Balance of Payment and Economic Development in Nigeria

Osuka, B. O, Otiwu, K C
Department of Banking and Finance Imo State University, Owerri

Kalu, Ugo Eke
Banking and Finance Department Abia State Polytechnic, Aba

Abstract
The discrepancies in the rates of growth of exports/import have been wider in value terms, because of the balance of payment of developing countries such as Nigeria has deteriorated vis-à-vis those of developed countries. Thus, this study examined the effect of balance of payment on economic development in Nigeria from 2000 – 2022. Import and export were used as a proxy for balance of payment, while per capita income was used for economic development in Nigeria. Data were obtained from secondary sources; International Monetary Fund, Balance of Payments Statistics yearbook and data files (2000-2022). Unit root test on the time series data displayed stationaity at first difference 1(1) for all variables. And Johansen co-integration test was carried out and result confirmed goodness of fit and validity of the model employed for the analysis. Multiple linear regression model was used to test hypotheses since, the data has a uni-lateral direction. Findings reveal that import and export have significant effect on per capita income in Nigeria. In conclusion, balance of payment has significant effect on per capita income in Nigeria. The researcher recommended that both federal and state government should put in place policies that promote industrialization and domestic production in order to promote exportation. This may be done by formulating and implementing dynamic terms of trade and keeping trade openness rate below or at ceiling level in order to ensure economic development, since exportation has positive and significant effect on per capita income in Nigeria.

Key Words: Balance of Payment, Effect, Economic Development, Nigeria

INTRODUCTION

Right from the time of the classical economists, the theory of trade and payment had been considered as vital in the explanation of the economic development process of any country. This was hinged on the observed long historical interdependence among the various economies of the world. In essence, no country is a complete island to itself. It is for this reason that international trade theorists have always tried to explain observed patterns in national development standards in terms of their differential nature endowment and production efficiency (United Nation, World Economic and Social Survey, 2013). The interaction among production, distribution and exchange across national frontiers, and their implications for economic growth from the central core of trade theory. It can be said that the positive effects of trade on economic growth were first pointed out by Adam Smith (1776). This was the prevailing economic idea, with an exception of the relative hibernation during the marginalist revolution until World War II (Alfonso, 2017).

In the real world, no economy survives with total autarky; every economy depends on another for one or more commodities or services. But the pattern of trade and payment of a nation affects its rate of economic growth, meaning that international trade must be well appraised or balanced by nations to ensure they are not at the detriment of trade (import and export). Given the desire of the various economies of the world to grow and translate their growths into sustainable development that will lead to several structural adjustments and the stimulation of demand and supply, hence the reason for striving continuously to determine a model of economic growth that suits different nations so as to monitor the variations in balance of payment, rate of economic development and make adjustments when necessary (Olayemi, Adedeji, Adenekan & Owonikoko, 2017). Conceptually, balance of payment is a system that shows the difference between the monetary value of imports and exports of a country. It may be favourable or unfavourable for a country. It affects their currency relative value. The large trade deficits are perceived as problematic for an economy, but not the smaller ones. If it is favourable will generate a confidence among the investors. They would like to invest or vice versa (Umaru, 2016). The Balance of Payments (BoP) is a statement or record of all monetary and economic transactions made between a country and the rest of the world within a defined period (every quarter or year).

The balance of payment constrained growth model states that a country's economic growth rate is constrained by the desire to generate foreign exchange and reiterate the function of demand as the motivation for domestic growth. This arises because growth in export and investment growth in import substitution are the only aspect of aggregate demand that can increase GDP growth and reduce foreign constraints (Osuka & Achinihu, 2014). This implies that growth rate may be constrained by the balance of payment as the economy cannot grow faster than what is consistent with the balance of payment equilibrium. The principle of this Keynesian demand side growth theory is that export capability and import attitude may establish a long run economic growth. Income derived from external trade constitute the principal medium to finance growing import due to a rise in domestic activities (Jhingan, 2016). This model differs from the supply induced growth models which evaluate economic growth by using factor inputs such as savings, human and physical capital, population growth and initial per capital GDP on economic growth (World Trade Organization, 2019). However, it is pertinent to note that, although the dominant theoretical postulations (beginning with the classical) indicate a positive trade-economic growth nexus, most studies concentrated only on the static effects of trade, as Baldwin (2019) posited that the static gains of trade were of little significance. This led to a series of debates in the last decades on the precise direction of trade and stressing its dynamic effects on economic growth.

