



International Trade as a Catalyst for Economic Growth in Nigeria

Michael Chukwunaekwu Nwafor
Department of Accounting and Finance
Godfrey Okoye University Enugu
michaelandstephens@yahoo.com

Publication Process

Date

Received

April 20, 2019

Accepted

April 28, 2019

Published

July 29, 2019

ABSTRACT

This research work explored international trade and how it can boost the economic condition of Nigeria. The focus of this research work was broken down into three objectives addressing the relationship between exportation and economic growth; importation and economic development; and exportation and balance of trade. Simple linear regression model was employed to illustrate this relationship. Ordinary least squares regression was employed in testing the hypothesis of which results revealed that the volume of Exports in Nigeria has no significant impact on economic growth; the volume of Imports in Nigeria has significant impact on economic development; and that exportation has significant impact on International Trade in Nigeria.

Keywords: International Trade; Exportation; Importation; Economic Growth; Economic Development

1. Introduction

The concept of globalization is one that necessitates alliance amongst nations of the world. This alliance among various independent nations can be promoted via international trade. International trade permits the exchange of goods and services that foster healthy relationships among countries regardless of their various levels of economic development. A country partaking in international trade need not have fear of dominion or loss of sovereignty because foreign trade is a mutual agreement to engage in trade across specific country borders. Conversely, any country not participating in international trade runs the risk of a slow and retarded economic development due to the lucid fact that it is impossible for a country to possess all the resources required for sustainable economic development.

Foreign trade has been regarded as the most fundamental and longstanding aspect of a nation's international economic relations. Its role in the development process of a contemporary global economy is very crucial and central. Over the years, there has been a significant increase in the growth and development of various countries which has meaningfully contributed to the overall advancement of the world economy. The contributions of foreign trade on a nation's economy are not only restricted to the quantitative gains but also foreign capital flow and facilitating structural change in the economy. Trade fosters the efficient production of goods and services via

resources allocation to nations that have a comparative advantage in their productions. Foreign trade has been described as a tool and catalyst for economic growth (Frankel & Romar, 1999).

Before Nigeria's political independence in October 1st 1960, the country has been active in the field of international trade with major dominance in agricultural commodities such as groundnuts, cotton, cocoa, rubber, beans, palm oil etc. (Englama, Duke, Ogunleye, & Isma'il, 2010). Presently, this sector is dominated by petroleum products (Onwe, 2013). Since the discovery of oil in commercial quantity in the late 50s, Nigeria has gained international recognition in the foreign trade arena, especially with its position as the 12th largest producer of crude oil in the Organization of Petroleum Exporting Countries OPEC (Englama et al. 2010). The initial discovery of oil was in Oloibiri in Delta State (Afaha & Aiyelabola, 2012), but unfortunately, these natural endowments have not reflected in the overall welfare of the citizenry which has been worsened (Soderbom & Teal, 2001) by the meltdown of the world oil market caused by the boom in 1981 (Muritala, Taiwo, & Olowookere, 2012). Crude oil prices rose speedily from \$20.94 dollars per barrel in 1979 to \$36.95 dollars in 1980 and \$40.00 dollars in 1981 and recorded a fall to \$29.00 in 1983 down to \$14.85 in 1986. Exchange receipt also rose from \$15.7 billion dollars in 1981 and fell to \$5.2 billion dollars. This economy came close to a collapse in 1983 with real per capita income decreasing by 30 per cent from its initial level during the oil boom (Soderbom & Teal, 2001).

Nigeria's participation in international trade has to some good extent, yielded benefits. However, Usman, (2011) opines that international trade has not been of much help in the aspect of promoting economic growth. The economy has been unstable due to over-dependence on foreign-made products which has made the economy an import-dependent one. Also, Arodoye & Iyoha, (2015) maintain that earnings from exports were not effectively utilized for enhancing economic growth which is as a result of corruption, lack of accountability which particularly thrived during the military dictatorships between 1966 and 1999, which led to serious macroeconomic management mistakes. With 40% of the population currently living below the poverty line, Nigeria cannot be classified as an economically successful state.

This study focuses on evaluating whether Nigeria's economic under-development or relative economic prosperity can be attributed to international trade, with respect to growth and development. In other words, it evaluates how foreign trade has effectually contributed to the economic growth and development of Nigeria.

