

ASSESSMENT OF THE IMPACT OF INTERNATIONAL TRADE ON ECONOMIC GROWTH IN NIGERIA.

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Abstract

This research examined the impact of international trade on Nigeria's economic growth using time series data from 1980 to 2023 obtained from World Bank statistics. The examination used the autoregressive distributed lag (ARDL) model. The ADF test, an abbreviation for Augmented Dickey-Fuller test, is used for detecting unit roots. Moreover, the Autoregressive Distributed Lag (ARDL) functions as the estimation technique. The Autoregressive Distributed Lagged bound test was used to determine the long-term relationships among exports, imports, and economic growth. The stationarity test revealed that the two variables, EXPT and INFR, were stationary at level, with values of -3.133712 exceeding -2.518090 and -4.210863 surpassing -3.518090. The remaining three variables, GDP, IMPT, and EXCR, exhibited non-stationarity at level (-2.133712, -2.888957, and -2.744781). The ARDL findings demonstrate that export trade (EXPT) has a significant beneficial impact (3.5%) on long-term economic growth. Similarly, the inflation rate (INFR) had a little beneficial impact (0.9%) on long-term economic growth. The research indicated that import trade (IMPT) and exchange rate (EXCR) had significant negative impacts of 2.0% and 2.4%, respectively, on long-term economic growth. Consequently, the following suggestions were put forth: The government need to establish and promote an export development plan, performing an unbiased assessment to facilitate more accessible and economical entrance into the export industry, hence augmenting its beneficial impact on Nigeria's economic growth. The importation of commodities must be assessed to ensure it comprises just industrial inputs rather than domestic consumables, so enhancing the productivity of Nigeria's industrial sectors for optimum output that might stimulate economic growth via exports.

Keywords: *International Trade, Export, Import, GDP, Economic Growth*

INTRODUCTION

Developing and even developed countries rely on international commerce as a development factor. No economy, developed or otherwise, can achieve economic independence without first slowing its rate of economic

growth. This is true everywhere in the globe, not only in emerging nations. Overall, international commerce was valued at \$39.7 trillion in 2018, according to the World Bank (World Bank, 2020). Included in this total are exports

of 20.8 trillion dollars and imports of 18.9 trillion dollars. Furthermore, the group said that commerce powers about for 2020 shows that global goods trade fell 2.8% in value in 2019, after two years of expansion. Trade with other countries encourages domestic manufacturing. Greater resource utilisation, more job possibilities, more foreign currency profits, less poverty, higher per capita income, better infrastructure, broader economic scale, etc. are all direct results of this. According to Thorbecke and Kato (2018), it is seen as more than just a tool for increasing productivity; it also drives economic growth and development.

International commerce and economic growth are positively correlated, as is clearly obvious. The reason for this is because local manufacturing in emerging countries like Nigeria relies significantly on imported inputs, hence international trade gives a boost to industrial growth by making these inputs accessible. Also, investment, employment, production, and income all go up when countries engage in foreign trade because it opens up new markets for domestic manufacturing goods (exports), which in turn increases income, consumption, and welfare in those countries (Adewuyi & Adeoye, 2020).

Sunde, Tafirenyika, and Adeyanju (2023) list many ways in which a strong and steady export sector might benefit the economy, including enhanced resource allocation, capacity utilisation, technical innovation, and competition in global markets. The amount of international business has grown dramatically. In particular, the amount and value of trade between Nigeria and other countries have increased significantly (World Bank, 2020).

In 2014, statistics from international trade showed that Nigeria's economy was ranked as the 119th most complicated according to the Global Economic Complications Index (ECI) and that it was the world's 41st biggest export economy. According to a study published by the World Bank, in 2013, the exports of Nigeria were valued at \$94.8 billion, while its imports were valued at \$53.3 billion, which resulted in a trade balance that was \$41.6 billion in the black. The World Bank (2020) reports that Nigeria's gross domestic output was equal to \$521 billion, with a gross domestic product per individual of \$5.6 billion.

46% of the \$86 trillion global economy. World Bank data

The World Bank reported in 2020 that Nigeria's most expensive exports include oil and gas (worth \$10.3 billion), cocoa beans (worth \$561 million), refined petroleum (worth \$3.07 billion), and special purpose ships (worth \$463 million), while its most valuable imports include wheat (worth \$1.42 billion), rolled tobacco (worth \$1.34 billion), refined petroleum (worth \$9.5 billion), automobiles (worth \$1.87 billion), and special purpose ships (worth \$1.01 billion).

In terms of percentages, crude petroleum (79.4% of total exports) and petroleum gas (10.1%) are the top two exports from Nigeria, while refined petroleum (17.9% of total imports) and automobiles (3.51% of total imports) are the top two imports (World Bank, 2020). In September 2015, Nigeria's trade surplus was N197, 187.70 million. Throughout the years 1981–2015, Nigeria's balance of trade averaged N201, 370.76 million, with a peak of N217, 7553.08 million in October 2011 and a record low of N-592200.72 million in March 2011 (Adewuyi & Adeoye, 2020).

Foreign currency gains from commercial commodities, especially crude oil, account for the vast majority of Nigeria's international commerce, while services make up a negligible portion of the country's overall exports. Conversely, the nation has consistently paid a high price to import overseas services, especially those related to transportation, tourism, and other business-related activities. According to Sunde et al. (2023), the average percentage of total exports that are services accounts for about 10% of all exports.

The same holds true for services; they make up over 35 percent of all imports. Government money is generated via foreign trade operations, which is a key component of openness that has a growing influence on economic development. According to Sunde et al. (2023), a nation's openness affects its development rate via influencing the degree of economic activity and making it easier to move resources across borders.

