Vector Error Correction Model and Co-integration tests. It was observed that the economy of Nigeria shared a long-run co-integrating relationship with the international trade variables under study. Again, if in Nigerian economy the researcher adjusts at 81% to the shocks and dynamics of the rate of exchange and the correlation as well as the causal relationship that exist among export and exchange rate and among the variables under study.

Duru, Okafor, Adikwu and Njoku (2020) examined the relationship between trade liberalization and economic growth in Nigeria from 1981 to 2018. The study adopted Auto Regressive Distributed Lag (ARDL) model, Bounds techniques to Co-integration. Findings revealed that trade liberalization do not promote economic growth in Nigeria. The results also showed unidirectional causality from real Gross Domestic Product to trade liberalization in Nigeria.

Babatunde and Oyelekan (2020) examined the effect of Trade openness on economic growth in Nigeria from 1981 to 2018. The methodology deployed is ordinary least square (OLS) and the result reveals that Trade openness has a positive effect on economic growth with an evidence of a long-run relationship. It also showed a priori in the case of exports and imports has negative positive signs respectively.

Nwadike, Ani, and Alamba (2020) examined the nature of trade openness and economic growth in Nigeria from 1970 to 2011. The study adopted ex-post facto research design, time series analyses, ADF unit root test, co-integration test and ordinary least squared (OLS) and the result obtained was used to test for hypotheses which revealed that trade openness has positive significant impact on Nigerian's economic growth, while gross domestic product responds to the shock of trade openness value as a proxy of total import and total export divided by the GDP as well as change in exchange rate (DEXR). There also exists long-run relationship between the variables used.

Ehikioya, Omankhanlen, Osuma and Inua(2020) examined the dynamic relationship between external debt and economic growth in 43 African countries from 2001 to 2018 using the Johansen Cointegration test and system Generalized Method of Moments (sysGMM) and result reveals evidence to support a long-run equilibrium relationship between external debt and economic growth in Africa. The findings showed that beyond a definite capacity, the short-run converges to equilibrium in the long-run and external debt would start to have a weaken impact on economic growth in Africa.

Aremo and Arambada (2020) examined the individual and joint effect of trade openness and financial openness on economic growth in sub-Saharan African (SSA) countries within the period 1980 to 2017. The study employed the dynamic panel analysis using the techniques of difference Generalized Method of Moments (GMM) and system GMM. The findings show that there is no evidence of simultaneous openness hypothesis in SSA economies.

Ajayi and Araoye (2019) studied the effect of trade openness on economic growth in Nigeria from 1970 to 2016. The study used Augmented Dickey-Fuller (ADF) and Phillip-Peron (PP) unit root test which discovered that all the series are not stationary at first difference in ADF. Cointegration test reveals that an equilibrium relationship exists between the variables, there is a long-run relationship between economic variables according to Cointegration test in line with Engel and Granger.

Yinusa and Olalekan (2019) investigated the relationship between the rate of exchange, trade balance and growth in Nigeria for the period 1960 to 2016 by using the asymmetric cointegration analysis the M-TAR (Momentum - Threshold Autoregressive) and the TAR (Threshold Autoregressive) models. The result revealed that for the TAR model, cointegration exists among the three variables (economic growth, balance of trade and real exchange rate), an asymmetric adjustment disequilibrium process also exists. The point estimates suggest that the adjustment speed is lower when the balance of trade is worsens. The asymmetric ECM suggests that trade balance, real exchange rate and growth respond to disequilibrium and that the coefficient of domestic income and exchange rate are negative and that of foreign income is positive and statistically significant.

Tyopev (2019) examined the impact of Trade openness and export expansion grants in Nigerian economy from 1986 to 2019. The study adopted a quantile regression exploring Coefficient covariance metrics, stability leverage plot and pairwise granger causality in the analysis. Findings show a positive relationship between trade openness and economic growth in the first and last quantile while the remaining quantile has negative effect on GDP growth rate of Nigeria were statistically insignificant. Also, the coefficients of export expansion grants (EEXG) has positive impact on GDP growth rate of Nigeria in all quantiles but statistically significant. Also, the result of pairwise granger causality showed strong bi-directional causality among trade openness and GDPR at 5% level of significance as well as uni-directional causality from GDPR to export expansion grants.

Elijah and Musa (2019) examined the dynamic effect of trade openness on Nigerian economic growth from 1980 to 2016 using the Error Correction Model (ECM). The short-run results revealed that trade openness hurt economic growth in Nigeria.

Moyo and Khobai (2018) examined the interaction between trade openness and economic growth for 11 Southern African Development Cooperation (SADC) countries of Botswana, Madagascar, Mauritius, Namibia, Swaziland, Zambia, Lesotho, Malawi, Mozambique, South Africa and Tanzania over the period of 1990 to 2016 using ARDL Bounds test method and Pooled Mean Group (PMG) model. The results showed that trade openness exerted a negative impact on economic growthin the long-run.

Yakubu and Akanegbu (2018) examined the impact of trade openness on economic growth in Nigeria from 1981 to 2017. The study adopted the ordinary least squares technique (OLS), the result on series data to estimate the impact of trade openness on the Gross Domestic Product (GDP). It was observed that the variables, Real Gross Domestic Product (RGDP), Degree of Trade Openness (DOP), FX and Per Capita Income (PCI) were positive and statistically significant at first different, and were all cointegrated and unidirectional causality was found from RGDP to DOP.

Duru and Ehidiamhen (2018) examined the impact of export diversification on economic growth in Nigeria from 1980 to 2016. The methodology employed in the study is the approach of ARDL bound test to cointegration and result revealed that export diversification has a positive and insignificant relationship with economic growth in Nigeria. Moreover, exports of goods and services and the growth rate of exports have positive and statistically significant effect on the country's economic growth, where trade openness has a negative and insignificant influence.

Mangir, Acet and Baoua (2017) used the Vector Error Correction Model (VECM) to examine the link between trade openness and economic growth in Niger from 1970 to 2015. The result shows that there is existence of a bidirectional relationship between trade openness and economic growth in Niger in the short-run.

Moyo, Nwabisa, and Halefang (2017) investigated the long-run nexus between trade openness and economic growth in Ghana and Nigeria using the ARDL model from 1980 to 2016. The result showed the existence of long-run relationship between the variables for both nations. The findings revealed that trade openness exerted a positive and significant effect on economic growth in Ghana, openness to trade has a negative and significant impact on economic growth in Nigeria.

Keho (2017) examined the effect of trade openness on economic growth in Cote d'Ivoire over the period 1965 and 2014 using the autoregressive distributed lag bounds test to co-integration the trade openness and economic growth. Result reveals that trade openness has a positive and significant effect on economic growth of Cote d'Ivoire over the period, also, there is a long run relationship existing between trade openness and economic growth in the country over the period. The study concludes that that trade openness drives economic growth. Hence, all trade policies that restrict trade openness should be avoided to encourage reasonable number of trade volume amongst nations of the world.

Calderon and Lui (2017) assessed the impact of trade liberalization on economic growth in Kenya over the period 1986 and 2016 using ARDL. Trade liberalization was represented by trade openness while GDP growth rate represents economic growth. Result from the estimations of base line reveals that trade liberalization impacted

positively and significantly to GDP growth in Kenya. Also, in the long run, economic growth is hampered than in the short run by rate of GDP per capita approximately 27 percent and transfer of resources from non-exportable and inefficient agriculturalsectors to the more efficient export sector will accelerate economic growth.

Morley (2017) examined the impact of inflation on trade policies in Venezuela from 1985-2016.Trade policies was proxied by trade openness, trade tariff and trade volume ratio of exportation to GDP. Ordinary least square regression was the adopted methodology. Result reveals that inflation negatively and significantly impacted on by trade policies. This study concludes that management of inflation will improve the trade policies of Venezuela. it was recommended that inflation if well managed will improves the level of importation in the country.

Kalu, E. U., Nwude, C. E. and Nwonye N. (2016) examined whether trade openness engineers economic growth in Nigeria with empirical evidence covering from 1991 to 2013. The study adopted Classical Linear Regression Model (CLRM) using Ordinary Least Square method to represent the principal method of estimation in combination of an array of other general and standard diagnostic tests. In the study R2 explains that 97.7% of variation in GDP in the model is explained by the regressors. Results showed that Export was found to be a positive and significant function of GDP while Import was positive and does not have significant function.

Mwngi (2016) studied the impact of trade openness on economic growth in Malaysia using ordinary least square from 1980-2014.Result reveals that trade openness proxied by the ratio of exports and imports to GDP positively and significantly impacted on the economic growth of Malaysian both in the short and long run. It was concluded adequate management of trade policies can improve the economic growth of the country under the study.