Before her political independence in 1960, Nigeria had been an active player in the field of foreign trade. Thus, the Nigerian economy has had her fair share of international trade since the 1960s even though the composition of trade has evolved over the years. However, despite her involvement in international trade the Nigerian economy, until recent years, had recorded dismal growth and development rates. More so, it worth noting that the liberalization of the foreign exchange market in Nigeria in the mid-1980 had caused persistent movement in exchange values which may led to deleterious effect on the balance of payment position of a country. The discrepancies in the rates of growth of exports have been wider in value terms, because of the balance of payment of developing countries such as Nigeria has deteriorated vis-à-vis those of developed countries. This resulted in a fall of developing countries share of the total value of world trade from 30 percent in 1960 to below 20 percent recent days (Ochei, Tochukwu & Areghan, 2019). Thus, despite the predictions of trade theory, the issue for

developing countries in general, and Nigeria in particular is not so much as whether to trade, but in what to trade, and the terms on which to trade. In effect, the Nigerian economy is now more integrated into the global economy, and foreign trade become one of the essential elements of economic growth in the country especially during the last three decades. Thus, the issue of trade and its impact on the Nigerian economy has gained prominence since the country opened up its economy to the world through the implementation of liberal economic policies provide credit and risk bearing facilities to banks, so as to encourage them to support exports (Dele, 2010). In view of the above, the impact of trade on the Nigerian economy is a well-researched topic in the literature.

REVIEW OF RELATED LITERATURE

Concept of Balance of Payment

The balance of payments records an economy's transactions with the rest of the world. Balance of payments accounts are divided into two groups: the current account, which records transactions in goods, services, primary income, and secondary income, and the capital and financial account, which records capital transfers, acquisition or disposal of non-produced, nonfinancial assets, and transactions in financial assets and liabilities. The current account balance is one of the most analytically useful indicators of an external imbalance. A primary purpose of the balance of payments accounts is to indicate the need to adjust an external imbalance. Where to draw the line for analytical purposes requires a judgment concerning the imbalance that best indicates the need for adjustment. There are a number of definitions in common use for this and related analytical purposes. The trade balance is the difference between exports and imports of goods (Abaidoo & Rexford, 2019). From an analytical view it is arbitrary to distinguish goods from services. For example, a unit of foreign exchange earned by a freight company strengthens the balance of payments to the same extent as the foreign exchange earned by a goods exporter. Even so, the trade balance is useful because it is often the most-timely indicator of trends in the current account balance. Customs authorities are typically able to provide data on trade in goods long before data on trade in services are available.

Balance of payment is the difference in total value between payments into and out of a country over a period. The balance of payments (BOP) is the method countries use to monitor all international monetary transactions in a specific period (Abaidoo & Rexford, 2019). The BOP is usually calculated every quarter and every calendar year. The balance of payments is a comprehensive and systematic record of a country's economic transactions with the rest of the world, encompassing goods, services, and capital flows within a specified time frame (Pham, 2017). It comprises the current, capital, and financial accounts, each reflecting different types of transactions. The BoP statement provides a clear picture of the economic relations between different countries. It is an integral aspect of international financial management. BoP statement provides information pertaining to the demand and supply of the country's currency. A country's BoP determines its potential as a constructive economic partner. In addition, a country's BoP indicates its position in international economic growth. By studying its BoP statement and its components closely, a country would be able to identify trends that may be beneficial or harmful to the economy and take appropriate measures. Now let's understand the different components of the BoP. The BoP consists of three main components: current account, capital account and financial. The current account must balance with the combined capital and financial accounts (Atesoglu, 2019).

i. Current Account

The current account monitors the flow of funds from goods and services trade (import and export) between countries (Bairam, 2018). It includes money received or spent on manufactured goods and raw materials. It also includes revenue from tourism, transportation receipts, revenue from specialized services (medicine, law, engineering), and royalties from patents and copyrights. In addition, the current account includes revenue from stocks (Barro & Sala-i-Martin, 2019).