International transactions make up a substantial amount of Nigeria's production, and the country is essentially an open

economy. The free movement of goods and services has boosted foreign investment and knowledge into Nigeria's economy, which in turn has boosted the country's GDP growth. But there are a lot of variables that determine how much a country gains from international commerce. There have been two distinct trade policy regimes in Nigeria's history. In an effort to spur economic development, Nigeria adopted the import substitution industrialisation (ISI) strategy upon gaining independence. Significant trade obstacles, both tariff and non-tariff, were imposed in order to execute the ISI. Import licencing and the random application of tariff via the yearly budget constituted the bulk of trade policy during the time after independence. World Bank (2020) reports that this contributed to a strong anti-export bias that impeded Nigeria's economic growth and development. Various nations have offered trade preferentials, regional agreements, and bilateral agreements to Nigeria in an effort to increase access to the country's markets. Consider Nigeria: a signatory to the Lome Convention, a member of the World Trade Organisation, and an economic community of West African states. There has been a marked decrease in trade promotion initiatives in Nigeria throughout the era of tremendous liberalisation. Financial liberalisation policies were also instituted in tandem with trade liberalisation in an effort to increase efficiency by facilitating competition both inside and between local enterprises that competed with foreign firms in terms of imports. Commodity marketing boards were dismantled and tariff and non-tariff barriers were lowered as part of trade liberalisation policies.

The rise of the Nigerian economy has not been translated into policy actions aimed at fostering trade links with other nations worldwide in order to generate income from foreign currencies, notwithstanding these efforts, which have been launched and executed in stages. Why? Because from 2006 to 2018, Nigeria's proportion of global services exports stayed dismal at 0.1% on average. Over the same time period, Nigeria's services imports accounted for an average of 0.5% of global imports (WTO, 2019). The purpose of this research was to analyse how Nigeria's economy has grown thanks to foreign commerce.

Objectives of the Study

The effect of global commerce on Nigeria's economic expansion was investigated in this article. The particular goals were to:

- i. assess the effect of import trade on Nigeria's economic growth.
- ii. assess how export trade affects Nigeria's economic growth.
- iii. examine the link over time between gross domestic product, import and export trade.

Research Questions

The following research questions served as the basis for this investigation.

- i. What impact has the import trade had on Nigeria's economic expansion?
- ii. How does Nigeria's economic development relate to export trade?
- iii. Do import, export, and gross domestic product have any meaningful long-term relationships?

Research Hypothesis

For the purpose of this paper, three null hypotheses were formulated at tested at 5% and 10% levels of significance.

H_{01} : Import trade has no significant impact on the Economic growth in Nigeria

H_{02} : Export trade has no significant impact on the Economic growth in Nigeria

H_{03} : There is no significant long-run relationship among import trade, export trade and gross domestic product.

Significance of the Study

This research is of significant value to policymakers because it gives insight into how effective international trade is in generating economic development in Nigeria. This study's conclusions provide the foundation for additional studies that will be carried out in the near future about the relationship between international commerce and economic development in Nigeria by building upon the work of earlier researchers. The method that was used in this investigation might serve as a basis for future studies investigating the exchange of goods and services between other nations. The

results of this study would serve as a valuable resource for anybody who is interested in gaining further knowledge regarding the impact of foreign businesses on Nigeria's economic progress. Its use would confer benefits on learners, investigators, academic institutions, and people in general alike. Finally, this study provides an addition to the existing body of research concerning the impact of international commerce on the economic progress of Nigeria, and it will also act as a source of vital information for academics, authors, and other investigators in the years to come.

Scope of the Study

Beginning in 1980 and continuing until 2023, a span of forty-four years was included by the research. The effect of foreign trade on GDP growth in Nigeria was the primary focus of the empirical research. A dependent variable used to describe the Nigerian economy is the gross domestic product (GDP). To substitute for the actual international commerce happening, the quantity of imports and exports was used as an independent variable in this context. Both the exchange rate and the inflation rate played a part as moderators.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Conceptual Review

The buying and selling of commodities and services between countries is what is often referred to as international commerce. It is required that at least two nations be engaged in the operations, which include all transactions between foreign merchants. The study of international commerce focusses on the variables that influence the movement of production factors and the outcomes of international exchanges of goods and services (Adedeji, 2020).

Countries that engage in international trade are clearly more productive than those that focus only on the home market. The degree to which a country's economy is exposed to outside influences, including trade, has become more important in the age of globalisation and liberalisation. International trade's positive impact on national economies is hard to overstate. Businesses gain by expanding their export markets, while consumers gain from more

competition and variety brought to home markets by imports. Businesses in a country may benefit from increased efficiency thanks to trade since it exposes them to the best practices of businesses abroad and the demands of picky consumers. According to Adewuyi and Adeoye (2020), developing nations have access to better capital inputs like machine tools via trade, which increases productivity and opens up new development potential. One of the factors that is helping to speed up Nigeria's economic development is foreign commerce.

Tractors, ploughs, industrial facilities, and other equipment have been able to be imported with its assistance. The Nigerian economy can boost her production and accelerate her expansion with the help of all these equipment. Increases in job prospects brought about by FDI have contributed to a general improvement in the socioeconomic status of Nigerians, and international commerce is a key factor in this trend.

The total value of a country's exports is the sum of all commodities and services produced inside its borders and exported to foreign nations, according to Elias, Agu, and Eze (2018). Exports, which are considered inflows into an economy, may increase competitiveness, let comparative advantage be manifested and harvested, and help an economy attain a positive balance of payments, according to the authors. Furthermore, it is well acknowledged in the literature that export has an impact on economic development. This is because economies of scale allow for more effective resource allocation and higher economic productivity (Adewuyi and Adeoye, 2020; Adedeji, 2020).

The total monetary worth of all products and services purchased by citizens of a country from other nations is called "import." Most people believe that imports hurt economies because they show that growth is slowing down (Elias et al., 2018). Reducing the amount of imports relative to exports is necessary for a country's economy to thrive and have a positive balance of payments, according to the authors. According to Lipsey (1986), economic growth is defined as an increase in a country's total production over a long period of time. This reluctance suggests that GDP will probably keep growing at a steady rate for quite a while. One common way to measure economic growth is by

looking at gross domestic product (GDP). It is a way to find out how much stuff an economy produces all in one go. An rise in a country's output of goods and services over a specific time period is what economists call "economic growth" (Yusuf, Nchom, Osuji, and Udeorah, 2020). An increasingly used metric is the percentage increase in real gross domestic product. The authors also confirmed that real, or inflation-adjusted, terms are often used to measure economic growth, which takes into consideration the impact of inflation on the cost of goods and services.