Ndebbio (2016) examined the relationship between economic growth and trade openness in Nigeria from 1981-2015 using correlation matrixes. Result from the analysis reveals that trade openness and economic growth has a positive and significant relationship with economic growth in Nigeria. It was concluded that adequate management of trade policies can improve the economic growth of Nigeria. Siddiki (2016) assessed the cause and effect relationship existing between trade openness and economic growth in Rwanda from 1996-2015 using granger causality estimation. Result reveals that trade openness had bidirectional causality with economic growth but importation and exportation had a unidirectional relationship existing among the variables under study.

Sakyi, Villarverde and Maza (2015) examined the relationship between trade openness and economic growth of a sample of 115 developing economies in Asia from 1970 to 2009 using panel data. Granger causality estimation was adopted in the analysis. Result showed that that there was bidirectional causality among some historical data of some countries, some have unidirectional relationship, while few showed no relationship between trade openness proxied by trade volume ratio of export and economic growth represented by GDP. The study concluded that trade openness caused economic growth usually on a unidirectional basis because 80 countries had unidirectional characteristics between trade openness and economic growth in the 115 countries sampled.

Raustava (2015) studied the impact of trade openness on economic growth of Croatia using VAR from 1975 to 2013. Result showed that there were block exogeneity between trade openness and economic growth in Croatia. Also, there was no individual exogeneity between the variables of interest.

Munozu (2014) examined the contribution of effective trade policies in the growth and development of the economy in Zimbabwe,1986-2012, using ordinary least square regression. Result reveals that trade policies in the country positively and significantly impacted on the economic growth of Zimbabwe under the scope of the study.

Okeke (2014) studied the impact of trade openness on economic growth in Nigeria from 1981-2013 using OLS regression and Johnson co-integration approach. Result found that trade openness has a positive and significantly impact on economic growth in Nigeria. An estimate from the variables reveals that there is a long run relationship called co-integration existing between trade openness and economic growth for the periods of the study in Nigeria. The study concludes that that trade openness drives economic growth. Hence, all trade policies and tariff that restrict

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trade openness should be avoided to encourage reasonable number of trade importation and exportation amongst nations of the world of trade.

Nowbutsing (2014) investigated the impact of trade openness on economic growth in Indian Ocean Rim Countries over the time period 1997 to 2011 using fully Modified Panel Ordinary Least Square. Result reveals that trade openness has a positive and significant impact on economic growth of Indian Ocean Rim Countries over the time period 1997 to 2011. Estimate from the variables revealed that there is a long run relationship existing between trade openness and economic growth for Indian Ocean Rim Countries over the time period 1997 to 2011. The study concludes that that trade openness drives economic growth. Hence, all trade policies and tariff that restrict trade openness should be avoided to encourage reasonable number of trade importation exportation nexus amongst nations of the world.

Khandu (2014) assessed the relationship between trade liberalization and economic growth in small developing economies. The study used a cross-country growth regression analysis under a fixed-effects model using dynamic panel data. Samples of 20 homogenous countries from different regions were selected for the analysis based on land size, population, economy, geography, and resource dependence. Given the complexity of constructing a trade openness index in the absence of adequate data, the study used the ratio of total trade (exports + imports) to real GDP as a proxy for trade liberalization, and GDP for economic growth. Result reveals that trade openness has a positive and significant relationship on economic growth of Samples of 20 homogenous countries from different regions were selected for the analysis based on land size, population, economy, geography, and resource dependence. The study concludes that that trade openness drives economic growth. Hence, all trade policies that restrict trade openness should be avoided to encourage reasonable number of trade volume amongst nations of the world so as to encourage more relationship for better trading partners.

Hamad (2014) analyzed the effect of trade liberalization on economic growth in Tanzania. The study adopted a simple linear regression model where real GDP was the dependent variable while trade openness was the independent variable. Annual time series data was used covering the period 1970-2010. This overall period was then subdivided into a closed economy period (1970-1985) and an open economy period (1986-2010). OLS technique was used to estimate the regression model twice, regarding the two sub-periods. The empirical findings indicated that trade openness had a positive and significant effect on economic growth in Tanzania. However, this effect was relatively greater during the closed economy compared to the open economy period.

Nduka, Chukwu, Ugbor and Nwakaire (2013) in their empirical study examined the causal link between trade openness on economic growth in Nigeria during the pre and post SAP periods of 1970Q1 to 1985Q4 and 1986to 2011 respectively. The study usingJohnson co-integration approach result found that there is the existence of a long-run equilibrium relationship between the variables. The results also revealed a unidirectionalcausality running from economic growth to trade openness devoid of feedback (growth-led trade) during the pre-SAP era.

Nsoki, (2013) assessed the causal relationship existing between economic growth and trade openness inNigeria for the period of 1986-2012 using granger causality estimation. Results reported a unidirectional causality ranging from economic growth to openness without a feedback in the pre-Structural Adjustment Programme period (growth-led trade), whereas there exists a bi-directional causality going from economic growth to openness with a feedback effect in the post SAP period (growth-led trade and trade-led growth respectively). In addition, the Granger causality test shows that there is a causal relationship between financial development and economic growth, but that financial development has a unidirectional causality ranging from economic growth to openness without a feedback.

Kwame (2013) investigated the impact of trade liberalization to economic growth in Ghana over the period 1986 and 2010 using ARDL. Trade liberalization was represented by trade openness while rate of GDP per capita represents economic growth. Result from the estimations of base line reveals that trade liberalization impacted positively and significantly to GDP growth in Ghana. Also, in the long run, economic growth is hampered than in the short run. Rate

of GDP per capita approximately 39 percent and transfer of resources from non-exportable and inefficient sectors to the more efficient export sector will accelerate economic growth.

Awojobi (2013) examined the impact of trade openness and other financial liberalization on the Greek economy. Using time series data covering the period 1960-2009, he estimates a vector error correction model (VECM) in order to analyze the long-run equilibrium features of proxies for openness and growth; and the relationship between financial development and economic growth using the Granger causality test. Results from the regression estimates find the error correction term (ECT) to be -0.20 for the sampled data. This suggests that there is long-run convergence among financial development, trade openness, and domestic output in Greece. This convergence is expected within an average of five cumulative years. In addition, the Granger causality test shows that there is a unidirectional causal relationship between financial development and economic growth, but that financial development has no causal impact on trade in the case of Greece, which is theoretically unacceptable.

Akilou (2013) investigated the linkages of trade openness and economic growth, 1980-2012. They focused on countries in West African Economic and Monetary Union (WAEMU) using granger causality methodology. Their results showed that economic growth did not cause trade openness in Côte d'Ivoire at the 10% level of significance but have a unidirectional relationship amongst other West African countries and economic union. The study concludes that that trade openness drives economic growth. Hence, all trade policies that restrict trade openness should be avoided to encourage reasonable number of trade volume amongst nations of the world so as to encourage more relationship for better trading partners.

Gries and Redlin (2012) examined the causal relationship between openness and growth for industrialized countries using general method of moments (GMM) estimation for 158 countries from 1970 to 2009, ganger causality evaluation. Result reveals that there is a positive causal relationship from openness to growth in the long term. Bidirectional relationship between openness to trade and growth is found mainly for industrialized countries only when the countries are classified according to income groups. However, in fewer developed countries, negative causality has been observed. These results are robust to controlling for country and time fixed effects as well as political institutions restricting free trade amongst countries.

Zulfiqar and Kausar (2012) examined the impact of trade liberalization and effective exchange rate on export growth for Pakistan, using Vector Error Correction Model (VECM). The study is based on annual time series data for the period 1981-2010 and the results suggest that, openness has a significant and positive impact on export growth in the long run. Real effective exchange rate and world GDP also have positive and significant impact on export but only if trade is more liberalized.

Saad (2012) examined the impact of trade policies on economic growth in Lebanon using vector error correction models (VECMs) and Granger causality in examining data from 1970 to 2011.Result reveals that Bidirectional relationship between openness to trade and growth is found mainly for Lebanon only when the countries are classified according to income groups. Result from the estimations of also reveals that trade liberalization impacted positively and significantly to GDP growth in Lebanon. Also, in the long run, economic growth is hampered than in the short run and their results for Lebanon truly follow the export-led growth hypothesis. It was concluded that trade polices is capable of affecting export import nexus and as well economic growth.

Brüeckner and Lederman (2012) analyzed the effect of openness and international trade on economic growth with panel data in Germany,1978-2010; using rainfall, political institutions, ethnic polarization and fractionalization as variables. Employing instrumental variables techniques of association that correct for endogeneity bias, the empirical evidence suggests that within-country variations in trade openness has a positive and significant association with economic growth: a 1 percentage point increase in the ratio of trade over gross domestic product is associated with a short-run increase in growth of approximately 0.5 percent per year; the long-run effect is larger, reaching about 0.8 percent after ten years. These results are robust to controlling for country and time fixed effects as well as political institutions.

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Dini (2012) assessed the combined effects of trade liberalization and financial development on economic growth in Iran using endogenous growth models during the time period of 1965-2007. This theory shows the importance of economic growth policies that will lead to an increase in the return rate. It specifically states that human and physical capital, trade liberalization and financial development may have important roles to play in measuring economic growth. Empirical results of Johnson co-cumulating method indicate positive relationship between trade liberalization and economic growth and negative relationship between financial development and their joint effects on Iran's economic growth.