ii. Capital Account

The capital account monitors the flow of international capital transactions. These transactions include the purchase or disposal of non-financial assets (for example, land) and non-produced assets (Bairam, 2018). The capital account also includes money received from debt-forgiveness and gift taxes. In addition, the capital account records the flow of the financial assets by migrants leaving or entering a country and the transfer, sale, or purchase of fixed assets (Barro & Sala-i-Martin, 2019).

iii. Financial Account

The financial account monitors the flow of funds pertaining to investments in businesses, real estate, and stocks. It also includes government-owned assets such as gold and Special Drawing Rights (SDRs) held with the International Monetary Fund (IMF). In addition, it includes foreign investments and assets held abroad by nationals. Similarly, the financial account includes a record of the assets owned by foreign nationals (Atesoglu, 2019). The financial account is a measurement of increases or decreases in international ownership of assets. The financial account monitors the flow of funds pertaining to investments in businesses, real estate and stocks. It also includes government-owned assets such as gold and Special Drawing Rights (SDRs) held with the International Monetary Fund (IMF). The financial account is part of a country's balance of payments (Imoisi, Olatunji & Ekpenyong, 2013).

Concept of Economic Development

Describing economic development Adegbola, Onyegiri, Damilola, Okoye, and Ayomide, (2022) observed that economic development is characterized as a long-term effort by a country to enhance the local economy and quality of life by increasing the area's ability to adapt to economic change. Economic development is usually measured by gross domestic product per capita generally referred to as Per-capita income. Per-capita income is a measure of economic well-being of an average citizen. Per-capita income is a measure of economic well-being. Through its effect on economic development, it can indirectly affect sustainable development (Antwi, Mills & Zhao, 2013). Over the years, income per-capita was commonly used to describe the wellbeing of individuals in a specific period of time. This was usually done without putting into consideration the inter-temporal dimension in which sustainable development can be also affected by income per-capita level (Oyejide, 2020). Income per-capita level can indirectly affect sustainable development through its effect on economic development. This can be through the effect of income per-capita on education, health, migration and sanitation levels. Having low levels of income per-capita is more likely to reduce the individuals' access to high levels of education and knowledge (Ezenwa, 2017). In addition, it deprives individuals from better nutrition which negatively affect their health status and productivity as well as it encourages migration from the country whenever possible. Also, low income per capita is associated with poor environmental conditions such as poor sanitation, high levels of pollution

and lack of access to clean water. In particular, the literature is rich in tracing the effect of low levels of income per-capita on pollution emissions level as illustrated by the Environmental Kuznets Inverted U hypothesis (Kolawole, 2018). Per capita income is a measure of the amount of money earned per person in a nation or geographic region.

Effect of International Trade on Economic Growth of Nigeria

International trade can be interchangeably referred to as '*foreign trade' or 'global trade'*. It encompasses the inflow (import) and outflow (export) of goods and services in a country. A country's imports and exports represent a significant share of her gross domestic product (GDP); thus, international trade is correlated to economic growth. In an open economy, development of foreign trade greatly impacts GDP growth (Li, Chen & San, 2017). Countries would be limited to goods and services produced within their territories without international trade. International trade is directly related to globalization because increase in trade activities across border is paramount to the globalization process. The globalized nature of an economy enhances its direct participation in the world market consequently leading to market expansion (Osuka & Achinihu, 2014).

There is no negation that Nigeria is an import-dependent nation. Her most important export commodity is oil. The discovery of oil has inflicted *'Dutch Disease'* or resource curse on the economy. Prior to oil discovery, the agricultural sector has been the largest export sector for Nigeria. However, the oil boom which occurred in 1970s made the relevance of Nigeria's agricultural sector in the global market whittle away. The focus of the government on crude oil exports led to the neglect of the agricultural sector; hence, reducing the overall productivity of the economy. According to Abebefe (2019), Nigeria's over-dependence on crude oil is dangerous because crude oil is a wasting asset with a proven reserve which would eventually become depleted and the vagaries of the oil market has resulted in a significant decline in the earnings because of the exogenously determined price of crude oil. The 21st century has witnessed series of economic and trade reforms in Nigeria put in place by government in order to diversify the export base and ensure that foreign trade serves as a driving force for the economic growth engine. Theory of comparative advantage make us to understand that countries trade with each other in goods and services because of the concept of differentials in the natural resources, human capital, financial capital and technical capabilities endowment of nations. Some countries are more endowed in these resources than others, even, many countries that are adequately blessed with good resources may not have the ability to manage and channel them to their advantage, hence, denying them the opportunity of achieving the necessary growth, development and good standard of living for their citizenry. The importance of international trade stems from the fact that no country can produce all goods and services which people require for their consumption largely owing to resources differences and constraints. As a result, this trade relationship suggests that economies need to export goods and services in order to generate revenue to finance imported goods and services which cannot be produced domestically.