Theoretical Review

The theoretical review that serves as the foundation for this work is based on two theories of international trade: the theory of absolute advantage put forward by Adam Smith and the theory of comparative advantage put forth by David Ricardo. The following theories will be investigated in further detail.

Theory of Absolute Advantage

"Wealth of Nation" (1776), Adam Smith's seminal work, posited the idea of absolute cost advantage. The notion came into being due to the fact that mercantilism was criticised. Smith argued that free trade was the most effective strategy for global economic development. According to Smith, free trade would allow countries to import products and services that they were less effective at producing and specialise in making those goods and services. The trading countries would all benefit from the rise in global output that would come from worldwide specialisation of production factors (Smith, 1776). Therefore, it is not necessary for one country to benefit at the cost of another; rather, all countries might benefit at the same time. To rephrase, the idea states that countries should focus on producing and exporting goods in which they have a comparative advantage in terms of absolute cost or reduced manufacturing costs. Yet, if a nation has a larger cost or absolute cost disadvantage relative to other countries, it should import that item (Smith, 1776).

Comparative Advantage Theory

After realising that Adam Smith's absolute advantage theory couldn't account for the fact that different nations involved

in a trade would have different strengths and weaknesses in producing different products, David Ricardo (1817) proposed the notion of comparative advantage. It was Ricardo who first shown that differences in comparative advantage, rather than absolute advantage, are the root cause of international commerce. The term "greater advantage" is what "comparative advantage" refers to. According to Ricardo (1817), a trade could still occur between two nations if one country produced the goods more efficiently than the other, as long as the degree of superiority was different for each commodity. Two nations, two goods, and labour as the only element of production were the working assumptions of Ricardo. David took it as read that all workers were hired and could not leave the country, and that there was no price discrimination between products or services. Transportation expenses and other trade barriers do not exist.

According to this idea, countries would aim to sell more of the goods for which their production costs are lower than their pre-trade isolation costs. That both countries' technological levels will remain constant was another tenet of the hypothesis. While countries' technological capabilities may vary, businesses within each country follow a standard procedure while making their wares. As for the distribution of international funds, it was predicated on the idea that commerce is balanced. Trade has little effect on the distribution of a nation's income (Ricardo, 1817).

The theory is founded on the idea that the worth of a commodity is directly proportional to the quality of the work that went into its creation, or at least can be deduced from it. This idea is known as a labour theory of values. Because of its usefulness in economics, the law of comparative advantage must remain in place despite its flaws (Ricardo, 1817).

This research is firmly based on David Ricard's justifiably famous theory of international trade: the comparative cost advantage. For one thing, Nigeria is an international powerhouse when it comes to producing cheap crude oil compared to other nations like the US and Germany. This means that the country can rely on its exports to bring in much-needed foreign currency, which it then uses to buy goods from all over the globe.

Empirical Studies

The influence of international trade on economic development has been the subject of substantial investigation, and the results of these studies give abundant evidence of the manner in which trade contributes to economic advancement. The research team looked into the discoveries that had been found in the past with respect to the issue in question. In light of the current trend towards modernisation in international commerce, Tkalenko et al. (2023) undertook an investigation of the impact of openness in trade on economic growth. After using the Granger causality approach to examine the relationship between these two variables, the inquiry discovered that there is persuasive evidence indicating that there is a causal correlation between exports and economic growth. Having made that statement, the research did come to the conclusion that an increase in the growth of imports in comparison to the growth of exports, together with a negative overall growth rate, resulted in a detrimental balance of international trade.

By using an autoregressive distributed lag (ARDL) bound testing technique to the co-integration methodology, Sunde and colleagues (2023) explored the effects that trade openness, exports, and imports have on Namibia's economic growth. The import subsector had a negative and statistically significant impact on GDP as a result of this; however, the export subsector and trade openness had a positive effect on GDP. The key drivers of economic improvement in Namibia are trade liberalisation and the rise of exports, at least in the near term, according to the findings of the investigation. In addition, an examination of the link between trade openness and economic development in Nigeria was carried out by Bright and Moses (2023). This examination was done by dividing trade openness into four categories: earnings from the export of solid minerals, earnings from the export of manufactured goods, earnings from the export of agricultural products, and earnings from the sale of oil. The autoregressive distributed lag (ARDL) model was used to create the data for this research, which includes information spanning from the year 1986 to 2020. Consequently, the results of the bound test showed that there was a long-term equilibrium link between the development of the economy in Nigeria and all four of the sectoral export variables. The

results of the research indicate that alterations in the agricultural and crude oil export sectors have a positive and significant impact on economic development in the short term. However, modifications in the solid mineral export sector have a negative and significant influence on economic growth in the short term. The findings of the statistical analysis indicated that in the near term, the rise in exports of manufactured goods did not have a perceptible effect on the growth of gross domestic product (GDP). The long-term influence of agricultural products and manufactured goods on growth was shown to be both positive and statistically significant. In contrast, exports of solid minerals and oil were found to have a negative and statistically significant effect. In addition, the autoregressive distributed lag (ARDL) methodology was used by Sunday, Ali, Monyuy, and Yachit (2023) to explore the effects of international trade on the gross domestic product, or GDP, growth of Nigeria from 1981 to 2019. Autoregressive distributed lag (ARDL) bound test methodology was used to confirm that all of the variables were related in a way that would lead to long-term equilibration. This finding substantiated the fact that the three vectors that were included into the model were connected. Furthermore, according to the predictions made by the model for both the short and the long term, foreign direct investment (FDI), the currency exchange rate, and trade in imports all have a small and negative impact on the growth of Nigeria's gross domestic product (GDP) during the course of the research period. On the other hand, the export trade has a substantial direct effect. The results of the research indicate that trade with other nations did not have an influence that could be distinguished from other factors on the development of the nation's economy throughout the time period that was being investigated.