Statement of Problem

The significance of international trade in the economic development process has been of interest to both economists and policymakers (Arodoye & Iyoha, 2014). Imports and exports are a key part of international trade and the importation of capital goods is vital to the economic growth of the nation. This is so because capital goods have a direct effect on investment, which is the motor that drives economic expansion. Economic reform is expected to affect imports as part of the scheme to restore external balance. However, except policymakers come to a full understanding of the major components of imports and how they are determined, such a scheme can be harmful to investment and output if domestic production depends on imports. The main aim of this research is to take an objective view concerning the controversy of the role played by international trade, in the advancement of a country with respect to the economic growth of Nigeria. Some 21st-century analysts are of the opinion that trade could be negative in terms of acting as a catalyst to the growth and development of the economy, acting as a regressive force, in the journey to economic independence. But paradoxically, past experience has demonstrated the potency of trade as a catalyst of economic progress, with regards to growth and development.

Objectives of the Study

International trade has generally been regarded as the engine of growth for the global economy [Usman, 2011; Obadan & Okojie, 2014] and might be the catalyst required by small countries to achieve rapid growth (Arodoye & Iyoha, 2014). But in this 21st Century, there is a school of thought claiming that international trade propagates the

under-development of poor nations due to unbalanced share of gains from trade that accumulates for industrialized countries. Therefore, this study focuses on the following objectives:

1. To examine the extent exportation has improved the economic growth of Nigeria
2. To measure the extent to which importation have influenced economic development in Nigeria
3. To determine the extent to which exportation can influence international trade.

2. Literature Review

2.1 Theoretical Framework

Classical Theory of Trade

The classical theory of trade postulated that countries are better capable to gaining and sustaining development if each commits resources to the generation of goods and services in which economic advantage is being enjoyed by them [Smith, 1776; Ricardo, 1817 cited in Morgan and Katsikeas, 1997]. The theory elaborates the scenario where a nation produces goods and services in which it has an advantage not only for exporting the surplus but also domestic consumption and imports the goods and services, they have an economic disadvantage in. Economic advantages and disadvantages usually emanate from country differences in factors such as capital, labour, technology resource endowments, or entrepreneurship. The theory, therefore, contends that the fundamentals for sustainable development and international trade can be traced to differences in resource endowments and production characteristics founded on domestic differences in naturally inherent economic advantages (Morgan & Katsikeas, 1997). Specifically, the theory was predicated on the principles of specialization and comparative cost advantage, which lead to benefits for the trading collaborators (Umo, 2007). One of the weak points of this theory is that investment resources are not internationally mobile, i.e. only commodities are movable and investment decisions are undertaken on a national basis. Capital, in today's world, is very mobile across national frontiers, and so also technology.

The Theory of Factor Proportion

The theory of factor proportion, on the other hand, is capable of giving an explication for discrepancies in advantage demonstrated by trading nations. As lucubrated by the theory, nations have the tendency to produce and exchange internationally goods and services that exploit large amounts of abundant production factors that they have, while they import those that require large amounts of production factors which are comparatively and scarcely unavailable [Hechsher & Ohlin, 1933 cited in Morgan & Katsikeas, 1997]. The theory fleshes out the concept of economic advantage in the context of costs of factors of production and endowment.

The Product Life Cycle Theory

The Product Life Cycle Theory was propounded in relation to some developments to deal with the ever-changing commercial facts like the role executed by multinational enterprises and technological advancement in sustainable development and trade of their nations. The theory stipulates that a trade cycle occurs where a product is generated by a parent company, then by its alien subsidiary firms and lastly anywhere in the world where costs are at their minimum possible [Wells, 1968; Vernon, 1966, Morgan & Katsikeas, 1997]. It also expounds how a product may emanate as a nation's export and work through the life cycle to at long last transform to an import (Morgan & Katsikeas, 1997). As noted by the theory, market size and innovations in technology are very crucial for leveraging in external trade and naturally economic growth.

2.2 Review of Empirical Literature

Empirically, studies have been carried out to provide clear evidence on the relationship cross-border trade has on the economy. International trade brings efficiency and welfare benefits to all nations regardless of their technological capabilities, development level and resources endowments (Krugman & Helpman, 1988)). For many decades, the influence of international trade on economic growth has been a disputable subject. Various approaches have been employed in several studies and it has been discovered that economic growth can be heightened by liberalization or trade openness [Krueger, 1978; Balassa, 1978; Dollar, 1992]. Taylor, 1991 argued that trade expansion or trade liberalization may not be expedient for the economic growth of all nations at all times. With special regard to the impacts of foreign trade on average real wages, (Edward, 2000) opined that there are too restricted studies to deduce much in the way of conclusion. He, however, stated the only notable study to deal with this prevailing issue is that of Lawrence and Slaughter (1993), who discovered almost no impact of liberalized trade on the wage stagnation of the post-1973 era. He affirmed there is no driving justification that the expansion of international trade since the early 1970s contributed substantially to either the decline in the real wage or in the surge of the wage differentials between unskilled and skilled labour.