Theoretical Framework
Ricardian Trade Theory

Ricardian trade theory by David Ricardo (1817) posits that even when one country has absolute advantage in the production of two goods against another country; it might still be more beneficial to both countries if each of them specialized in the production of only one of the

goods. With this, both countries can enjoy the benefits of comparative advantage and enhance the process of exchange between them. Heckscher-Ohlin model depicts that trade arises from differences in comparative cost which in turn arises from inter-country differences in relative factor endowment. As a result, real income per capita rises than the standard of living would increase. Trade has acted as an important engine of growth for countries at different stages of development, not only by contributing to a more efficient allocation of resources within countries, but also by transmitting growth from one part of the world to another. Not all countries, however, necessarily share equally in the growth of trade or its benefits. This will depend on the production and demand characteristics of the goods that a country produces and trades, the domestic economic policies pursued, and the trading regime it adopts. For example, taking the developing countries as a whole, the volume of exports has grown slower than for developed countries since 1950 –5percent per annum compared to 8 percent – because developing countries still largely produce and export primary commodities and low value-added manufactured goods with a relatively low income elasticity of demand in world markets. The inconsistency in rates of growth of exports has been even wider in value terms because the terms of trade of developing countries has deteriorated vis-à-vis developed countries causing the developing countries' share of the total value of world trade to have fallen from 30 percent in 1965 to 20 percent today, (Thirlwall 2013).

Modern Theory of Trade

The Heckscher-Ohlin modern theory of trade explains why countries trade in goods and services with each other. Condition for trade between two countries includes differences in the availability of the factors of production. For instance, if one country has many machines but few workers, while the other country has a lot of workers but few machines differences in factor exists. Specialization is another condition; a country specializes in the production of goods that it is particularly suited to produce. Specialization in production and trade between countries generates, according to this a higher standard-of-living for the countries involved. The production of goods and services requires capital and workers. Some goods require more capital – technical equipment and machinery - and are called capital intensive. For instance these goods are cars, computers, and cell phones, while other goods require less equipment to produce and rely mostly on the efforts of the workers. These goods are called labour intensive. Examples of these goods are shoes and textile products such as jeans. The Heckscher-Ohlin theory holds that two countries trade in goods with each other (and thereby achieves greater economic welfare), if the following assumptions hold: the major factors of production, namely labour and capital are not available in the same proportion in both countries; the two goods produced either require relatively more capital or relatively more labour; labour and capital do not move between the two countries; there are no costs associated with transporting the goods between countries; the citizens of the two trading countries have the same needs.

Of the above conditions, the central one is the assumption that capital and labour are not available in the same proportion in the two countries. This condition leads to specialization. The country with relatively more capital, specializes - but not necessarily fully – in production of capital-intensive goods (which it exports in exchange labour for intensive goods) while the country with relatively little capital specializes in Production of labour-intensive goods (which it exports in exchange for capital - intensive goods). According to the theory, the more different the countries are regarding the capital-to-labour ratio – the greater the economic gain from specialization and trade.

Review of Empirical Literature

Adelegan and Abraham (2022) conducted a study on the determinants of balance of payments in Nigeria. The Autoregressive Distributed Lag Model (ARDL) was used in the investigation. Long-term results from the ARDL regression showed that the exchange rate coefficient was negative, whereas short-term results showed a positive value. Also, the coefficients of FDI, GDP growth, interest rates, and crude oil prices were positive and significant. To help the economy thrive, capital investments and expenditures should be made. The government should make incentives to prospective foreign investors in order to attract FDI inflows into the country. Government should also enhance safety and security and build a sense of belonging in the Niger Delta in order to promote peace and ease of doing business in the petroleum industry there.