There is a mountain of data showing how international commerce contributes to economic advancement, according to the many studies that have examined the effect of trade on GDP growth. The research group looked at what had already been found on the subject. In light of the current tendency towards international trade globalisation, Tkalenko et al. (2023) examined the impact of trade openness on GDP growth. After employing the Granger causality approach to examine the relationship among exports and economic

development, the analysis discovered strong evidence of a causal correlation. However, the research did find that a negative overall growth rate and a more pronounced rise in import growth relative to export growth contributed to a negative balance of international trade. Through the application of the autoregressive distribution of lag (ARDL) bound testing technique to the co-integration methodology, Sunde and colleagues (2023) examined the impact of trade openness, exports, and imports on the economic growth of Namibia. Hence, trade openness and the export subsector enhanced GDP, but the import subsector significantly and negatively impacted GDP. According to the data, trade liberalisation and increased exports are the key factors propelling Namibia's economy forward, at least in the near future.

Additionally, Bright and Moses (2023) examined the correlation between Nigeria's trade openness and GDP growth by dissecting trade openness into four sub-categories: earnings from solid mineral exports, manufacturing exports, agricultural exports, and oil exports. This research made use of data produced by the autoregressive distributed lag (ARDL) model, which extends from 1986 to 2020. Consequently, the results of the bound test showed that all four of the sectors export variables were positively correlated with the expansion of the Nigerian economy over the long run. The research found that changes in agriculture and crude oil exports significantly and positively affect economic expansion in the near term, whereas modifications in solid minerals exported significantly and negatively affect economic growth in the same time frame. However, the statistical analysis also revealed that exports of manufactured goods had little effect on the growth of GDP in the near term. A favourable and statistically significant influence on growth was long-term exports of agricultural products and manufactured goods, while exports of solid mineral resources and petroleum had a negative and statistically significant effect.

In addition, Sunday, Ali, Monyuy, and Yachit (2023) examined the effect of foreign trade on Nigeria's GDP growth from 1981 to 2019 using an ARDL (Autoregressive Distributed Lag) method. Using the Autoregressive Distributed Lag (ARDL) bound test approach, we confirmed

that the three vectors contained in the model were connected in a way that would lead to long-run equilibration. Furthermore, the model's short- and long-term estimates indicate that FDI, the exchange rate, and import trade all have a small and negative impact on the growth of Nigeria's GDP throughout the examination period. Nonetheless, there is a direct and substantial effect from export commerce. The analysis found that throughout the time period under consideration, trade with other nations had no noticeable effect on the development of Nigeria's economy.

MATERIALS AND METHODS

Research Design

An ex post facto research approach was used in this paper. The purpose of this research strategy is to find out what factors, if any, affect the dependent variable. The nature of the relationship between the predictor and the regressand may be determined, and the impact of the independent variables on the dependent factor can be examined. The confidence in this method's capacity to accurately portray the interrelationships between export, import, and economic expansion led to its selection.

Types and Sources of Data Collection

In the field of economics, data is a fundamental tool for economic study. Gujarati (2004) asserts that the presence of precise and appropriate data is crucial for the efficacy of any econometric study. Researchers must recognise that the accuracy of the data utilised during the study is closely correlated with the quality of its research outcomes. This research project used secondary data from World Bank statistics spanning from 1980 to 2023.

Method of Data Analysis

The Augmented Dickey-Fuller (ADF) unit root test is used for this purpose. This test is used to make modifications for the Phillips-Perron test utilising nonparametric statistical procedures in order to account for the serial connection in the terms of error without using delayed difference terms. In addition, the estimating technique that is used is the Autoregressive Distributed Lagged (ARDL) model. The autoregressive distributed lag model (ARDL) was selected because to its ability to handle time series data with variable degrees of integration. The Autoregressive Distributed

Lagged Bound test was used to ascertain the long-term connections that exist between economic growth, imports, and exports. We used diagnostic tests such as the Breusch - Godfrey serial correlation LM test, the Breusch-Pagan-Godfrey coefficient heterogeneity test, the Ramsey RESET test for model specification, and the Jarque-Bera test for residual normality in order to verify that the estimated model was correct.

Model Specification

The variables that were independent in this study were export and import. Subsequently, a regression analysis was conducted to evaluate the relationship between these variables and economic growth, which was measured by the nation's economic output (GDP). Additionally, the currency rate and inflation rate were employed as variables that were monitored or controlled. The Autoregressive Distributed Lag (ARDL) model that was developed by Pesaran et al. in 2001 was modified for the purposes of this investigation. The model has undergone the subsequent modifications:

$$GDP_t = f(IMPT, EXPT, INFR, EXCR) \dots\dots\dots 1$$

Where:

GDP is the Gross Domestic Product; Represents economic growth,

IMPT is import trade,

EXPT is export trade,

INFR is an inflation rate

EXCR is exchange rate; this refers to the cost or rate at which one currency is valued against another.

The IMPT, EXPT, INFR and EXCR represent the international trade of Nigeria.

The mathematical or functional form of the model is given thus:

$$GDP_t = \beta_0 + \beta_1 IMPT_t + \beta_2 EXPT_t + \beta_3 INFR_t + \beta_4 EXCR_t + \mu_t \dots\dots\dots 2$$

The estimated variable coefficients of the model are β_i $i=1, 2, 3$ and 4. The white noise process is represented by the error term μ_t .

On apriori ground, the values of β_1, β_4 , are anticipated to be negative ($\beta_1, \beta_4 < 0$), and β_2, β_3 are anticipated to be positive ($\beta_2, \beta_3 > 0$).