Similarly, Bayoumi, Coe, & Helpman, (1999) stated that research and development, its spillover and trade contribute immensely to promoting economic growth both in developing and industrial nations. The results of Coe & Moghadam (1993) postulate that trade and capital have a positive impact on growth in France. Lin, (2000) examined the link between trade and economic growth using China's national data for the period between 1952 and 1997, the findings disclose that growth rate of import, the growth rate of the volume of trade, the growth rate of export, and labour force growth were positively connected to economic growth. Maddison (2008) exhibited that the gradual trade liberalization and capital flows in the OECD nations stimulated Western Europe's reconstruction, catch-up growth and recovery. Also, gradual trade liberalization, the outward orientation, and inward investment in some East Asian nations like China, Hong Kong and Singapore have significantly affected their economic growth. Drabek & Laird (1998) observed that developing nations with progressively more liberal trade programmes are those with growing ratios of inward investments, trade, and national income and its growth rates.

Karbasi, Mohamadi, & Ghofrani (2005) studied the significance of FDI and trade in fostering economic growth in 42 selected developing nations. They stated that human capital, trade, FDI, and domestic investment are vital sources of economic growth for less developed nations. They ascertained a positive significant correlation between trade and growth. They agreed that the contribution of FDI to economic growth is facilitated by its positive interaction with sound macroeconomic policies, human capital and institutional stability. Jude & Pop-Silaghi, (2008) also investigated this point and concluded that the FDI inspired a false impact on growth in the Romanian economy when other factors of growth are disregarded. In the same vein, Fogel (2006) asserted that for China to attain the desired target of the quadrupled rate of GDP by 2020, improvement in political stability, institutional quality and quality of education should be prioritized. Fosu & Magnus (2006) studied the long- run effect of FDI and trade on economic growth in Ghana for the period 1970 and 2002. They discovered a long-run relationship between determinants of economic growth and economic growth itself in their model. The findings indicated a negative and positive growth impact of trade and FDI respectively.

Adelowokan & Maku (2013) studied the effect of trade and financial investment openness on Nigeria economic growth between 1960 - 2011. Estimations from the reported dynamic regression model specified that trade openness and foreign investment wield progressive and regressive effect on economic growth respectively. It was proven that long-run relationship occurs within trade openness, foreign investment and economic growth. In the same vein, (Adenugba & Dipo, 2013) assessed the performance of non-oil exports in the economic development of Nigeria from 1981-2010. Results showed that non-oil exports have performed poorly; therefore, emphasizing the efficacy of the export promotion strategies that have been embraced. They noted that the economy is still a long distance away from diversifying from crude oil exports and because of that, the crude oil sub-sector continues to be the most significant sector of the economy. In a similar study, Edoumiekumo & Opukri (2013) studied the influence

of international trade (proxy with export and import values) on the economic growth of Nigeria measured by real GDP. Time-series data gotten for a period of 27years was analyzed using Augmented Dickey-Fuller (ADF) test, Ordinary Least Square (OLS) statistical technique, Johansen co-integration test and Granger Causality test. The outcome revealed that there is a positive relationship between the variables as well as co-integration among the variables. The Granger Causality test realized a uni-directional relationship showing that RGDP Granger cause export and import Granger cause RGDP and export.

Mongoe & Mongale (2014) examined the relationship between foreign trade and economic growth in South Africa using a co-integrated vector autoregression approach. The Empirical investigation discloses that inflation rate, export and exchange rates all have a positive connection to GDP while the import is negatively related to GDP. Adenugba & Dipo (2013) observed the performance of non-oil exports in the economic growth of Nigeria from 1981-2010. Their estimates showed that non-oil exports have performed poorly thereby giving reason to doubt the efficacy of the export promotion strategies that have been used and since implemented. They rightly indicated that the Nigerian economy is still far from shifting from crude oil exports and as such the crude oil sub-sector continues to be the single most important sector of the economy.

Arodoye & Iyoha (2015) studied the nexus between international trade and economic growth in Nigeria making use of quarterly time-series data for the period 1981 to 2010. The results indicated that there is a stable, long-run relationship between international trade and economic growth and they concluded that trade policies aid export expansion and should be encouraged because exports drive economic growth. Furthermore, an exchange rate policy which is favourable to export expansion and consistent with Nigeria's status as a small open economy should be encouraged.