Javed (2012) investigated the impact of total exports to GDP ratio, imports to GDP, terms of trade, investment to GDP ratio, and inflation on the economic growth of Pakistan. The analysis was conducted using time series data from 1973-2010. Chow test was used to test the structural break and model fitness. The OLS technique was used to detect the relationship between exogenous variables and endogenous variable and reveal that explanatory variables have positive and significant impact on the economy of Pakistan. The results also demonstrated that an increase in the import of raw materials, production, employment, and output of the country was boosted up. It concluded that international trade played an important role to enrich the economy of Pakistan.

Falve (2012) addressed the effects of trade liberalization, economic growth to recession in Libya. The emphasis in this paper was whether the crisis was a good time for trade reform? Is the economic crisis affecting the country at the time of trade liberalization on growth performance of the country? Threshold regression techniques are applied to identify five criteria indices to identify the values of crisis and estimate economic growth in critical and non-critical regimes. Our results indicated that although trade liberalization was identified in both critical and non-critical periods increased the growth afterward, but internal crisis has a smaller acceleration and in external crisis, the acceleration is higher than the non-critical regime.

Manni and Afzal (2012) used ordinary least square technique to study the effects of trade liberalization on economic growth of Bangladesh between 1980 and 2010 through analyzing important variables namely exports, imports, growth and inflation. The study shows that both real exports and imports impacted positively and significantly to GDP and had increased with greater openness, which led to the growth of the Bangladesh economy after 1990s; while growth and inflation only increased following liberalization.

Tash and Sheidaei (2012) studied the relationship between trade liberalization, financial development and their impact on economic growth in Iran. Using endogenous growth theory between 1966 and 2010, OLS method was adopted methodology. Result showed that trade liberalization and financial development positively contributed to economic growth, although their impacts were negligible. Also, the impact of trade liberalization and financial development in terms of economic liberalization was positive on growth, while the human and the physical capital had significant effects.

Yeboah, Naanwaab, Saleem and Akuffo (2012) investigated the relationship between trade liberalization and financial development and their joint impact on the economic growth in 38 countries in Asia between1966-2010. Using ordinary least square regression, the result obtained indicated that trade liberalization and financial development positively contribute to the economic growth, although their impacts are negligible. Furthermore, the joint impact of trade liberalization and financial development in terms of economic liberalization is positive on growth, while the human and the physical capital have had significant impacts. It was finally Found that trade openness has a positive relationship with GDP.

Zakaria and Ghauri (2011) examined the effect of trade openness on real exchange rate in Pakistan using quarterly data for the period 1972Q1 to 2010Q2. They estimated a dynamic model of real exchange rate determination by using GMM estimation technique. The results showed that trade openness has a statistically positive and significant effect on real exchange in Pakistan, which indicates that trade openness, has depreciated Pak-rupee in real terms.

Das and Paul (2011) examined the impact of trade openness on economic growth in Asia over the 1971 to 2009 period using a Generalized Methods of Moments of a dynamic panel data. Result reveals that trade openness has a

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positive and significant impact on economic growth of Indian Ocean Rim Countries over the time period 1997 to 2011.Esrimated from the variables reveals that there is a long run relationship existing between trade openness and economic growth for Asian Countries over the time period 1997 to 2011. The study concludes that that trade openness drives economic growth. Hence, all trade policies and tariff that restrict trade openness should be avoided to encourage reasonable number of trade importation exportation nexus amongst nations of the world found that trade openness has a positive effect on economic growth.

Marelli and Signorelli (2011) studied the impact of trade openness on economic growth in China and India over the period 1980 and 2007 using the Generalized Methods of Moments. Result revealed that trade openness had a positive and significant effect on economic growth of Indian and china over the review period. The result also showed a long-run relationship existed between trade openness and economic growth for Asian Countries over the study period. The study concluded that trade openness drove economic growth.

Khan (2011) assessed the impact of trade liberalization on economic growth in Pakistan using OLS method for the period 1980-2009. Result showed that trade liberalization could havea positive and beneficial impact on economic growth if supported by appropriate sequencing of prudent macroeconomic policies including good management, integrated and strengthened efforts made by domestic institutions, focused and targeted flow of foreign direct investment (FDI's) towards export-oriented industries and services, and improved market access.

Abrishami (2010) studied the effect of free trade policies on economic growth of Islamic countries from 1980 to 2008 using OLS method. The proxies for free trade were trade openness, importation, exportation and exchange rate. The results showed a positive and significant effect of free trade policies on economic growth of the study area.

Sakyib, (2010) ascertained the impact of trade liberalization on economic growth in Ghana from 1978 to 2009 using an ARDL bounds test. Results found a positive and statistically significant impact on trade openness and economic growth in Ghana in both the short- run and the long run in.

Herath (2010) examined the impact of trade liberalization on economic growth and trade balance in Sri Lanka. Data were collected before and after the trade liberalization from 1960 to 2007. Using regression analysis and Chow test, the study shows a significant positive impact of trade liberalization to economic growth of Sri Lanka. Trade liberalization polices such as trade openness, exchange rate regulation and exportation.

Sun and Heshmati (2010) studied the relationship between international trade and China's economic growth. Both econometric and non-parametric approaches are applied based on a 6-year balanced panel data of 31 provinces of China from 2002 to 2007. For the econometric approach, a stochastic frontier production function is estimated and province specific determinants of inefficiency in trade identified. For the non-parametric approach, the VAR index of each province/region is calculated to be used as the benchmark. The study demonstrated that increasing participation in the global trade helps China reap the static and dynamic benefits, stimulating rapid national economic growth. Both international trade volume and trade structure towards high-tech exports result had a positive and significant relationship on China's regional productivity.

Empirical works above seems to concentrate on the impact, effect, causality and relationship of trade openness and economic growth. This gap is reflected in currency of the research in Nigeria (1986-2020), methodology used in analysis in Nigeria, autoregressive distributed lag (ARDL)model and finally in Literature where most studies emphasize on the impact, effect causality and relationship of trade openness to economic growth. Therefore, the adoption of ARDL model for analysis forms the major highlight in the knowledge gap.

3. Methodology

3.1   Research Design

Ex-postfacto research design, also called after-the-fact research is suitable for the work given that it is based on an already completed event and the researcher is meant to analyze the outcomes of the already completed event and draw reasonable conclusions.

3.2 Nature and Sources of Data

All the data to be employed for this work will be time series, secondary and purely quantitative. The study used annualized time series covering the period 1986 to 2019 (33 years) obtained from the Central Bank of Nigeria and the World Bank Development Indicator.

3.3 Model Specification

This study adopted the model used by Sakyi (2015) who did a study of 115 developing Asian

countries with a focus on the cause and effect relationship between trade openness and economic growth. In this study work, the direct causal model is stated thus:

$$(GDP, EXR, INFR, EXD)Trade\ Openness = f$$

As a modification to the above, study introduces more macroeconomic variables other than economic growth and also adopts the Autoregressive Distributed Lag Model so as to capture both the baseline and lagged relationship among the variables under study. In the light of the above, the aggregated model for this study appears thus:

$$\Delta TO_t = \beta_0 + \sum_{i=1}^{m} \beta_1 \Delta TO_{t-1} + \sum_{i=1}^{n} \beta_2 \Delta EXR_{t-1} + \sum_{i=1}^{n} \beta_3 \Delta INF_{t-1} + \sum_{i=1}^{n} \beta_4 \Delta EXDEBT_{t-1} + \sum_{i=1}^{n} \beta_5 \Delta GDP_{t-1} + \delta_1 TO_{t-1}$$
$$+ \ \delta_2 EXR_{t-1} + \gamma_3 INF_{t-1} + \delta_4 EXR_{t-1} + \delta_5 INF_{t-1} + \mu_t$$

y = the variable whose causation is being appraised

yt-1 = lagged value of the variable

The result of the test will show unidirectional, bidirectional or no causality among the variables under study.

Where the variables are represented, thus:

EXR   =Exchange rate,

INFR=Inflation rate,

EXDEBT=External Debt,

GDP   =   Gross Domestic product,

TO   = Trade openness.

To ensure linearity and trimming down the data size without losing its real value, the variables were logged transformed. Given the design of the research, a special type of regression was used for this study called Auto regressive distributed lag model (ARDL). This is because ARDL is a dynamic model.

3.4   Description of Research Variables

Independent Variables

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Real Exchange Rate (RER): Ayodele (2009) opined that RER is the rate of traded weighted average of real exchange rate between two countries and these trading partners. The weight reflects the proportion of imports over exports. This type of exchange rate is used by CBN as official exchange rate. Nominal Exchange Rate (NER); This is the weighted average of nominal exchange rate between one country and its partners.

Inflation Rate: According to economic times (2017) inflation is the percentage change in the value of the wholesale price index no a year basis. It effectively measures the change in the prices of a basket of goods and service in a year.