The Autoregressive Distributed Lag (ARDL) econometric model is given thus:

$$\begin{aligned} \Delta \ln GDP_t = & b_0 + \sum_{i=1}^p b_1 \Delta \ln GDP_{t-1} + \sum_{i=1}^p b_2 \Delta \ln IMP_{t-1} + \sum_{i=1}^p b_3 \Delta \ln EXP_{t-1} + \sum_{i=1}^p b_4 \ln FR_{t-1} + \sum_{i=1}^p b_5 \ln EXCR_{t-1} + \alpha_1 \ln GDP_{t-1} + \alpha_2 \ln IMP_{t-1} + \alpha_3 \ln EXP_{t-1} + \alpha_4 \ln INFR_{t-1} + \alpha_5 \ln EXCR_{t-1} + \mu_t \dots\dots\dots 3 \end{aligned}$$

Where;

The range of values from $\alpha_1 - \alpha_5$ on the right-hand side shows how the variables are related over the long term, whereas the range of values from $b_1 - b_5$ with the summing signs shows how the variables change over the short term.

β_0 represents the intercept or the constant term,

$t-1$ is a lag value (previous years)

μ_t is the disturbance term when considering the other hand of the equation.

$H_0: \alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = \alpha_5 = 0$ represents the null hypothesis in equation 3. This suggests that long-term relationships are therefore nonexistent.

$H_1: \alpha_1 \neq 0, \alpha_2 \neq 0, \alpha_3 \neq 0, \alpha_4 \neq 0, \alpha_5 \neq 0$ represents the alternative hypothesis.

The error correction model and short-run dynamics are modelled below.

$$\begin{aligned} \Delta \ln GDP_t = & \beta_0 + \sum_{i=1}^p \delta_i \Delta \ln GDP_{t-1} + \sum_{i=1}^p \phi_i \Delta \ln IMP_{t-1} + \sum_{i=1}^p \omega_i \Delta \ln EXP_{t-1} + \sum_{i=1}^p \lambda_i \Delta \ln INFR_{t-1} + \sum_{i=1}^p \lambda_i \Delta \ln EXCR_{t-1} + \alpha ECM_{t-1} + U_t \dots\dots\dots 4 \end{aligned}$$

The error correction model (ECM) evaluates the speed with which equilibrium is restored in the long term subsequent to the short-term anomaly of the model (Onisanwa, Shido-Ikwu, and Mercy, 2018). The coefficient of the model for error correction must be negative and less than zero in order for the system to attain equilibrium in the long run, as Narayan (2005) has said.

RESULTS

Table 1: Unit Root Test Results

Augmented Dickey-Fuller test statistic	
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Variables	Level	First Difference	Order of integration
GDP	-2.454927 < (-3.518090)	-4.973052 > (-3.520787)	1(1)
EXPT	-4.133712 > (-3.518090)	-3.521247 < (-3.520787)	1(0)
IMPT	-2.888957 < (-3.518090)	-8.649587 > (-3.520787)	1(1)
INFR	-4.210863 > (-3.518090)	-2.316533 < (-3.520787)	1(0)
EXCR	-2.744781 < (-3.518090)	-5.1754303 > (-3.520787)	1(1)

Source: Author's computation using E-views 9.0

The variables that were included in the ARDL model of regression and their results of the unit root test are shown in Table 1. Both the level and first difference critical values are -3.518090 and -3.520787, respectively. Table 1 shows that both EXPT and INFR were stationary at the level where -3.133712 > -2.518090 and -4.210863 > -3.518090, respectively. Whereas, at the level of -2.133712, -2.888957,

and -2.744781, the other three variables—GDP, IMPT, and EXCR—were not stationary. Their ADF values are below the crucial thresholds of -3.518090, which is why this is happening. At the same time, the ADF values of -4.973052, -8.649587, and -5.1754303 were all over the crucial threshold of -3.520787, indicating that the three variables in question were stable at first difference.

Table 2: ARDL Bounds Test Results

Critical Values = 5%		Critical Value Bounds	
Significance		Lower Bound I(0)	Upper Bound I(1)
10%		2.45	3.52
5%		2.86	4.01
2.5%		3.25	4.49
1%		3.74	5.06
		K = 4	
Computed F-Statistics = 15.19723			

Source: Author's computation using E-views 9.0

The bounds test for ARDL is shown in Table 2 above this. The upper limits are lower than the F-statistics (15.19723) at all confidence levels, as can be seen from the findings in

table 2 above. This indicates that there are long-term associations between the variables that are included in the model.

Table 3: ARDL Long-Run Estimation Results

Variable	Coefficient	S.E	t-statistic	Prob.
EXPT	0.353751	0.216026	2.572852	0.0115
IMPT	-0.201876	0.179282	1.845822	0.0916
INFR	0.099534	0.123466	0.006169	0.4272
EXCR	-0.249322	0.620050	2.337429	0.0271
C	-4.879453	0.892289	5.468469	0.0000

Source: Author's computation using E-views 9.0

The influence of the independent variables on the dependent variable was investigated by looking at the coefficients over time of the autoregressive distributed lag model. The numbers are shown in Table 3. The findings demonstrate that exportation (EXPT) plays a significant role in the growth of the economy over an extended period of time. This is caused by the fact that a one percent rise in exports would cause gross domestic product (GDP) growth to

increase by four percent. Furthermore, the t-statistics (1.845822 > 0.0916) provide evidence that imports (IMPT) have a negative influence on the economic growth of Nigeria.

If imports were to rise by one unit, this would cause a two percent decline in economic growth. There was also a beneficial influence of the rate of inflation (INFR) on the increase of Nigeria's gross domestic product (GDP), but this

impact was statistically insignificant. For every 1% rise in the price level, there would be an increase in economic growth of either 0.9% or 1%.