3. Methodology and Results

To model the relationship between exportation and economic growth; importation and economic development; and exportation and trade balance, a simple regression model was employed often stated as:

$$Y = \beta_0 + \beta_1 K + \mu$$

Where

Y – Dependent Variable; β_0 – Constant/Intercept; β_1 – Slope; μ – Error Term

The above regression model can be applied in this study as:

Model I: $GDP = \beta_0 + \beta_1 \text{Exports} + \mu$

Model II: $GDP_Cap = \beta_0 + \beta_1 \text{Imports} + \mu$

Model III: $BoT_T = \beta_0 + \beta_1 \text{Exports} + \mu$

Where

GDP – Gross Domestic Product (Proxy for Economic Growth)

GDP_Cap – GDP Per Capita (Proxy for Economic Development)

BoT_T – Total Trade Balance

Exports – Total Volume of Exports

Imports – Total volume of Imports

Hypothesis I – First Result

The volume of Exports in Nigeria has no significant impact on economic growth

The R of .393 shows that a weak positive relationship exists between the dependent variable (GDP) and the independent variable (exports) [See Appendix II]. The R-square of .154 shows that only about 15.4% of the variation in GDP can be explained by exports. The ANOVA table shows that the relationship between both variables is non-significant (Sig. > .05). The intercept of 8.614 shows the value of the dependent variable when the independent is constant. The slope of [.0001] shows that at every percentage increase in exports, GDP will increase by 0.01%. The equation will take the following shape after substituting obtained values from analyses, $GDP = 8.614 + .0001Exports + 3.331$ [See Appendix II].

The p-value on which basis the above hypothesis can be rejected is .107 [See Appendix II]. Since p-value > .05, the hypothesis cannot be rejected, hence the affirmation that *the volume of Exports in Nigeria has no significant impact on economic growth*.

Hypothesis II – Second Result

The volume of Imports in Nigeria has no significant impact on economic development

The R of .568 in the SPSS output shows that there exists a fairly positive relationship between the dependent variable (GDP_Cap) and the independent variable (Imports) [See Appendix III]. The R-square of .322 shows that only about 32.2% of the variation in GDP Per Capita (GDP_Cap) can be explained by the total volume of imports. The ANOVA table shows that the relationship between both variables is very significant (Sig. [.014] < .05) [See Appendix III]. The intercept of 6.364 shows the value of the dependent variable when the independent is constant. The slope of [-.001] shows that at every percentage increase in Imports, GDP_Cap will shrink by 0.1%. The equation will take the following shape after substituting obtained values from analyses, $GDP = 6.364 - .0001Imports + 2.921$ [See Appendix III].

The p-value on which basis to reject the hypothesis above is .014. Since p-value < .05, the hypothesis is rejected and we conclude that the volume of Imports in Nigeria has a significant impact on economic development.

Hypothesis III – Third Result

Exportation has no significant impact on International Trade in Nigeria.

The R of .574 in the SPSS output shows that there exists a fairly positive relationship between the dependent variable (BoT_T) and the independent variable (Exports) [See Appendix IV]. The R-square of .329 shows that only about 32.9% of the variation in Balance of Trade (BoT_T) can be explained by the total volume of exports. The ANOVA table shows that the relationship between both variables is very significant (Sig. [.013] < .05). The intercept of 299.489 shows the value of the dependent variable when the independent is constant. The slope of [.273] shows that at every percentage increase in Exports, International Trade Balance will increase by 27.3%. The equation will take the following shape after substituting obtained values from analyses, $BoT_T = 299.489 + .273Exports + 1898.841$ [See Appendix IV].

The p-value on which basis to reject the hypothesis above is .013. Since p-value < .05, the hypothesis is rejected and we conclude that exportation has a significant impact on International Trade in Nigeria.

4. Conclusion and Discussion of Finding

The first hypothesis testing showed that the volume of exports in Nigeria does not have a significant influence on economic growth.

Although the p-value showed a high level of significance, the slope of [-.001] in the second hypothesis testing shows that an inverse relationship exists between imports and economic development. This slope revealed that economic development declines proportionally by 0.1% at every percentage increase in imports. Hence the need to reduce importation of consumer goods in Nigeria.

The slope of [.273] further explains the kind of relationship existing between both variables in the third hypothesis testing. The slope of .273 shows that there exists a parallel relationship between exportation and international trade as an increase in the volume of exports will add some positives to the international trade balance. An improved balance of trade is an effective way of reducing inflation in an economy.

Asides foreign reserves, international trade is one of the most effective ways to boost the international relevance of an economy. More so it also has a huge impact on the state of affairs of economic activities locally. As shown in Appendix 5, The imports to exports ratio of Nigeria is averaging 2:3 from 2000 to 2017. This further explains the continuous regression in the economy of Nigeria, ranging from increasing inflation to the drop-in value of the naira. Importation to Exportation ration in a country seeking favourable economic condition locally and globally should be

considered and minimized to at least 1:2. This issue of disproportional international trade activity is the very reason economic conditions in Nigeria will never get better.