Efanga, Ihemeje, Egwu, Yamta, Biradawa & Ikwuagwu (2020) investigated the role of balance of payment on economic growth in Nigeria. Data were obtained from secondary sources; Central Bank of Nigeria Statistical bulletin of 2018. Unit root test on the time series data displayed a combination of 1(0) and 1(1) variables, the Autoregressive Distributed Lag (ARDL) Model was employed for data estimation.. Findings reveal that: balance of payment exerted a positive and significant impact on gross domestic product in Nigeria across the period covered by this study. The study recommends that government should continue to put embargoes on the importation of certain products and services that are produced and rendered locally in our economy so as to improve our balance of payment position and also alleviate the pressure on our domestic currency, the Naira.

Fasanyaa and Olayemi (2018) examined the Balance-of-Payment (BOP) constraint growth model in Nigeria for the period of 1980 to 2012 using the bounds testing Auto regressive Distributed Lag (ARDL) approach. The ARDL test suggests that the variables in the framework have a long run relationship. The empirical findings reveal that import is cointegrated with relative price and income, and the equilibrium growth rates coincide with actual growth rates, hence, the result shows that the Thirlwall's law, of actual growth rate being equal to the predicted growth rate by the balance of payment current account equilibrium holds in Nigeria. This reason may be due the fact that the economy of Nigeria depends mainly on international trade even though oil dominates the export. Achievement of potential growth can be stimulated by making exports more competitive through macroeconomic stability, sound institutional qualities, improvement in human and physical capital development, reducing access problems to external market, among other factors.

Igbinoba (2017) studied balance of payments constrained economic growth in Nigeria. The study applied the adjusted balance of payment (BOP) constrained growth framework modified by Thirwall and Hussain (1982) on Nigeria's economic growth to estimate the determinants of the long run rate of growth in Nigeria. With Nigeria adopting the import substitution industrialization policy in 1960, the researchers applied co-integration test on time series data to estimate the long-run relationship between Nigeria's real GDP (output) and its real export. Results signify co-integration between our variables, lending support to Thirwall's BOP constrained model as a suitable framework to explain Nigeria's long term growth and reinforces the opinion that external factors constrain Nigeria's economic growth.

However, there are some observed shortcomings in the empirical approaches and objectives adopted most of the existing literature. First, most of the empirical studies such as Bola, (2015)

did not examine the basic components of Nigeria's international trade which should naturally be the first step in explaining the transmission channels through which the gains of trade impact on economic growth. Without a clear explanation of the transmission channels, many of these studies have not been able to emphatically establish the causal relations between balance of payment and economic development. The contribution of the work to knowledge is that the work gives fresh insights into the theoretical discussion of the nexus between balance of payment and per capita income at least within the context of the Nigerian economy for the specified period (2000-2022).

Methodology

Quasi experimental research design was adopted for the study. *Quasi experimental* study or after-the-fact research is a category of research design in which the investigation starts after the fact has occurred without interference from the researcher. This design is best fitted for this study since, data (dependent and independent) for this study are already acquired or formulated. This design was chosen because the researcher has no control over the exogenous variable that were used for the study. The study utilised annualised secondary data for the period 2000 to 2022 as extracted from: the Statistical Bulletin of the Central Bank of Nigeria (CBN); National Bureau of Statistics (NBS); Nigerian Ports Authority (NPA); and World Bank indicators website.

Model Specification

The study adopts the model of Efanga, Ihemeje, Egwu, Yamta, Biradawa & Ikwuagwu (2020) but with clear modifications. E-view 12.0 econometric statistical software package was used for the analysis. The model is a multiple regression model stated below:

$PCI = f(IMP, EXP)$ …………………….. (1)

By modifying the functional model in equation (1) into econometric model:

$PCI_t = \beta_0 + \beta_1 IMP_t + \beta_2 EXP_t + \mu_t$ ……….. (2)

Where: PCI = Per capita income, IMP = Import, EXP = Export, μ_t = Stochastic disturbance, and $\beta_0, \beta_1, \beta_2$ are the coefficients of the parameters.