According to statistical study, currency exchange rate (EXCR) has a negative impact on the growth of the economy in Nigeria. This indicates that if the exchange rate were to rise by 1%, then two and a half percent of the economic progress would be delayed

Table 4: Table 3: ARDL Short-Run Dynamics

Variable	Coefficient	S.E	t-statistic	Prob.*
GDP(-1)	-0.031667	0.204908	-4.546749	0.0543
GDP(-2)	0.123751	0.216026	-0.572852	0.5715
GDP(-3)	-0.430923	0.179282	-1.845822	0.0759
EXPT	0.049322	0.620050	-2.337429	0.0271
EXPT(-1)	-0.029453	0.892289	5.468469	0.0000
EXPT(-2)	0.019534	0.197559	0.806154	0.5433
IMPT	-0.023728	0.107712	-4.033427	0.0081
IMPT(-1)	-0.097122	0.098654	-2.064388	0.0601
IMPT(-2)	0.010223	0.097065	0.509899	0.0708
INFR	0.059788	0.046637	0.977665	0.0509
INFR(-1)	-0.067433	0.300822	1.854666	0.0975
INFR(-2)	0.043279	0.081011	0.908611	0.6010
EXCR	-0.038544	0.686533	0.808996	0.0401
EXCR(-1)	-0.016543	0.098867	-2.097522	0.0900
EXCR(-2)	0.043098	0.005456	0.065663	0.0087
CointEq(-1)	-1.018370	0.986675	-5.435699	0.0000

Source: Author's computation using E-views 9.0

The ARDL short-run coefficients were shown in Table 4. According to the findings, the short-run coefficient for GDP at lags 1 and 3 is negative and does not reach statistical significance. Inferentially, a 1% gain in GDP in prior years would result in a 0.3% and 4% drop in GDP in the present year, respectively. Nevertheless, the second lag for GDP is positive, although it is not statistically significant. Thus, a 1% increase to lag 2 for GDP would result in a negligible 1.2% rise to current GDP.

Table 4 additionally showed that both the short-run estimate (EXPT) and the lag 2 estimate (EXPT (-2)) of the same export contribute positively to Nigeria's GDP growth. However, it failed to have a statistical impact. It was shown that a 1% increase in exports would result in a 0.4% and 0.1% boost to Nigeria's current economic growth. Nevertheless, the present economic expansion was severely dampened by the first export lag (EXPT (-1)).

Furthermore, as shown in table 4, the import lag 1 and the short-run import coefficient (IMPT) both have a negative effect on Nigeria's economic development. According to these numbers, a 1% increase in imports would have a 0.2% and 0.9% impact on Nigeria's economic growth this year, respectively.

The inflation rate estimate for the near term (INFR) and the prior year (lag 2) both have a beneficial effect on economic growth in Nigeria. Nevertheless, a detrimental effect was shown by lag 1. It follows that there would be a statistically significant 0.6% drop this year for every 1% rise in inflation.

Finally, there is statistical evidence that the estimated coefficients of exchange rate (EXCR) had a detrimental effect on economic development in Nigeria. So, if the exchange rate were to rise by 1%, GDP growth in Nigeria would fall by 0.3%. Similarly, the present economic

development in Nigeria was impacted negatively by the coefficient estimate of the exchange rate from the prior year (lag 1). Reason being, there would be no statistically significant difference in economic growth from a 1% rise in the exchange rate from the prior year to a 0.1% decline in this year. There is a negative and statistically significant co-

integrating error correction mechanism (ECM) this year, which means that the independent variables are adjusting back to future relationship at a rate of around 102%.

Table 5: Summary of the Diagnostic tests results

Test	Null Hypothesis	F-statistics	Prob. Value
Breusch-Godfrey Serial Correlation LM Test	No serial autocorrelation	1.210753	0.4118
Breusch-Pagan-Godfrey Jarque-Bera	No heteroscedasticity Series residuals are normally distributed	1.810531 0.982154	0.3907 0.1410
Ramsey RESET	No misspecification	5.194327	0.2873

Source: Author's computation using E-views 9.0

The ARDL short-run coefficients were shown in Table 4. According to the findings, the short-run coefficient for GDP at lags 1 and 3 is negative and does not reach statistical significance. Inferentially, a 1% gain in GDP in prior years would result in a 0.3% and 4% drop in GDP in the present year, respectively. Nevertheless, the second lag for GDP is positive, although it is not statistically significant. Thus, a 1% increase to lag 2 for GDP would result in a negligible 1.2% rise to current GDP.

Table 4 additionally showed that both the short-run estimate (EXPT) and the lag 2 estimate (EXPT (-2)) of the same export contribute positively to Nigeria's GDP growth. However, it failed to have a statistical impact. It was shown that a 1% increase in exports would result in a 0.4% and 0.1% boost to Nigeria's current economic growth. Nevertheless, the present economic expansion was severely dampened by the first export lag (EXPT (-1)). Furthermore, as shown in table 4, the import lag 1 and the short-run import coefficient (IMPT) both have a negative effect on Nigeria's economic development. According to these numbers, a 1% increase in imports would have a 0.2% and 0.9% impact on Nigeria's economic growth this year, respectively.

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DISCUSSION OF FINDINGS

The particular aims and tested hypotheses of the research form the basis of the results discussion. Finding out how import trade affected GDP growth in Nigeria was the primary goal. The long-run ARDL coefficient data showed that imports (IMPT) significantly stunted Nigeria's GDP development. That is, a 2% slowdown in economic growth in Nigeria would result from a 1% rise in imports.

Imports from foreign nations devalue the naira because they promote over-dependence and inhibit domestic creation of goods and services. This is due to the fact that larger sums of money are being put into the treasuries of other countries. The findings of this investigation, which indicate that import trade has a negative impact on the Nigerian economy, are consistent with those of Omotayo, Adewole, and Adeyemo (2022) as well as Awujola (2013). The findings of this research project were found to be in conflict with the results of other research projects, including those carried out by Adeleye et al. (2015), Elias et al. (2018), Javed et al. (2012),

Rahmaddi & Ichihashi (2011), Puruweti (2017), Richard et al. (2020), Babatunde et al. (2017), Lawal and Ezeuchenne (2017), Adedeji (2020), and Omoke and Opuala (2021).