5. Recommendation

1. Government Policies should be directed towards extreme encouragement of local industries by giving grants and loans, discouraging importation and placing high import tariffs on importation.
2. Export Diversification is one of the deficiencies of the export arm of the Nigerian economy. Diversification of exports could help spread the risk of global trade or financial downturn.

References

- Adelowokan, & Maku. (2013). Trade Openness, Foreign Investment and Economic Growth in Nigeria: A Long-Run Analysis, *European Journal of Globalization and Development Research*, 7(1).
- Adenugba, A. A., & Dipo, S. O. (2013). Non-Oil Exports in the Economic Growth of Nigeria: A Study of Agricultural and Mineral Resources. *Journal of Educational and Social Research*, 3(2), 403-418.
- Afaha, J. S., & Aiyelabola, O. O. (2012). Foreign Trade and Economic Growth: Evidence from Nigeria. *Arabian Journal of Business and Management Review (OMAN Chapter)*, 2(1), 26-48.
- Arodoye, N. L., & Iyoha, M. A. (2015). Foreign Trade-Economic Growth Nexus: Evidence from Nigeria". *Central Bank of Nigeria (CBN) Journal of Applied Statistics*, 5(1), 121-141.
- Balassa, B. (1978). Exports and economic growth: further evidence. *Journal of Development Economics*, 5, 181-189.
- Bayoumi, T., Coe, D. T., & Helpman, E. (1999). "Research and development and global growth". *Journal of International Economics*, 47, 399-428.
- Coe, D. T., & Moghadam, R. (1993). Capital and trade as an engine of growth in France". *IMF Staff Papers*, 40, 542-566.
- Dollar, D. (1992). Outward-oriented developing economies really do grow more rapidly. *Economic Development and Cultural Change*, 40(3), 523-544.
- Drabek, Z., & Laird, S. (1998). The new liberalism: trade policy developments in emerging markets. *Journal of World Trade*, 32, 241-269.
- Edoumiekumo, S. G., & Opukri, C. O. (2013). Economic Growth Factor in Nigeria: The Role of Global Trade. *American Journal of Humanities and Social Sciences*, 1(2), 51-55.
- Edward, N. W. (2000). *Trade and Inequality: A Review of the Literature*. New York: New York University.
- Englana, A., Duke, O., Ogunleye, T., & Isma'il, F. (2010). Oil Prices and Exchange Rate Volatility in Nigeria: An Empirical Investigation. *Central Bank of Nigeria Economic and Financial Review*, 48(3), 31-48.
- Fogel, R. (2006). *Why China is likely to achieve its growth objectives*", NBER working paper No. 12122,. Cambridge: National Bureau of Economic Research, Cambridge.
- Fosu, O. A., & Magnus, J. F. (2006). Bound testing approach to co-integration: An examination of foreign direct investment, trade and growth relationships. *American Journal of Applied Sciences*, 3(11), 2079-2085.

- Frankel, J., & Romar, D. (1999). Does Trade Cause Growth? *American Economic Review*, 89(3), 379-99.
- Hechsher, E., & Ohlin, B. (1933). *Interregional and International Trade*. Cambridge: Harvard University Press, Cambridge, MA.
- Jude, C., & Pop-Silaghi, M. I. (2008). Some determinants of economic growth in Romania: foreign trade and foreign direct investment", *The Annals of the University of Oradea, Economic Sciences*, 17.
- Karbasi, A., Mohamadi, E., & Ghofrani, S. (2005). Impact of foreign direct investment and trade on economic growth, Paper presented at the 12th Economic Research Forum Conference, *Economic Research Forum Conference*, Cairo, Egypt.
- Krueger, A. (1978). *Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences*. Ballinger, Cambridge, Massachusetts.
- Krugman, P., & Helpman, E. (1988). *Imperfect Competition and International Trade: Evidence from Fourteen Industrial Countries*. Cambridge: Harvard University Press, Cambridge.
- Lin, S. (2000). Foreign trade and China's economic development: A time-series analysis, *Journal of Economic Development*, 25(1), 145-153.
- Maddison, A. (2008). Chinese Economic Performance in the Long Run, *OECD*.
- Mongoe, & Mongale. (2014). The Impact of International Trade on Economic Growth in South Africa: An Econometrics Analysis, *Mediterranean Journal of Social Sciences*.
- Morgan, R., & Katsikeas, C. S. (1997). *Theories of International Trade, Foreign Direct Investment and Firm Internationalization: A Critique, Management Decision*. Cardiff Business School, University of Wales, UK. MCB University Press.
- Muritala, T., Taiwo, A., & Olowookere, D. (2012). Crude Oil Price, Stock Price and Some Selected Macroeconomic Indicators: Implications on the Growth of Nigeria Economy. *Research Journal of Finance and Accounting*, 3(2), 42-48.
- Obadan, M. I., & Okojie, I. E. (2014). An empirical analysis of the impact of trade on economic growth in Nigeria. *Jos Journal of Economics*, 4(1), 1-23.
- Onwe, O. J. (2013). Trade Balances and Economic Progress in Nigeria: Analysis of the Oil and Non-Oil Sub-Sectors. *International Journal of Business and Social Science*, 4(8), 233-243.
- Ricardo, D. (1817). *Principles of political economy. The Works and Correspondence of David Ricardo*. London: Cambridge University Press, London.
- Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. London: edited by E. Cannan (1961) and reprinted by Methuen, London.
- Soderbom, M., & Teal, F. (2001). *The Performance of Nigerian Manufacturing Firms: Report on the Nigerian Manufacturing Enterprise Survey 2001*. United Nations Industrial Development Organization (UNIDO) and Centre for the Study of African Economies, University of Oxford.
- Taylor, L. (1991). *Economic openness: problems to the century's end*, in Banuri, T. (Ed.), *Economic Liberalization: No Panacea*, Clarendon Press, Oxford.
- Umo, J. U. (2007). *Gains from International Trade" in Economics: An African Perspective*, Enugu: Millennium Text Publishers Limited,