External Debt: A clear and persistent lesson of the debt management is vital if external resources are to be used efficiently. Nigeria resort to external borrowing to bridge the domestic resources gap in order to ensure economic growth. It then means that any developing country can resort to external borrowing provided that the proceeds and facilities of the eventual servicing and liquidation of the debt are readily made available upfront.

Economic Growth: Ndebbia (2004) sees economic growth as the increase in physical production in all the three sectors of the economy: agricultural, production industry and various services were referred as economic growth. An increase in economic growth need not bring an increase in economic development.

Dependent variable

Trade Openness = (Export + Import) / (Gross Domestic Product). That is to say,

TO = (XP+MP)/GDP

Where:

TO = Trade Openness

XP = Export

MP = Import

GDP = Gross Domestic product (Economic growth)

3.5   Technique of Data Analysis

Auto-Regressive Distributed lag model (ARDL) formed the principal method of data analysis. ARDL was chosen over the ordinary least square regression (OLS) because ARDL is a dynamic model while OLS is a static model. (Pesaran and Shin, 1999). ARDL bound test is more appropriate for a sample size that is small; usually sample size that is less than 40 observations (Pesaran and Shin, 1999). It is more appropriate than any other regression method because it does not require other pre-testing since all the variables are integrated at order 1(0) or 1 (1), (Pesaran and persaran,1979).It is also better than other regression because diagnostic effect of auto correlation, homoscedasticity and heteroskedasticity are all overcome, it also confirms with the assumptions of the classical linear regression model (Pesaran and Shin, 1999), Pesaran and persaran (1979) revealed that ARDL yield consistent and robust result because it allows the existence of equilibrium relationship in terms of short run and long run dynamics without losing long run information. Therefore, the justification of the choice of the model arises from the fact that ARDL techniques is more superior than the OLS traditional approach of Engel granger (1987), Johansen and Juselius (1990), Philip and Heinsen (1990).

Presentation and Analyses of Data

4.1   Data Presentation

To adequately analyse the data for the purpose of drawing conclusion and testing the formulated hypothesis and even answer the research questions, the time series data is presented in table 4.1 covering all the variables for the estimation to be done.

Table 4.1:   Trade Openness and Macroeconomic Variables

Year	TO	EXT_DEBT	GDP	INF	EXR
1986	0.073624	41.45240	202.4362	13.67347	2.020575
1987	0.193323	100.7891	249.4391	9.694794	4.017942
1988	0.164327	133.9563	320.3285	61.21113	4.536733
1989	0.211909	240.3937	419.1964	44.67005	7.391558
1990	0.311409	298.6144	499.6769	3.614035	8.037808
1991	0.354040	328.4538	596.0447	22.95970	9.909492
1992	0.383339	544.2641	909.8033	48.80198	17.29843
1993	0.305304	633.1444	1259.070	61.26226	22.05106
1994	0.209238	648.8130	1762.813	76.75887	21.88610
1995	0.589178	716.8656	2895.201	51.59132	21.88610
1996	0.495397	617.3200	3779.133	14.31428	21.88610
1997	0.507676	595.9319	4111.641	10.21333	21.88610
1998	0.346324	633.0170	4588.990	11.91292	21.88610
1999	0.386536	2577.374	5307.362	0.223606	92.69335
2000	0.424901	3097.384	6897.482	14.52697	102.1052
2001	0.396616	3176.291	8134.142	16.49485	111.9433
2002	0.287399	3932.885	11332.25	12.16854	120.9702
2003	0.388535	4478.329	13301.56	23.81136	129.3565
2004	0.380447	4890.270	17321.30	10.00848	133.5004
2005	0.451163	2695.072	22269.98	11.56515	132.1470
2006	0.364002	451.4617	28662.47	8.548721	128.6516
2007	0.370407	438.8909	32995.38	6.563952	125.8331
2008	0.408114	523.2541	39157.88	15.05556	118.5669
2009	0.318094	590.4371	44285.56	13.92956	148.8802
2010	0.369431	689.8375	54612.26	11.80000	150.2980
2011	0.416519	896.8496	62980.40	10.28303	153.8616
2012	0.347295	1026.904	71713.94	11.98108	157.4994
2013	0.308411	1387.332	80092.56	7.956881	157.3112
2014	0.263907	1631.522	89043.62	7.978297	158.5526
2015	0.211602	2111.531	94144.96	9.550000	193.2792
2016	0.180472	3478.915	101489.5	18.55000	253.4923
2017	0.218034	5787.513	113711.6	15.37161	305.7901
2018	0.251714	7,759.20	127,736.83	14.3	306.9211
2019	0.279859	9,022.42	144,210.49	13.5	306.9500

Source: Central Bank Statistical Bulletin 2019.

The data as contained in table 4.1 include the aggregate external debt, Trade openness (TO) generated by dividing the sum of import and export by GDP. There is also inflation rate and exchange rate. As has been stated earlier, the time series data are ordered in annualized fashion.

4.2   Data Description

This section describes the essential statistical and stationarity characteristics of the data under study with the aim of justifying their suitability for the analyses done with them in the course of this study. Table 4.2shows a summary of the basic descriptive statistics of the series used in this study.

Table 4.2 Summary of Basic Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob.
TO	0.332405	0.350667	0.589178	0.073624	0.111032	-0.107164	2.946079	0.065125	0.967962
EXTDEBT	1543.596	669.3252	5787.513	41.45240	1584.512	1.193121	3.264792	7.685682	0.021433
GDP	28720.25	9733.197	113711.6	202.4362	35400.52	1.088748	2.799582	6.375543	0.041264
INF	20.53268	12.92100	76.75887	0.223606	19.14964	1.619688	4.420903	16.68336	0.000238
EXR	95.60707	115.2551	305.7901	2.020575	79.07182	0.557712	2.852730	1.687815	0.430027

Source: Author's Computation from the Eviews 10

The measures of central tendency such as the mean and median as well as the measures of dispersion like standard deviation; minimum and maximum are all shown in Table 4.2. It is evident that external debt and economic growth exhibited the highest levels of dispersion around the mean standing at 1584 and 35400 respectively. This obviously says a lot about the instabilities in the growth and foreign debt profile of Nigeria. All the variables were found not to be normally distributed as is consistent with the behaviour of financial and economic variables especially the time series. Secondly, we checked the stationarity properties of the variables to determine the right estimation model and also forestall the production of spurious estimates. The result is as presented in Table 4.3:

Table 4.3:   Summary of Unit Root Test Results

Variables	ADF Stat.	Critical Values 5%	P-Value	Inference
EXTDEBT	-2.31	-1.95	0.0223	I(1)
LGDP	-4.08	-3.57	0.0164	I(1)
TO	-3.36	-2.96	0.0207	I(0)
EXR	-2.52	-1.95	0.0135	I(1)

Source: Extract from Appendix 1

The series stationarity behaviour shows that they are a combination of I (1) and I (0) implying that they are not all stationary at levels. While external debt, exchange rate and GDP are found to be stationary at first difference, trade openness exhibits a different stationarity disposition by being stationary at levels. With this combination, it is econometrically wrong to apply the OLS form of regression. This justifies our choice of ARDL model, which tolerates all forms of stationarity composition basically I (1) and I (0) excluding I (2)

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4.3 Presentation of the ARDL Estimates

Having determined the suitability of the ARDL form of regression in our study, we present below the ARDL estimates with the diagnostic tests. Table 4.4 contains the estimates of the ARDL and the diagnostic tests results as used in this study.

Table 4.4:Autoregressive Lag Model Estimates

Number of models evaluated: 162				
Selected Model: ARDL(1, 0, 2, 0, 0)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
TO(-1)	-0.013711	0.190463	-0.071988	0.9433
LOG(EXT_DEBT)	0.023026	0.019349	1.190072	0.2467
LOG(GDP)	0.498501	0.176833	2.819045	0.0100
LOG(GDP(-1))	-0.179188	0.259720	-0.689928	0.4975
LOG(GDP(-2))	-0.272801	0.160842	-1.696081	0.1040
INF	-0.003155	0.001023	-3.082527	0.0054
EXR	-0.001422	0.000616	-2.307926	0.0308
C	-0.175004	0.194917	-0.897841	0.3790
Diagnostic Tests: R-squared 66% Adjusted R-squared 55% F-statistic 6.05 Prob(F-statistic) 0.000508 Durbin-Watson stat 2.2 Het. Test (BGP): F-Stat 1.050(0.4263)				

Source: Author's Summary of the ARDL Estimates.