Data Analysis Technique

The study adopts Augmented Dickey-Fuller unit root test and Johansen co-integration test estimation technique as the main tool of analysis. Statistical evaluation of the global utility of the analytical model, so as to determine the reliability of the results obtained, were carried out using the coefficient of correlation (r) of the regression, the coefficient of multiple determination (R^2), the student T-test and F-test. The estimation is done using E-views 12.0 software.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Unit Root Test of Cointegration

Unit root test was carried out to establish the order of integration. The results of the Augmented Dickey-Fuller based unit root test are as summarized in Table 4.2 below:

Table 1: Presentation of Augmented Dickey-Fuller unit root test

Variables	ADF- statistics		Order of integration
	Level	First difference	
Per Capita Income	-1.810454 (0.3659)	-3.055175 (0.0460)**	stationary at 1st diff $I(1)$
Import	-1.783172	-4.712246	stationary at 1st diff $I(1)$

	(0.3783)	(0.0014)***	
Export	-1.953899	-4.068465	stationary at 1st diff $I(1)$
	(0.3034)	(0.0054)***	

Source: Compiled by Researcher from E-View 12 output.

The results of the augmented Dickey-Fuller unit root test as shown in table 1 indicates that all the logged variables of import and export have their absolute value of t-statistic being greater than the 5% critical value and statistically significant at first difference. The variables are therefore co-integrated at I(1). As such, they all accepted the null hypothesis of stationary at order 1. Hence, the study employed Johansen's test for data estimation and analysis. It is based on a Variance Autoregressive Regression (VAR) model as developed by Johansen (1991).

Johansen Co-integration Test
Table 2: Unrestricted Cointegration Rank Test (Trace) for PCI, IMP and EXP

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.649319	30.14546	29.79707	0.0456
At most 1	0.220217	8.140006	15.49471	0.4506
At most 2	0.129668	2.916484	3.841466	0.0877

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

Source: E-views 12.0 output

The Table 2 above shows the results of hypothesis testing for the existence of co-integration. The trace statistic is in the rejection region; therefore we reject the hypothesis of no co-integration. This is statistically evidenced by the trace statistic value of 30.14546 being greater than the 5% critical value of 29.79707and reinforced by the probability value of 0.0456 being less than the 0.05 significant level, implying significance. The result sets a null hypothesis of at most 1 co-integrating equation. We cannot reject Ho in this case; therefore PC1, IMP and EXP are co-integrated. In other words, there is long run relationship between balance of payment and economic development in Nigeria.

Regression Analysis and Interpretation of Result
Table 3: Multiple Linear Regression Result for the Model of the Study

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IMPORT	1.821316	0.425212	4.283318	0.0004
EXPORT	8.668774	3.189423	2.718023	0.0122
C	371.8849	177.0795	2.100101	0.0486

Adjusted R^2 0.701302; *Durbin Watson* 1.983830; *F-statistic* 46.53931; *F-Prob* 0.00345; *ECM* -1.16886; *ECM-Prob*. 0.03446
Source: E-view Software package, 12.0.

Import and Per Capita Income in Nigeria

Cointegrating multiple linear equation analysis was used to test hypotheses and the result is as follows: the estimated value of import (IMP) was statistically significant at 5% level with a positive sign, implies that a unit increase in importation leads to 1.821316 unit significant increase in per capita income in Nigeria. From the result, the t-cal value of import was 4.283318[***] while the T-table value was 2.093, since the t-table value is less than t-calculated value in absolute terms, the researchers rejected the null hypothesis and accept the alternative that, importation has positive and significant effect on per capita income in Nigeria.

Export and Per Capita Income in Nigeria

The estimated value of export (EXP) was statistically significant and positively related to per capita income in Nigeria at 5% probability level. This implies that a unit increase in export leads to 8.668 unit significant increase in per capita income, holding other variables constant. From the result, the t-cal value of export was 2.718023 while the T-table value was 2.093, since the T-table value is less than t-cal value in absolute terms, the researcher rejected the null hypothesis in favour of alternative hypothesis. This signifies that, exportation has significant and positive effect on per capita income in Nigeria.

The R^{-2} adjusted value of 0.701302 indicates that, in real terms 70.13% changes in per capita income was elucidated by changes in export and import, while 29.87% were unexplained by the stochastic variables not captured in the model. This result reveals a goodness of fit of the regression model adopted in this study which is statistically significant at 5% probability level. The Durbin-Watson stat value was 1.9838 which is close to 2.5 was observed, implying that there is no evidence of autocorrelation. F-stat value of 46.539 with F-prob. value of 0.003 against 2.093 t-table value and 0.05 was observed from the regression result, indicating goodness of fit of the regression model adopted in this study which is statistically significant at 5% probability level. With this, the researchers rejected the null hypothesis and accepted the alternative which states that, import and export has positive and significant effect on per capita income in Nigeria.