Usman, O. A. (2011). Performance Evaluation of Foreign Trade and Economic Growth in Nigeria. *Research Journal of Finance and Accounting*, 2(2).

Vernon, R. (1966). International Investment and International Trade in the Product Cycle. *Quarterly Journal of Economics*, 190-207.

Wells, L. T. (1968). A Product life cycle for International Trade. *Journal of Marketing*, 33, 1.

APPENDIX I

Econometric Variables from CBN and World Bank Database

| Year | GDP_Cap | BoT_T | Imports | Exports | GDP | Import/Export |
|------|-------------|--------------|------------|----------|-----------|---------------|
| 2000 | 2.419602386 | 960.70091 | 985.02239 | 1945.723 | 6897.482 | 1/2 |
| 2001 | 3.290983616 | 509.77352 | 1358.18033 | 1867.954 | 8134.142 | 5/7 |
| 2002 | 12.45793041 | 231.482347 | 1512.69533 | 1744.178 | 11332.25 | 7/8 |
| 2003 | 4.65822009 | 1007.651123 | 2080.23527 | 3087.886 | 13301.56 | 2/3 |
| 2004 | 6.490049731 | 2615.73627 | 1987.04527 | 4602.782 | 17321.3 | 3/7 |
| 2005 | 3.722108658 | 4445.67847 | 2800.85633 | 7246.535 | 22269.98 | 2/5 |
| 2006 | 3.326685002 | 4216.16131 | 3108.51932 | 7324.681 | 28662.47 | 3/7 |
| 2007 | 3.822609349 | 4397.80569 | 3911.95263 | 8309.758 | 32995.38 | 1/2 |
| 2008 | 3.973446916 | 4794.513167 | 5593.18045 | 10387.69 | 39157.88 | 1/2 |
| 2009 | 5.199742695 | 3125.663594 | 5480.65612 | 8606.32 | 44285.56 | 2/3 |
| 2010 | 5.161380434 | 3847.501301 | 8163.97457 | 12011.48 | 54612.26 | 2/3 |
| 2011 | 2.528531945 | 4240.802362 | 10995.8636 | 15236.67 | 62980.4 | 5/7 |
| 2012 | 1.476169783 | 5372.769397 | 9766.55674 | 15139.33 | 71713.94 | 2/3 |
| 2013 | 3.857865802 | 5822.588902 | 9439.42471 | 15262.01 | 80092.56 | 5/8 |
| 2014 | 3.519624231 | 2421.712658 | 10538.7806 | 12960.49 | 89043.62 | 4/5 |
| 2015 | -0.02223518 | -2230.909533 | 11076.0683 | 8845.159 | 94144.96 | 1 1/4 |
| 2016 | -4.16010664 | -644.7549602 | 9480.36687 | 8835.612 | 101489.5 | 1 |
| 2017 | -1.78001521 | 3183.297347 | 10804.8458 | 13988.14 | 113711.6 | 7/9 |
| | | | | | Aggregate | 2/3 |

Source: CBN Statistical Bulletin, 2017 and World Bank Database

APPENDIX II

Model I: $GDP = \beta_0 + \beta_1 Exports + \mu$

Model Summary

| | | |
|------------|----------------------------|-------|
| Equation 1 | Multiple R | .393 |
| | R Square | .154 |
| | Adjusted R Square | .101 |
| | Std. Error of the Estimate | 3.331 |

ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|------------|------------|----------------|----|-------------|-------|------|
| Equation 1 | Regression | 32.398 | 1 | 32.398 | 2.919 | .107 |
| | Residual | 177.581 | 16 | 11.099 | | |
| | Total | 209.980 | 17 | | | |

Coefficients

| | | Unstandardized Coefficients | | Beta | T | Sig. |
|------------|------------|-----------------------------|------------|-------|--------|------|
| | | B | Std. Error | | | |
| Equation 1 | (Constant) | 8.614 | 1.688 | | 5.104 | .000 |
| | Exports | .0001 | .000 | -.393 | -1.709 | .107 |

APENDIX III

Model II: $GDP_Cap = \beta_0 + \beta_1 Imports$

Model Summary

| | | |
|------------|----------------------------|-------|
| Equation 1 | Multiple R | .568 |
| | R Square | .322 |
| | Adjusted R Square | .280 |
| | Std. Error of the Estimate | 2.921 |

ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|------------|------------|----------------|----|-------------|-------|------|
| Equation 1 | Regression | 64.879 | 1 | 64.879 | 7.603 | .014 |
| | Residual | 136.526 | 16 | 8.533 | | |
| | Total | 201.405 | 17 | | | |

Coefficients

| | | Unstandardized Coefficients | | Beta | t | Sig. |
|------------|------------|-----------------------------|------------|-------|--------|------|
| | | B | Std. Error | | | |
| Equation 1 | (Constant) | 6.364 | 1.298 | | 4.903 | .000 |
| | Imports | -.001 | .000 | -.568 | -2.757 | .014 |

APPENDIX IV

Model III: $BoT_T = \beta_0 + \beta_1 Exports + \mu$

Model Summary

| | | |
|------------|----------------------------|----------|
| Equation 1 | Multiple R | .574 |
| | R Square | .329 |
| | Adjusted R Square | .287 |
| | Std. Error of the Estimate | 1898.841 |