From Table 4.4, we can clearly see that the goodness of fit of the ARDL is 66% of changes in the dependent variable, which is accounted for by the lag values of both the dependent and independent variables, as well as the base values of the independent variables. The F-statistic of 6.05 (compared with a p-value of 0.000508) shows that the overall regression is good for meaningful analyses. Durbin Watson stat. of 2.2 and the insignificant Bresuch Godfrey and Pagan Hetroscedasticity tests show that there is neither autocorrelation nor heteroscedasticity in the model. The stability of the model is confirmed by the Cumulative Sums of Squares (CUSUM) graph following the Recursive Estimate framework as shown below:
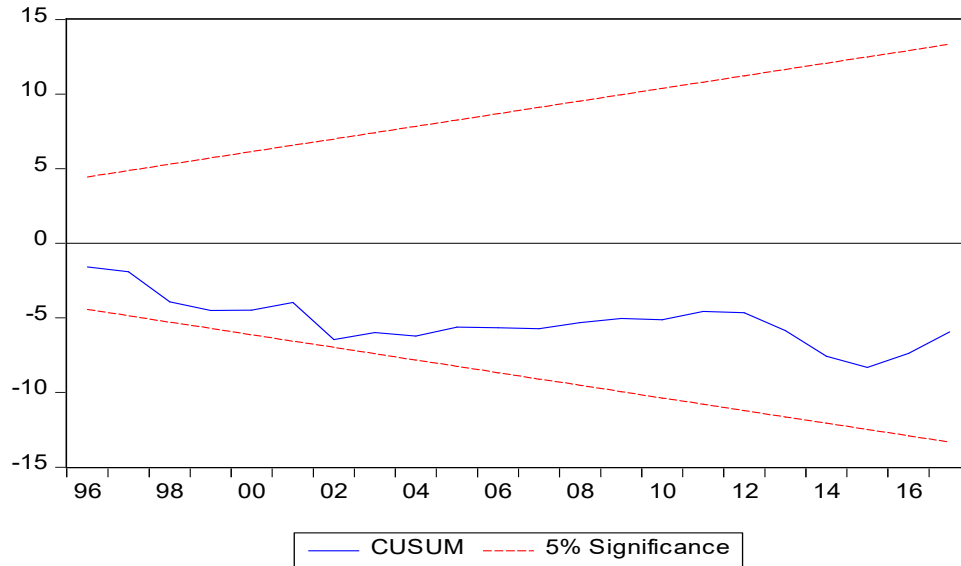
Fig. 4.1 Recursive Estimates CUSUM Graph for the ARDL Model

4.4 Test of Hypotheses

Having discussed the results of the estimated model, it is now expedient to test the formulated hypotheses with the view to providing answers to the research questions and drawing conclusions would form the outcome of this study.

This section provides the platform to test the hypotheses following the steps below:

1. In the first step the hypothesis is restated in null and alternate forms
2. Secondly, there would be the presentation of the results of the adopted Test method of estimation;
3. The set decision criteria are applied to accept or reject the null/alternative hypotheses.
4. The necessary conclusions are drawn.

4.4.1 Test of Hypothesis One

Hypothesis One in null and alternate form is presented as follows:

Ho: Exchange rate did not positively and significantly affect trade openness in Nigeria

Ha: Exchange rate positively and significantly affected on trade openness in Nigeria

The ARDL results presented in table 4.4, form the basis for testing this hypothesis. It can be seen from the result that exchange rate negatively and significantly affected trade openness within the period in Nigeria. It is obvious that the dwindling value of the Naira affected trade. Evidently export became cheaper and import dearer. A unit change in exchange rate produced a 0.01unit negative change in openness. This change is shown to be significant as the p-value of 0.0308 shows.

Decision on Hypothesis One

Since the exchange rate t-stat with its associated probability value are significant (less than 0.05) we reject the null hypothesis and conclude that exchange rate significantly affected on trade openness in Nigeria over the sample period.

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4.4.2 Test of Hypothesis Two

Hypothesis One is null and alternate form is presented as follows:

Ho: Inflation rate did not positively and significantly affect trade openness in Nigeria

Ha: Inflation rate positively and significantly affected trade openness in Nigeria

The ARDL results presented in table 4.4, form the basis for testing this hypothesis. It can be seen from the result that inflation rate negatively and significantly affected trade openness within the period in Nigeria. A unit change in inflation rate produced a 0.03 unit negative change in openness. This change is shown to be significant as the p-value of 0.0054 shows.

Decision on Hypothesis Two

Since the inflation rate t-stat with its associated probability value are significant (less than 0.05) we reject the null hypothesis and conclude that inflation rate significantly impacted on trade openness in Nigeria over the sample period.

4.4.3 Test of Hypothesis Three

Hypothesis One in null and alternate form is presented as follows:

Ho: External Debt did not positively and significantly affect trade openness in Nigeria

Ha: External Debt positively and significantly affected trade openness in Nigeria

The ARDL results presented in table 4.4, form the basis for testing this hypothesis. It can be seen from the result that inflation rate negatively and significantly affected trade openness within the period in Nigeria. A unit change in external debt produced a 0.02unit positive change in openness. This change is shown to be significant as the p-value of 0.2647 shows.

Decision on Hypothesis Three

Since the external debt t-stat with its associated probability value are non-significant (greater than 0.05) we refuse to reject the null hypothesis and conclude that external debt non-significantly impacted on trade openness in Nigeria over the sample period.

4.4.4 Test of Hypothesis Four

Hypothesis One in null and alternate form is presented as follows:

Ho: Economic Growth did not positively and significantly affect trade openness in Nigeria

Ha: Economic Growth positively and significantly affected trade openness in Nigeria

The ARDL results presented in table 4.4, form the basis for testing this hypothesis. It can be seen from the result that Economic Growth negatively and significantly affected trade openness within the period in Nigeria. A unit change in Economic Growth produced a 0.50 unit positive change in openness. This change is shown to be significant as the p-value of 0.0100 shows.

Decision on Hypothesis Four

Since the Economic Growth t-stat with its associated probability value is significant (less than 0.05) we reject the null hypothesis and conclude that Economic Growth significantly affected trade openness in Nigeria over the sample period.

4.5 Discussion of Findings

The findings from this study are discussed side by side with the set objectives of the study in this section.

i.   To examine the effect of exchange rate on trade openness in Nigeria:

It can be seen from the result that exchange rate negatively and significantly affected trade openness within the period in Nigeria. A unit change in exchange rate produced a 0.01unit negative change in openness. Theoretically speaking, it is obvious that the dwindling value of the currency affects trade as export became cheaper and import dearer. This finding is consistent with Zulfiqar and Kausar (2012) who found that real and effective exchange rate significantly affected trade liberalization in Pakistan.

ii.   To examine the responsiveness of trade openness to inflation rate in Nigeria:

The ARDL results presented in table 4.4, form the basis for pursuing this objective. It can be seen from the result that inflation rate negatively and significantly affected trade openness within the period in Nigeria. A unit change in inflation rate produced a 0.03unit negative change in openness. It was on the basis of the above that the null hypothesis was rejected and the conclusion drawn that inflation rate significantly impacted on trade openness in Nigeria over the sample period. It can be deduced that when inflation rate is high, it negatively affects openness by making the country's export too expensive and unattractive while a reduction in inflation will reverse the trend. This justifies the found inverse relation between inflation and trade openness. This submission agrees with the Hecksher-Ohlin Model that shows that allocation of scarce resources should be done considering their prices and how they benefit the nations while favoring other trade elements.

iii.   To determine the effect of external debt on trade openness in Nigeria:

It can be seen from the result that external debt non-significantly affected trade openness within the period in Nigeria. A unit change in external debt produced a 0.02 unit positive but non-significant change in openness. Intuitively, it can be inferred that the debt profile of a country may negligibly affect its trade relationship with other countries. It may affect the country's credit rating by supranational bodies like IMF and World Bank, it may arguably not exert significant influence on how a nation trade with other nations.

iv.   To measure the effect of economic growth on trade openness in Nigeria:

This objective produced hypothesis four of this study which the ARDL results presented in table 4.4, tested. It can be seen from the result that Economic growth positively and significantly affected trade openness within the period in Nigeria. A unit change in Economic Growth produced a 0.50 unit positive change in openness. The finding reported for objective four finds a theoretical bearing with the endogenous growth theory as postulated by Romer (1980). The theory which is a response to the neoclassical growth model holds that growth can engineer openness in a manner that openness can as well drive growth through a reverse causal effect.

Summary of Findings, Conclusion and Recommendations

5.1   Summary of Findings

The findings of this study from the specific objectives are as follows:

1.   That exchange rate negatively and significantly impacted on trade openness in Nigeria over the sample period.

2.   That inflation rate negatively and significantly impacted on trade openness in Nigeria over the sample period.

3.   That external debt did not affect significantly on trade openness in Nigeria over the sample period.

4.   That Economic Growth positively and significantly impacted on trade openness in Nigeria over the sample period.

5.2   Conclusion

The theoretical basis of this study is to check reverse side of the endogenous growth theory which stresses the role of internal factors and elements in engendering growth in any economic society. The study rather looked at how macroeconomic variables can drive the degree and direction of openness of the economy to the international trade sector.

It is in line with the desire to see the applicability of the reverse side of theory using empirical evidence from Nigeria that this study was embarked upon. Four objectives, four research questions and four hypotheses were put up as the anchor for the study at the end of which some very key findings were made. Specifically, trade openness was found to be a function of exchange rate, economic growth and inflation rate; while external debt shared no significant relationship with openness within the studied period.