Furthermore, the results of the study showed that both the import trade short-run coefficients (IMPT) and the import lag 1 both contribute to the hindrance of economic progress in Nigeria. According to the information provided here, an increase of one percent in imports would have had an impact of 0.2 percent and 0.9 percent on Nigeria's gross domestic product (GDP) growth for this year, respectively. Because the research demonstrated that the importation of goods and services had a significant effect on the economic growth of Nigeria, the null assumption was rejected.

The second objective was to examine how export commerce contributed to GDP growth in Nigeria. The ARDL found that export trade (EXPT) greatly increased GDP growth in the long run. In a similar vein, the same export has a positive impact on Nigeria's GDP growth in both the short-run estimation (EXPT) and the lag 2 estimate (EXPT-2). It did not, however, provide any statistically significant results. On the other hand, Nigeria's economic progress this year (EXPT (-1)) was severely impacted by the decline in exports from the previous year (lag 1).

The positive impact of export trade (EXPT) on GDP growth aligns with prior studies conducted in various countries, including Pakistan (Javed et al., 2012), Indonesia (Rahmaddi & Ichihashi, 2011), China (Sun and Heshmati, 2010), Namibia (Sunde et al., 2023), Ukraine (Tkalenko et al., 2023), Cote d'Ivoire (Yaya, 2017), Zimbabwe (Puruweti, 2018), South Africa (Malefane and Odhiambo, 2018), and Nigeria (Richard et al., 2020; Babatunde et al.; Lawal and Ezeuchenne, 2017; Omoke and Opuala, 2021). Export trade impeded economic advancement, as shown by research like Umar et al. (2021), Awujola (2013), Okenna (2022), and Adeleye et al. (2015). The study concluded that export commerce had a substantial impact on economic growth in Nigeria, hence rejecting the null hypothesis.

To investigate the relationships among the expansion of GDP, IMPT, and exports over an extended period of time was the third and final objective of the research. The variables that were included in the Autoregressive Distributive Lag Model (ARDL) were shown to exhibit

long-run correlations, according to the findings of the bound test of the ARDL. According to the findings of this research, there is a positive correlation between imports, exports, and gross domestic product (GDP) growth over the long run, which leads to the rejection of the null hypothesis.

CONCLUSION

This study examined to determined how the international trade affected Nigeria's economic growth. Time series data spanning 1980–2023, inclusive, was used for this purpose. Information was examined using the ARDL model, which stands for autoregressive distributed lag. Findings indicate that export trade (EXPT) significantly contributes to long-term economic growth. In addition, there is statistical evidence that shows that the import-export trade (IMPT) hinders the growth of the Nigerian economy. Although the study's results do not reach statistical significance, they do show that inflation (INFR) contributes positively to economic development in Nigeria. The EXCR has a statistically significant negative impact on Nigeria's economic growth over the long run.

. Aside from the estimation of the long-run parameters, it is essential to investigate the parameters of the autoregressive distribution of lag model (ARDL) in the short term. According to the data, the short-run correlations for lag 1 and lag 3 of GDP are not only negative but also statistically insignificant. In contrast, the lag 2 of the GDP is not statistically significant in spite of the fact that it is positive. Additionally, the short-term estimations for the market for imported goods (EXPT) and lag 2 for the same exporting trade (EXPT (-2)) have been shown to have beneficial impacts on the economy of Nigeria. but not reaching a level of statistical significance The export (EXPT (-1)) with a lag of 1 had a negative impact on the current economic growth, which was thus adversely influenced by the present economic growth, as the export (EXPT (-1)) had a significant effect on the present economic growth.

In the short run, import (IMPT) and import lag 1 are linked to detrimental effects on Nigeria's economic growth. Both Nigeria's economic progress and its previous year (lag 2) are positively impacted by the short-run parameter estimate for the rate of inflation (INFR). However, there was a negative impact from the lag 1. Finally, the coefficient of the

currency exchange rate (EXCR) was discovered to have a statistically significant adverse effect on Nigeria's economic development. Additionally harmful to Nigeria's current economic progress was the coefficient of prediction estimate of the currency exchange rate for the previous year (lag 1).

RECOMMENDATIONS

The following recommendations were made after an analysis of the impact of international trade in commodities and services, inflation, and currency exchange rates on GDP growth:

The government should adopt and support an export development strategy, and it should also undertake objective evaluations of the policy, in order to make it simpler and less expensive to join the export sector. This would strengthen the patterns of its impacts on the economy in Nigeria.