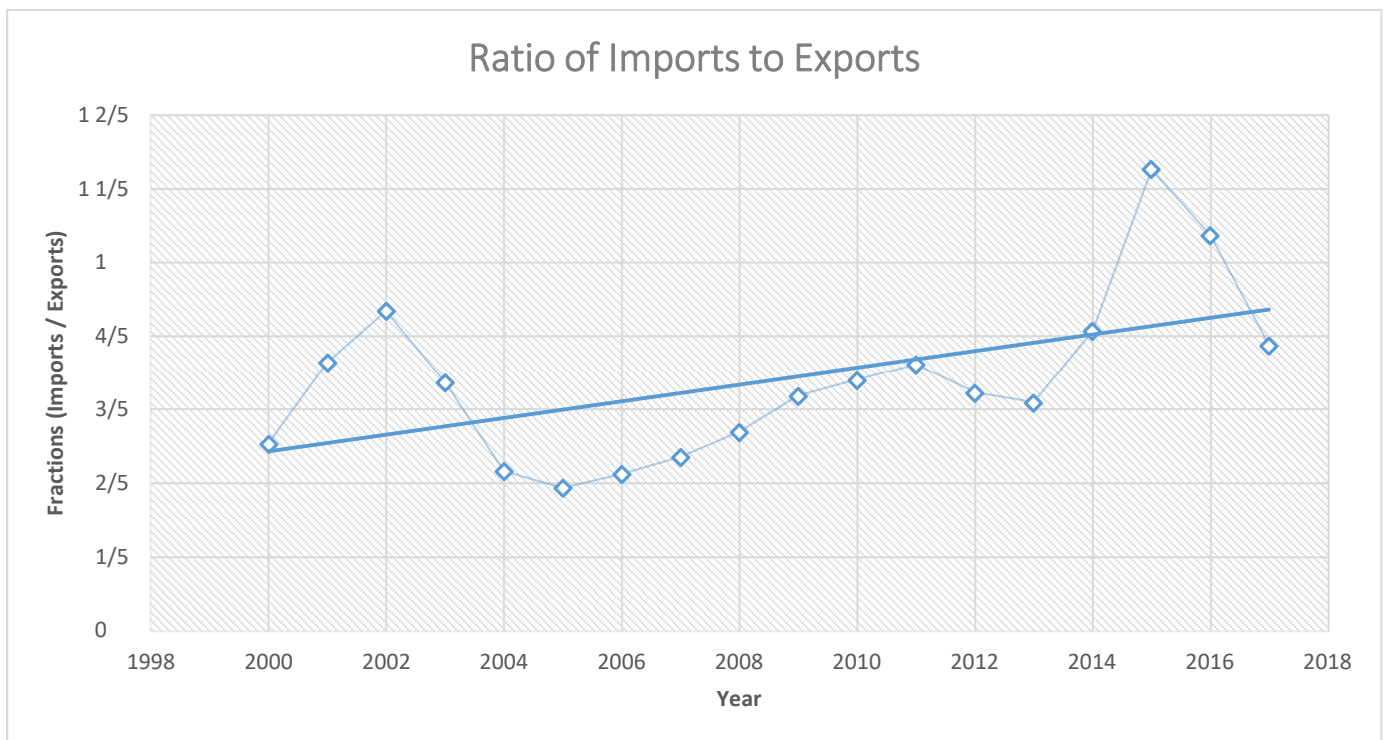
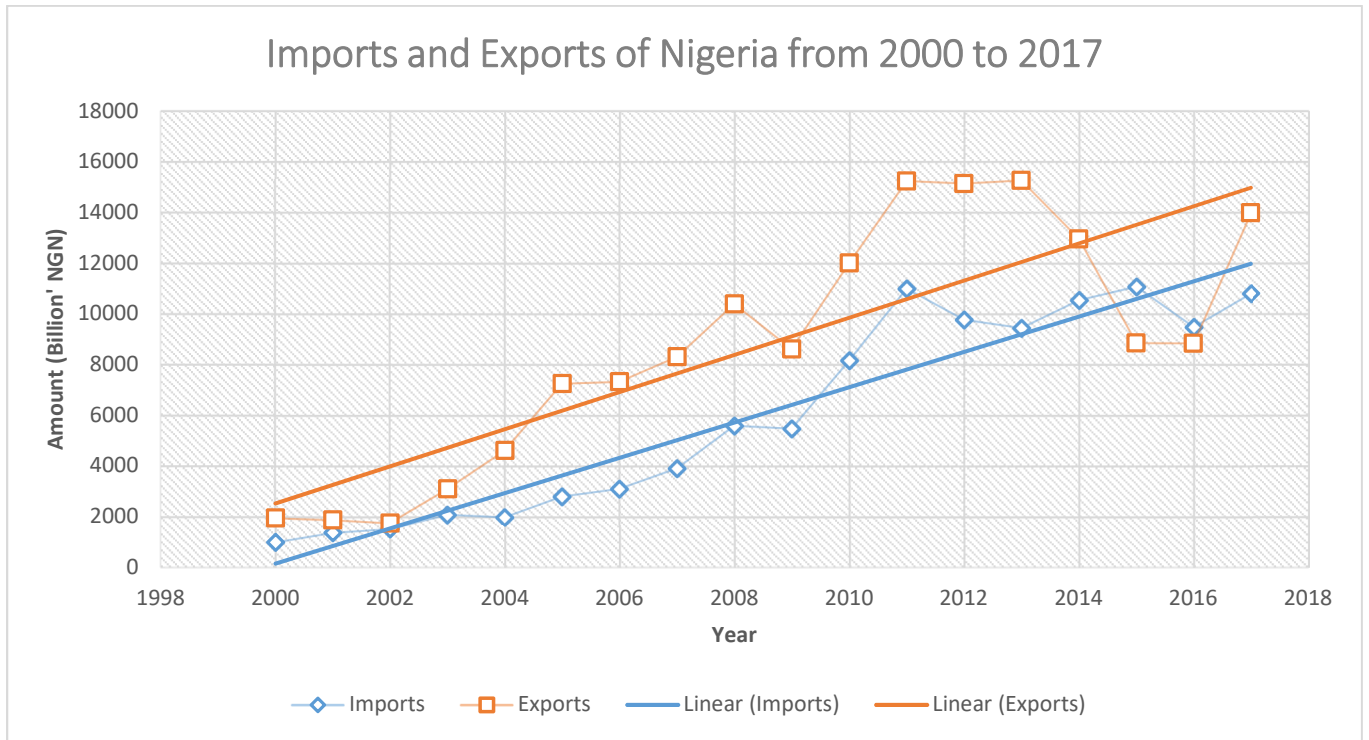
ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|------------|------------|----------------|----|--------------|-------|------|
| Equation 1 | Regression | 28287212.657 | 1 | 28287212.657 | 7.845 | .013 |
| | Residual | 57689573.737 | 16 | 3605598.359 | | |
| | Total | 85976786.395 | 17 | | | |

Coefficients

| | | Unstandardized Coefficients | | | | |
|------------|------------|-----------------------------|------------|------|-------|------|
| | | B | Std. Error | Beta | t | Sig. |
| Equation 1 | (Constant) | 299.489 | 961.907 | | .311 | .760 |
| | Exports | .273 | .097 | .574 | 2.801 | .013 |

APPENDIX V



Copyrights: The copyright for the published article is reserved by the author(s), with initial publication rights granted to the journal. This is an open-access article distributed under the terms and conditions of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/).