The study brought to fore some key issues which among other things include the following,

i.   That there is an interface between domestic macroeconomic factors and the international trade sector.

ii.   That a country's external debt profile shares no significance with its openness to the external trade environment. Intuitively, trading partners may care less about a country's debt profile provided that trade benefits abound to the trading nations.

iii.   That exchange rate regimes and the magnitude of inflation can either assist in making trade more robust or make it more restrictive and prohibitive.

It is believed that the findings from this study can trigger further inquisition in this area both within Nigeria, in Africa and at the global stage.

5.3   Recommendations

In line with the specific objectives of this study we recommend as follows:

1.   Government should evolve exchange rate regimes that are trade friendly with the view to opening Nigeria more to the outside trade world all to the advantage of the domestic economy.
2.   Trade openness was found to be a significant function of Inflation and as such, inflation should be duly controlled using a combination of monetary and fiscal policy measures so as to mitigate negative inflationary exposure that comes from foreign trade.
3.   Revalidation of the debt contraction and management policy of the economy so as to make it good enough to drive trade openness of the Nigerian economy.
4.   Since economic growth can positively drive openness, it implies that the country's products seem to enjoy foreign appeal and as such production to satisfy domestic and foreign demand can significantly catalyze the growth of the Nigerian economy. Increased investment in production of goods and services that are highly demanded is recommended as a policy for the government.

5.4   Contribution to Knowledge

This study has made contribution to the existing body of knowledge in the following way:

1.   It has caused a further enrichment of the literature in trade openness and its relationship with macroeconomic variables.
2.   It stretched to the most recent time the data analyses and empirical estimation upon which conclusions have been drawn on the interplay of trade openness and the macroeconomic environment.

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5.5   Recommendation for Further Studies

This study does not claim to be exhaustive, on the basis of which the researcher recommends the following for further studies:

1.   The impact of exchange rate on trade openness.
2.   Effect of trade inequality on the growth and development of the Nigerian economy

REFERENCES

Aboko, B. A. (2011). Impact of FDI and trade openness on economic growth:A comparative study of Pakistan and Malaysia. Theoretical and Applied Economics, 18(11), 53-58.

Abrishami, H. (2010). The effect of free trade on economic growth. Politics, Economic Research Journal, (91).

Afolabi, B. & Oyelekan, B. (2020). Trade openness and economic growth in Nigeria. Journal of Economics and Sustainable Development, 11(4) 165-171.

Aghion, P., Bloom, N., Blundell, R., Grith, R., & Howitt, P. (2005). Competition and innovation: An Inverted-U relationship. Quarterly Journal of Economics, 120, 701-728

Ahmed, Y.&Anoruo, E. (2000). Openness and economic growth: Evidence from selected ASEAN countries. The Indian Economic Journal, 47, 3, 110-117.

Ajasafe,S.M., Nassar,D.C& Gidado (2016) The impact of trade liberalization on export and GDP Growth in LDCs. UNCTAD Discussion Paper No. 85,12-16.

Ajayi, E. O., & Araoye, F. E. (2019). Trade openness and economic growth in Nigeria. International Journal of Economics and Financial Management, 4(2), 50-63.

Akani,H.W. &Yellowe,S. (2016). Dividend, macroeconomic aggregates and the profitability of selected quoted firms in Nigeria: An empirical analysis. Journal of Finance and Accounting, 4(4), 212-224.

Akilou, A. (2013). Is there a causal relation between trade openness and economic growth in the WAEMU countries? International Journal of Economics and Finance, 5, 151-156.

Akuffo, A. A. (2012). Effects of trade openness on economic growth: The case of African countries. Agribusiness, Applied Economics and Agric. Science Education- NC A&T, Birmingham.

Alesina, A., Spolare, S., &Wacziarg, W. (2000). Economic integration and political disintegration. American Economic Review, 90(5), 1276-1296.

Amadeo, K. (2018). Effect of export and import on the economy. Economic brief. USA.

Amin, B. (2011). Trade liberalization, competitiveness & economic growth: Empirical evidence from Pakistan. M. Phil thesis, Department of Economics F C College (A Chartered University) Lahore, Pakistan.

Anyanwaokoro, M. & Kalu, U. K., (2020). Exchange Rates Fluctuations and International Trade in a Mono-product Economy: Nigeria's Experience.South Asian Journal of Social Studies and Economics, 7(2): 21-48.

Arif, A., & Ahmad, H. (2012). Impact of trade openness on output growth: Co-integration and error correction model approach. International Journal of Economics and Financial Issues, 2(4), 379-385.

Awojobi, O. (2013). Does trade openness and financial liberalization foster growth: An empirical study of Greek economy. International Journal of Social Economics, 40(6), 537-555.

Ayodele, O. (2014). Effects of parallel premium of exchange in Nigeria. The financial and Technical support of AERC Nairobi, Kenya.

Brauner, S. M. & Raddatz,R. (1994). The impact of trade liberalization on export and GDP growth in LDCs.UNCTAD Discussion Paper No. 85,12-16.

Baldwin RE. (2002). Openness and growth: What's the empirical relationship;NBER. WP 9578.British Journal of Economics, Management & Trade, 4(5), 755-768.

ANDERSON, 2021

Bakare, I.A.(2011). Trade openness and economic growth: A reflection from Nigeria (1981-2010). International Journal of Economics, Commerce and Management, 3(5), 1-820.

Bakong, M.L. (2015). Effects of financial deepening on economic growth in Kenya. International journal of Business and Commerce, 3(8), 795-801.

Baltagi, B. H. (2007). Econometric Analysis of Panel Data,3rd edition. Wiley.

Berg, H. F. (2006). Foreign Direct Investment and Economic Growth: A Time-Series Approach. Economics Department Faculty Publications, 6(1), 1-19.

Birdswall, N.&Hamoudi, A. (2002). Commodity dependence, trade, and growth: When 'openness' is not enough. Centre for Global Development Working Paper, 7.

Bolanky, B. K. (2011). FDI, trade openness, capital formation, and economic growth in Bangladesh: A linkage analysis. International Journal of Business and Management, 6(1), 16-28.

Brueckner, M. & Lederman, D. (2012). Trade causes growth in sub-Saharan Africa. World Bank policy research. Working Paper No. 6007.

Central Bank of Nigeria (2013).Statistical Bulletin for Various Issues. Retrieved from www.cenbank.org

Brunner, A. D. (2003). The long-run effects of trade on income and income growth. IMF Working Paper WP/03/37. Washington, DC.: IMF Institute.

Calderon,C.&Lui,C.(2003). The direction of causality between financial development and economic growth. Journal of Developmental &Economic Research, 4(2).

Chang, R., (2009). Openness can be good for growth: The role of policy complementarities, Journal of Development Economics, 90(1), 33–49.

Chakraborty, C., & Singh, P. (2008). Economic reforms, foreign direct investment, and economic growth in India. A sector level analysis. World development, 36(7), 1192-1212.

Das, A.& Paul, B. P. (2011). Openness and growth in emerging Asian economies: Evidence from GMM estimations of a dynamic panel. Economics Bulletin, 3(31), 2219–2228.

Dini, H.(2002). Trade liberalization, financial development and economic growth in the long run. Iran, Jahad, National Economic University.

Dimitria, K.&Efthimiou, G. (2003). Financial development and economic growth. Evidence from panel survey and cointegration tests. Journal of Development Economics, 73,55-74.

Dollar, D. & Kraay, A. (2003). Institutions, trade, and growth.Journal of Monetary Economics, 50(1), 133–162.

Di-Giovanni, J.& Levchenko, A. (2007). The risk content of exports: Aportfolio view of international trade. Mimeo, IMF.

Duong, H. T. (2015). The interrelationship among foreign direct investment, domestic investment and export in Vietnam: A causality analysis, faculty of commerce, Danang University of economics, Danang, Vietnam. Tiendh@due.edu.vn.

Duru, I. U., & Ehidiamhen, P. O. (2018). Empirical investigation of the impact of export diversification on economic growth: Evidence from Nigeria, 1980-2016. Journal of Economics, Management and Trade, 21(7), 1-24.Available at: https://doi.org/10.9734/jemt/2018/42806.

ANDERSON, 2021

Duru, I. U., Okafor, B. O. N., Adikwu, F. O., & Njoku, F. C. (2020). Trade Liberalization and Economic Growth: An Assessment of Nigerian Experience. Asian Development Policy Review, 8(3):194-213.

Dutta, D., & Ahmad, N. (2001). Trade Liberalization and Industrial Growth in Pakistan: A Cointegration Analysis. Sydney: Sydney University, School of Economics and Political Science. Retrieved from http://www.econ.usyd.edu.au/staff/ddutta/

Economy Times(2017). International trade and economic growth. Retrieved from www.economywatch.com/international-trade/economic-growth.html.(Accessed20thApril, 2016).