REFERENCES

- Adak, B. N. (2010). Trade openness and economic growth: Evidence from Nigeria. *European Journal of Business, Economics and Accountancy*, 6(4), 30-44.
- Adedeji, K. (2020). Contribution of International Trade to Economic Growth in Nigeria. Awards for Excellence in Student Research and Creative Activity – Documents.
- Adeleye, J. O., Adeteye, O. S. & Adewuyi, M. O. (2015). Impact of International Trade on Economic Growth in Nigeria. *International Journal of Financial Research* 15(12), 163- 172.
- Adeteye O. S. & Adewuyi M. O. (2012): Impact of International Trade on Economic Growth in Nigeria (1988-2012), *International Journal of Financial Research* Vol. 6, No. 3
- Adewuyi, and Adeoye (2020). Attainment of Potential Growth Rates in Nigeria under Balance of Payments Constraints: Extent, Obstacle and the way forward. *Research Journal of Finance and Accounting*. Vol 2, No 2. www.iiste.org
- Awujola, A. (2013). External Trade and Nigerian Economy: An Impact Analysis. *International Journal of Economics, Commerce and Management*, 1, 157-163.
- Babatunde, A., Jonathan, D. D. & Muhyideen, I. A. (2017). International Trade and Economic Growth in Nigeria. *Global Journal of Human-Social Science*, 17(5).
- Bright O. Ohwofasa¹ & Moses Ekaruwe² (2023). Trade Openness and Economic Growth in Nigeria. *Lafia Journal of Economics and Management Sciences: Volume 8, Issue 1; 2023*.
- Elias, I. A., Agu, R. E. & Eze, L.O. (2018). Impact of international trade on the economic growth of Nigeria, *European Journal of Business and Management*, 10(18), 22-30.
- Considering the fact that imports have a negative influence on economic development in Nigeria, as shown by the results of the research, it is imperative that policymakers reassess imports in order to ensure that they consist mostly of industrial inputs as opposed to consumer items. This would increase industrial productivity in Nigeria, which would subsequently enable the country's exports to make a greater contribution to economic development.
- Industrial inputs, technology, and other inputs that will improve Nigeria's industrial capacity should have the utmost priority when businesspeople allocate forex on importing products and services. Local or emerging businesses will be able to manufacture more high-quality products and services, which can be easily exported and used to generate foreign currency, thanks to this.
- Javed, Z. H., Qaiser, I., Mushtaq, A., Sai-ullaha, Iqbal, A. (2012): Effects of International Trade on Economic Growth: The case study of Pakistan. *International Journal of Academic Research in Progressive Education and Development*. 1(2), 103-113.
- Lawal, O. E. & Ezeuchenne (2017). International Trade and Economic Growth in Nigeria. *Journal of Humanities and Social Science (IOSR-JHSS)*, 22(6), 35-43.
- Li, Y., Chen, Z., & San, C. (2010). Research on the relationship between foreign trade and the GDP growth of East China: Empirical analysis based on causality. *Modern Economy*, 1(2), 118-124.
- Malefane, M. R. & Odhiambo, N. M. (2018). Impact of trade openness on economic growth: Empirical evidence from South Africa. *Economia Internazionale/International Economics*, 71(4), 387- 416.
- Okenna, N. P (2022). The importance of international trade to the economies of developing countries. *International Journal of Economics and Management Sciences*. 9(5), 1-5.
- Omoke, P. C. & Opuala, C.S. (2021). Trade openness and economic growth nexus: Exploring the role of institutional quality in Nigeria, *Cogent Economics & Finance*, 9(1), 115-127.
- Omotayo, J. I., Ohwofasa, B. & Onabote, A., (2022). Empirical assessment of the impact of external reserves on economic growth in Nigeria. *Investment Management and Financial Innovations*, 19(2), 295- 305.
- Puruweti, S. (2017). Can trade openness stimulate output performance? A case of selected African countries. *Siyakiya, Journal of International and Global Economic Studies*, 10(2), 55-67.

- Rahmaddi, R. and M. Ichihashi, (2011). Exports and Economic Growth in Indonesia. A Causality Approach based on Multi-Variate Correction Mode. *Journal of International Development and Cooperation*, 17(2):53-73.
- Ricardo, D. (1817). On the principles of political economy and taxation. In Murray, J. (eds). pp. 160–162.
- Richard, O. I. & Uzoma, M. U. (2020). Trade openness and economic growth in the developing countries: Evidence from Nigeria. *International Journal of Academic Research IN economics and management sciences*, 8(3), 30-42.
- Safdari M, M.A Mehrizi and M-R Dehqan-Niri (2012). The Relationship between Foreign Trade and Economic Growth in Iran. *American Journal of Scientific Research*.
- Sarbapriya, R. (2011). Explaining Cointegration and Causality between Foreign Trade and Economic Growth: Econometric Evidence from India. *International Journal of Contemporary Business Studies*, vol. 2, no. 10.
- Smith, A. (1776). *An inquiry into the nature and causes of the Wealth of Nations*. Oxford, Oxford University Press.
- Stephen, E. A. & Obah, D. O. (2017). The Impact of International Trade on Economic Growth in Nigeria: An Econometric Analysis. *Asian Banking and Finance Review*, 1(1), 28-47.
- Sun, U., & Heshmati (2010). Trade Liberalization and Environment in the Pacific Basin; Coordinated Approaches to Mexican Trade and Environment Policy. *American Journal of Agricultural Economics*. 24(2).
- Sunday, S. O., Edun, F., and Taiwo, S. B. (2023). Export Diversification and Economic Growth in Nigeria: An Empirical Test of Relationship Using a Granger Casualty Test, *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)* 5(1):70-79
- Sunde, T., Tafirenyika, B. & Adeyanju, A. (2023). Testing the impact of exports, imports, and trade openness on economic growth in Namibia: Assessment using the ARDL co-integration method. *Economies*, 11: 86.
- Thorbecke W. A., Ewa, U. K., Edem, E. N., Oka, F. A. & Eleng, D. M. (2018). Influence of trade liberalization on the growth of Nigerian economy: autoregressive distributed lag approach. *European Journal of Accounting, Auditing and Finance Research*, 6(7), 87-106.
- Tkalenko, S., Duka, A., Sukurova, N., Kudyrko, L. & Litvin, N. (2023). The impact of trade openness on economic growth: The case of Ukraine. In: Hamdan, A., Shoaib, H.M., Alareeni, B., Hamdan, R. (eds). *The implementation of smart technologies for business success and sustainability*. *Studies in Systems, Decision and Control*, 216.
- Umar, B; Adamu, H.A; Nazeef, B.H; and Yahaya Y.M.B, (2021). Impact of trade openness on economic development in Nigeria. *International Journal of Intellectual Discourse (IJID)*. Volume 4, Issue 2.
- World Bank, (2020), World bank data report, World Bank, Washington, DC, USA.
- Yaya, K. (2017). The impact of trade openness on economic growth: The case of Cote d'Ivoire. *Cogent Economics & Finance*, 5(1), 133- 148.
- Yusuf, L. O. Nchom, H., Osuji, P. & Udeorah, S. F. (2020). Impact of international trade on the growth of the Nigerian economy. *International Journal of Research and Innovation in Social Science* 4(8), 2454- 6186.