Error Correction Model (ECM): the ECM coefficient value of -1.16886 being negative indicates that the ECM is correctly signed implying that the model has power of convergence. The probability values at 0.03446 appears less than the 0.05 significance level meaning the ECM is significant. This result hence reveals that the model has 116.88% speed of adjustment annually.

Discussion of Findings

Effect of Import on Per Capita Income in Nigeria

The estimated value of import (IMP) was statistically significant at 1% level with a positive sign, implies that a unit increase in importation leads to 1.821316 unit increase in per capita income in Nigeria. From the result, the t-cal value of import was 4.283318[***] while the T-table value was 2.093, since the t-table value is less than t-calculated value in absolute terms, the researcher rejected the null hypothesis that, importation has positive and significant effect on per capita income in Nigeria. The findings agrees with the result of Igbinoba (2017) who studied balance of payments constrained on economic growth in Nigeria. And with Nigeria adopting the import substitution industrialization policy in 1960, we apply cointegration test on time series data to estimate the long-run relationship between Nigeria's real GDP (output) and its real export.

Effect of Export on Per Capita Income in Nigeria

The estimated value of export (EXP) was statistically significant and positively related to per capita income in Nigeria at 1% probability level. This implies that a unit increase in export leads to 8.668unit increase in per capita income, holding other variables constant. From the result, the t-cal value of export was 2.718023 while the T-table value was 2.093, since the T-table value is less than T-cal value in absolute terms, the researcher rejected the null hypothesis in favour of alternative hypothesis. This signifies that, exportation has significant and positive effect on per capita income in Nigeria. This conforms to the findings of Bagnai, Rieber & Tran (2013) who examined the long run relationship between economic growth and the current account balance equilibrium by relying on the BoP constrained growth model. The relative price effect is neutral, allowing the volume effects to dominate in setting the BoP constraint. The high income elasticities of exports enable growth in the advanced countries to have a multiplier effect on the economy. However, this effect is hindered by a high 'appetite' for imports. The result also conforms to the findings of Abasiakan, Sani & Obiezue (2021) who studied determinants of Nigeria's international trade in services from 1981 to 2017. The result reveled that services value-added as a percentage of GDP (SERV), merchandise trade (MER), growth in GDP (NGDP), official exchange rate (EXC) and secondary school enrolment (SSE) are significant determinants of trade in services in the long-run. Terms of trade as percentage of GDP (TOT), foreign direct investment as percentage of GDP (FDI), government services expenditure as percentage of GDP (GEXP), and world GDP growth (WGDP) are found not to be significant determinants of trade in services. The results further show that a 1.0 per cent increase in services value-added as a per cent of GDP is expected to bring about 0.3 per cent increase in services trade in the long-run. Also, a 1.0 per cent increase in merchandise trade would lead to 0.2 per cent improvement in services trade in the long-run. The positive relationship between merchandise trade and services implies that increase in demand for goods would be accompanied by higher demand for specialized skills and services to produce the goods.

Conclusion

The examination of the effect of balance of payment on economic development in Nigeria from 2000 – 2022 on the model: per capita income = f(Import, export) using Johansen co-integration has shown that import and export have significant effect on per capita income in Nigeria. This leads the researchers to conclude that balance of payment has significant positive effect on economic development in Nigeria.

Recommendations

Based on the findings, the researchers make the following recommendations;

1. Both federal and state government should put in place policies that promote industrialization and domestic production in order to promote exportation. This may be done by formulating and implementing dynamic terms of trade and keeping trade openness rate below or at ceiling level in order to ensure economic development, since exportation has positive and significant effect on per capita income in Nigeria.
2. Importation into Nigeria should be encouraged especially on the commodities where the country is comparatively disadvantaged; but must be done with caution in order not to stifle the domestic industries.
3. The Central Bank of Nigeria should intensify the deregulation policy of the exchange rate market of the country who made available foreign currency to exporters and importers.

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