Ehikioya, B. I., Omankhanlen, A. E., Osuma, G. O. &Inua, O. I. (2020). Dynamic relations between public external debt and economic growth in African Countries: A curse or blessing? Journal of Open Innovation: Technology, Market and Complexity, 6(88), 1-16.

Elijah, S., & Musa, A. B. (2019). Dynamic impact of trade openness on the economic growth in Nigeria. International Journal of Engineering and Advanced Technology, 8(5C), 609-616.

Emekekwue, P. E. (2016).Corporate Financial Management.8th Edition. African Bureau of Educational services; Kinshasha, Zaria.

Engel, B.&Granger, C. W. (1981). Co-integration and error correction representation estimation and testing. Econometrics, 37, 313 – 344.

Freund, C. & Bolaky, B. (2008). Trade, regulations, and income. Journal of Development Economics, 87, 309-321.

Frankel, J. & Rose, R. (2002). An estimate of the effect of common currencies on trade and income. Quarterly Journal of Economics, 117(2), 437-466.

Gabriel, A. A. & David, A. O. (2020). Effect of Trade openness and financial openness on economic growth in Sub-Saharan African countries. African journal of Economic Review, 9(1) 1-22.

Gholami, M. (2000). Examined the relationship between economic growth and export growth: The case of Iran (1959-1995). Shiraz University, Graduate School.

Gholipour, S. et al. (2011). The impact of agricultural trade liberalization on exports and imports of agricultural and services sectors. Iranian Journal of Agricultural Economics and Development, (4).

Gries, T.& Redlin, M. (2012). Trade openness and economic growth: A panel causality analysis. Centre for International Economics, Canberra, Australia Working paper series, no. 2011-06.

Grossman, G. M. & Helpman, E. (1995). Innovation and Growth in the Global Economy, MIT press, Cambridge, USA and London, UK.

Gujarati, D.N. & Porter, D.C. (2009). Basic Econometrics, 5thEdition. Singapore: McGraw-Hill.

Hafezi, M. (1998). Effect of foreign trade and economic growth in the use of technology convergence.Beheshti University, Faculty of Economics and Political Science.

Hamad, M. M.(2014).Theimpact of trade liberalization on economic growth in Tanzania. International Journal of Academic Research in Business and Social Sciences, 4(5), 514-532.

Heidari, M. (2002). Examined the causal relationship between foreign trade and economic growth in Iran (1959-2000): A Vector Auto Regression Model. M.Sc Thesis, Shiraz.

Herath, H.M.(2010). Impact of trade liberalization on economic growth of Sri Lanka: An econometric investigation (in press). Wayamba University of Sri Lanka. Sri Lanka.

ANDERSON, 2021

Idun, A. A., & Aboagye, A. Q. Q. (2014). Bank competition, financial innovations and economic growth in Ghana. African Journal of Economic and Management Studies, 5(1), 30–51.

Ile, N. M. (2009) Management, A functional approach, Ochimba Printing and Publication Company ltd Enugu.

Javed, Z. H., & Farooq, M. (2009). Economic growth and exchange rate volatility in case of Pakistan. Pakistan Journal of Life and Social Sciences, 7(2), 112-118.

Jin, J. C. (2000). Openness and growth:An interpretation of empirical evidence from East Asian countries. Journal of International Trade and Economic Development, 9(1), 5-17

Johasson, S. &Juselius, K. (1990). Maximum likelihood estimation and inferences on co-integration with the application to demand of money. Oxford bulletin of Econometrics and Statistics, 52(2),169 – 210.

Jung, M. & Marshal, Z.(1985). Trade liberalization, financial development and economic growth in the long term: The case of Iran. Business and Economic Horizons, 8(2), 33-45.

Karras, G. (2003). Trade openness and economic growth: Can we estimate the precise effect? Applied Econometrics and International Development, 3(1), 7–26.

Kalinmanova, F. (2008). Do trade restrictions or openness affect economic growth differently in the presence of export credits? Business and Economics Journal, 69, 1-11.

Kalmanaui, F. (2013). Do trade restrictions or openness affect economic growth differently in the presence of export credits? Business and Economics Journal, 69, 1-11.

Kalu,E. U., Nwude, C. E. & Nwonye N. (2016). Does trade openness engineer economic growth in Nigeria? (Empirical Evidence). Global Journal of Management and Business Research: (B) Economics and Commerce, 16(4), 1-9.

Kalyanaraman, L.& Al-Tuwajri, B. (2014). Macroeconomic forces and stock prices: Empirical evidence from Pakistan.Asian Journal, 11(7), 89-102.

Kazungu, K. (2009). Trade liberalization and the structure of production in Tanzania. University of Glasgow.

Keho, Y. (2017). The impact of trade openness on economic growth: The case of Cote d'Ivoire. Cogent Economics & Finance, 5(1), 1-14.

Khan, A. H. (2011). The impact of trade liberalization on economic growth in Pakistan. Interdisciplinary Journal of Contemporary Research in Business, 3(2).

Khandu, P. (2014). Impact of trade liberalization on economic growth in small developing economies: Bhutan as a case study. Asian Journal of Empirical Research, 4(5), 263-278.

Kraaas, A. (2003) Trade growth and poverty. World Bank Policy Research Working Paper No. 26 (15).Economic Journal,114(493),F22–49.

Kwame, P. (2013). Trade liberalization and growth: The Ghanaian experience. Journal of Economics and Sustainable Development, 4(5), 125-135.

Kurt, s., & Berger, M. (2008). Openness in Turkey and economic growth. Ataturk University Economic and Administrative Journal, 22(2), 57-59

Lee, J. W. (2004). Data set for a panel of 138 countries, Technical report. Downloadable at http://www.nber.org/pub/barro.lee/.

Lee, J.-W. (1993). International trade, distortions, and long-run economic growth, IMF Staff Papers 40(2), 299–328.

ANDERSON, 2021

Levine, R. (2004). Finance and growth: Theory and evidence. NBER Working Paper no. 10766.

Lopez, T. O. (2007). Causality between exports, imports, and economic growth: Evidence from transition economies. Economics Letters, 94(3), 389-395.

Mangir, F., Acet, H., & Baoua, M. M. A. (2017). An empirical analysis of the relationship between trade openness and economic growth in Niger. Paper presented at the Econ World 2017@Paris Proceedings, July 25-27, 2017; Paris, France.

Manni, A.&Alfazal, T. (2012). Trade openness, investment instability and terms-of-trade volatility. Journal of International Economics, 61, 285–306.

Marelli, E., & Signorelli, M. (2011). China and India: Openness, trade and effects on economic growth. The European Journal of Comparative Economics, 8(1), 129-154.

Masudzadegan, S. (2002). Effect of foreign trade and economic growth in Iran using Input- output table from 1988 to 1994. The ma e-Ali Sina University, Faculty of Literature and Humanities.

Marelli, E., & Signorelli, M. (2011). China and India: Openness, trade and effects on economic growth. European Journal of Comparative Economics, 8(1), 129-154.

Mohammed, S. (2008). Financial–Growth Nexus in Sudan. Empirical Assessment based on an autoregressive Distributed Lag Model (ARDL). Arab Planning Institute, Working Paper Series.

Morley,S. A.(1992). Effect of real exchange rate to output of 28 developing countries in Europe. Review of Economic and Statistics, 74(1), 21 – 27.

Moyo, C., & Khobai, H. (2018). Trade openness and economic growth in SADC countries. MPRA Paper No. 84254.

Moyo, C., Nwabisa, K., & Hlalefang, K. (2017). The relationship between trade openness and economic growth: The case of Ghana and Nigeria. MPRA Paper No. 81317.

Munoz, S. (2006). Impact of foreign exchange parallel premium to economic growth in Zimbabwe's Export Performance, IMF Working Paper 628.

Mussa,A& Medial, M. (1984). The Theory of Exchange Rate Determination: Exchange Rate Theory and Practice. Chicago, University of Chicago Press.

Mubarik, Y. A. (2005). Inflation and growth: An estimate of the threshold level of inflation in Pakistan. SBP-Research Bulletin, 1(1), 35-44.

Mwangi, G. (2013). Effect of macroeconomic variables to foreign exchange market and stock market: Saudi Perspective.International Journal of Financial Research, 5(4), 120-127

Ndebbia, J. E. (2004). Financial Deepening Economic Growth and Development: Evidence from Selected sub-Sahara African countries. African Economic Research Consortium (AERC) Research Paper 42.Namibia

Nduka, K.E. (2013). Openness and economic growth in Nigeria. Journal of Education and Practice, 4(1), 68-73.

Nowbutsing, B. M. (2014). The impact of openness on economic growth: Case of Indian Ocean Rim countries. Journal of Economics and Development Studies, 2(2), 407–427.

Nsoki,A.S. (2013). Trade openness reduces growth volatility when countries are well diversified. Canadian Journal of Economics, 46(2), 765–790.

ANDERSON, 2021

Nwadike, G. C., Ani, K. J. & Alamba, C. S. (2020). Impact of trade openness on Nigerian economic growth: An empirical investigation.SAGE Journals of Foreign Trade Review, 55(2), 239-247.

Obadan, M. I. (2008). EconomicGlobalization, Markets and National Development: How sensibly do the poor countries (Nigeria included) stand? Inaugural lecture series, University of Benin, Benin City, September 18.

Onwumere, J.U.J.(2009).Business and Economic Research Method.2ndedition. Enugu: Vougasen Ltd.

Onayami, S. O. (2013). Output, growth, economic openness and financial deepening in Nigeria. A structural and causality analysis. European Journal of Humanities and Social Sciences, 20(10), 1381 – 1395.

Oleka, D. C. &Ezema, C. A. (2017). Response of some selected macroeconomic variables to the financial performance of insurance companies in Nigeria. ESUT Journal of Accountancy,7(2).

Okonkwo,I.C.(2011). Exchange rates devaluation in an oil economy. The case study of Nigeria. CBN Economic and Financial Review 2(4).

Olufemi, M.S. (2004). Trade openness and economic growth in Nigeria: Further evidence on the causality issue. South African Journal of Economic and Management Sciences, 7(2), 299- 315.

Okeke,A.O.(2014). Foundation Statistics for Business Decision. Enugu: Fourth Dimension Publishers.

Orji, J. (2016). Seminar in Finance.Splash Media Publication Enugu.

Patimi, E. (2014). Impact of exchange rate variation to selected macroeconomic performance in Nigeria. International Journal of Arts and Humanities, (2), 24 – 36.

Pasaran, H. &Shin, Y. (1999). An autoregressive distributed lag modeling approach to co-integration Analysis. Chapter 11 in Econometrics and Economic Theory in the 20th century. The Ragnar Frisch.

Pasaran, H. M., Shin, Y.,& Smith, R. J. (2001). Bound testing approach to the analysis of level relationships. Journal of Applied Econometrics. 16,289 – 326.

Pasaran, H. &Pesaran, B. (1997).Working with Micro-Soft 4.0 Interactive Economic Analysis. Oxford University Press.

Philips,P. &Heinson, B. (1990). Statistical inference and instrumental variables regression of I (1) process. Review Economic Studies, 57 99 – 125.

Philips,P.& Peron, P.(1988). Testing for unit root in time series regression.Priometrika, 75(2) 335 – 346.

Rautava, S. (2015). Impact of real effective exchange rate and oil prices in Russian's economy: A cointegration approach. Journal of Comparative Economic, 32, 315 – 322.

Rivera-Batiz, L. A. & Romer, P. M. (1991). International trade with endogenous technological change.European Economic Review, 35(4), 971– 1001.

Rodrik, D. & Rodrıguez, F. (2000). Trade policy and economic growth: A skeptic's guide to the cross-national evidence, in B. Bernanke and K. Rogoff (eds), NBER Macroeconomics Annual, MIT Press, Cambridge, USA, 15, 261–325.

Rodriguez, F. & Rodrik, D. (2001). Trade policy and economic growth: A skeptic's guide to cross- national evidence. National Bureau of Economic Research, Inc Working Papers-7081.

Rodriguez, F. (2007). Understanding economic policy reform. Journal of Economic Literature,34, 9-41.

Roubini, N. & Sala-I Martin, X. (1991). Financial development, trade regimes and economic growth. NBER Working Paper no. 3876.

ANDERSON, 2021

Rassakah, A. (2007) Openness and growth: A time series, cross–country analysis for developing countries. Journal Development Economics, 48,419–447.

Reizman, R. G., Summers, P. M., & Whiteman, C. H. (1996). The engine of growth or its handmaiden? A time series assessment of export-led growth. Empirical Economics, 21(1), 77-113.

Saad, W. (2012). Causality between economic growth, export, and external debt servicing: The case of Lebanon. International Journal of Economics and Finance, 4(11), 134-143.

Santos, P. & Amelia, U. (2002). Trade liberalization and export performance in selected developing countries. Journal of Development Studies, 39(1), 140-164

Sachs, J. D. and Warner, A. M. (1995). Economic reform and the process of global integration.Brookings Papers on Economic Activity, 1,1–118.

Sala-i-Martin, X. X. (1997). I just run two million regressions.American Economic Review, 87(2), 178–183.

Salinas, G., & Aksoy, A. (2006). Growth before and after trade liberalization. World Policy Research Working Paper.

Sakyi, D. (2010). Trade openness, foreign aid and economic growth in post-liberalization Ghana: An application of ARDL bounds test. Journal of Economics and International Finance, 3(3), 146-156.

Sakyi, D., Villaverde, J., &Maza, A. (2015). Trade openness, income levels, and economic growth: The case of developing countries, 1970–2009. Journal of International Trade & Economic Development, 24(6), 860–872.

Samuelson, P.A. & Nordhaus, W.D. (2010). Economics. 19th ed. New York: The McGraw-Hill Companies.

Sun, P. &Heshmati, A. (2010).International trade and its effects on economic growth in China.IZA Discussion Paper, 5151

Siddique, A. H., & Iqbal, J. (2005). Impact of trade openness on output growth for Pakistan: An empirical investigation. Market Forces, 1(1), 3-10.

Sakyib, S. (2010). Openness, productivity and growth: what do we really know?The Economic Journal, 108, 383-398.

Sakyi, D. (2010). Trade openness, foreign aid and economic growth in post-liberalization Ghana: An application of ARDL bounds test. Journal of Economics and International Finance, 3(3), 146-156.

Sukar, A. & Ramakrishna, G. (2002). The effect of trade liberalization on economic growth: The case of Ethiopia. Finance India, 16(4), 1295-1305.

Tamayo, L. M. (2004). La evolución del arancelen el Ecuador: 1990-1996, Cuadernos de Trabajo, Banco Central del Ecuador, May 1997.

Tash, M. N. S. &Sheidaei, Z. (2012). Trade liberation, financial development and economic growth in the long term: The case of Iran. Business and Economic Horizons, 8(2), 33-45

Trevino, L. J. (2002). Market reform and foreign direct investment in Latin America: Evidence from an error correction model. International Trade Journal, 16(4), 367-392.

Thirlwal, A. P. (2000). Trade liberalization and economic growth: Theory and Evidence. Economic Research Papers, no. 63, African Development Bank, Coted'Ivoire; 3

Tyopev, I. (2019). Trade openness and economic growth in selected West African countries. An Unpublished PhD Economics thesis of Benue State University, Makurdi, Benue State, Nigeria.

ANDERSON, 2021

Vamwakidis, A. (2002). How robust is the evidence growth-openness connection? Historical evidence.Journal of Economic Growth, 7, 57–80.

Wacziarg, R. (2001). Measuring the dynamic gains from trade.World Bank Economic Review, 15(3), 393–429.

Wacziarg, R. & Welch, K. H. (2008). Trade liberalization and growth: New evidence.World Bank Economic Review, 22(2), 187–231.

Winters, L. A. (2004). Trade liberalization and economic performance: An overview. Economic Journal, 114, F4–F21.

Wang, C., Liu, X., & Wei, Y. (2004). Impact of openness on growth in different country groups. The World Economy, 27(4), 567–585.

Yakubu, M. M., & Akanegbu, B. N. (2018). Trade openness and economic growth: Evidence from Nigeria. European Journal of Business, Economics and Accountancy, 6(4), 30-44.

Yanikkaya, H.(2003). Trade openness and economic growth: A cross-country empirical analysis. European Journal of Comparative Economics, 8(2), 129-154.

Yasmin, B. (2006). Trade liberalization and economic development: Evidence from Pakistan. The Lahore Journal of Economics, 11(1), 19-35.

Yeboah, O., Naanwaab, C., Saleem, S., & Akuffo, A. A. (2012). Effects of Trade Openness on Economic Growth: The Case of African Countries. Agribusiness, Applied Economics and Agriscience Education- NC A&T, Birmingham.

Yimer,L. (2011). The impact of trade liberalization on per capita income: Evidence from Sub-Saharan Africa. International Journal of Economic Research, 2(5).

Yinusa, O. & Aworinde, B. O. (2019).Exchange rate, Trade balance and growth in Nigeria: An Asymmetric cointegration analysis. The journal of Development Areas 53(4), 113-127.

Zakaria, M. &Ghauri, A. B. (2011). Trade openness and real exchange rate: Some evidence from Pakistan. The Romanian Economic Journal, 14(3).

Zakari, R., Kaltani, L. & Ghauri, N. V. (2012). Openness can be good for growth: The role of policy complementarities, Journal of Development Economics, 90(1), 33–49.

Zulfiqar, K. & Kauser, R. (2009). Trade openness and growth: Pursuing empirical glasnost.IMF Staff Papers, 56, 447-475.

Zulfiqar, K. &Kausar, R. (2012). Trade liberalization, exchange rate and export growth in Pakistan. Far East Journal of Psychology and Business, 9(2), 32-44**.**