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### Could Imports Be Beneficial to Economic Growth in Nigeria?

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#### Abstract

The study examined the impact of import on economic growth using annual time series data from Nigeria for the period 1981 – 2017. Import was disaggregated into consumer goods, manufactured goods, capital goods, raw materials and refined fuel. The impact of each component was estimated separately using the autoregressive distributed lagged model. The aim was to ascertain the economic growth potential of each component of import. The statistical analysis revealed that there was a change in the import composition of Nigeria during the period under study. In the 1980's, capital good dominated the import basket of Nigeria, with refined fuel constituting less than 1% of total import. However, in the current period, consumer good and refined fuel is dominant with refined fuel constituting 23% of total import in 2017. The empirical results revealed that importation of capital good is growth enhancing, while importation of refined fuel is a drain on the country's economic growth process. Importation of consumer goods was found not to be a serious growth enhancing import in Nigeria. Human capital development, money supply and export were found to also have significant impact on economic growth in Nigeria. The impact of government expenditure though significant, negatively affect economic growth in Nigeria. It was therefore recommended that strategic policy framework be put in place to encourage the importation of capital goods, accompanied with serious effort at improving the technical base of the labour force. It was also recommended that local refining of fuel should be a deliberate policy of the government.

**Keywords:** disaggregate import, economic growth, export, human capital, export-led-growth

#### Introduction

Export led growth strategy has been identified by many economist as the secret of the East Asian miracle of the second half of the 20<sup>th</sup> century. The export-led-growth strategy according to Afaf and Majeed (2015) assumes that one way of encouraging accelerated economic growth apart from mounting the quantity of investment and manpower, is by increasing total export.

At the core of the export-led-growth strategy of the East Asia countries was trade protectionism of the domestic market to enable infant domestic firms grows to international competitiveness (Kim, Lim & Park, 2007). Giving the growth performance of East Asia from the export-led-growth strategy, there has been the impression that export is beneficial while imports are harmful for economic growth.

But is import totally harmful to economic growth? Could all imported goods be considered not beneficial to economic growth even in developing countries with little or no visible manufacturing

activities? The study of the impact of import on economic growth has not gain a lot of attention in trade literature like the study of the impact of export on economic growth. In most empirical study on the impact of international trade on growth, attention is placed on the export component. Imports were only mentioned passively without detailed analysis of its components. Some recent studies based on Nigeria such as Agbo, Ebere and Oluchukwe (2018), Afolabi, Danladi and Azeez (2017) Lawal and Ezeuchenna (2017), Abiodun (2017), Adelaye, Adeteye and Adewuyi (2015) included import in their study. However, they used import in its aggregative term. None of the study decomposed import into its various components. To get a clear cut impact of import on economic growth, various components of import should be examined separately. This is important as each component of import has its own unique impact on economic growth. Aggregating import amount to telling only a part of the story. Hence, this study is aimed at examining the impact of import on economic growth in Nigeria using a disaggregate model.

This study is divided into five sections. Apart from section one which is the introduction, section two deals with the review of relevant literature. Section three is the theoretical Framework and model specification, while section four covers the empirical analysis. The study is round off in section five with some concluding remarks.

## Literature Review

Much studies have been conducted on the impact of trade on economic growth. However, studies focusing majorly on import trade and its impact on economic growth are scarce. The literature in this study is reviewed in line with studies based on other countries and studies based on Nigeria.

Afaf and Hussan (2015) examined the impact of export and import on economic growth in Tunisia. The study employed co-integration and error correction modelling techniques as well as the Granger causality test for the period 1975 – 2012. The result revealed that import is a source of economic growth in Tunisia.

Bakari and Mabrouki (2016) investigated the relationship among imports, exports and economic growth using empirical data from Turkey for the period 1960 – 2015. The study employed vector auto regression technique and the granger causality test. The result revealed that there exist a bidirectional causality between economic growth and import in Turkey.

Mori, Dallah, Kok and Jaratin (2011) assess the impact of import on economic growth in Malaysia using annual time series data for the period 1970 – 2007. The study employed the Engle-Granger, Hsiao-Granger and the Tado-Yamamoto procedure for bivariate co-integration and causality analysis. The findings of the study shows that there exist a bidirectional causality between import and economic growth. Also, it was observed that economic growth in Malaysia is significantly influenced by import.

Ali, Ali and Damar (2018) studied the impact of import and export performance on economic growth in Somalia using annual time series data for the period 1970 – 1991. The study employed the vector error correction modelling technique and the Granger causality test. The results shows that import do not granger cause economic growth and export. However, export granger cause economic growth. The paper does advocated for the adoption of the export-led growth strategy to stimulate economic growth in Somalia.

Kim et al (2007) examined the impact of import on economic growth in Korea using quarterly time series data for the period 1980 – 2003. The study employed the vector error correction modelling technique for testing for causality between import and economic growth. The result revealed that import significantly influence productivity in Korea. Furthermore, the study shows that import of capital goods and import of consumer goods significantly influence productivity in Korea.

Moyo and Mapfumo (2015) examined the causal relationship between imports and economic growth in Zimbabwe for the period 1975 – 2013. The empirical results reveled that there is no evidence of long run relationship between imports and economic growth in Zimbabwe. However, there was evidence

that import influence growth in the short run. The causality test revealed that there is a unidirectional causality between the two macro variables with causality from imports to economic growth in the short run.

Studies based on Nigeria reviewed include Agbo et al (2018), Afolabi et al (2017), Lawal and Ezeuchenna (2017), Abiodun (2017) and Adeleye et al (2015). Results from all the studies revealed that import had no significant impact on economic growth in Nigeria. In all the studies, it was found that only the export component of trade significantly influenced economic growth in Nigeria.

A close observation of all the studies both those based on Nigeria and those based on other countries shows that they were all based on aggregated import data except Kim et al (2007). It could be possible that though total import may not significantly affect growth, some components of import may be growth enhancing for a developing country like Nigeria. A model based on aggregate import may not be able to reveal that. This is the aspect this study seek to evaluate.

## Methodology

This study relied on the endogenous growth model of Romer (1990) and Grossman and Helpman (1991) to establish the link between import and economic growth. Romer (1990) in his endogenous growth model introduced Research and Development (R&D) to make technological progress endogenous. The complete model was made up of three sectors. These are the R&D sector, the intermediate goods sector and the final goods sector. The model assumed spillovers in the R&D sector on the basis that findings from one research can be used by other researchers to develop other varieties of products. Hence, knowledge embodied in designs in the sector is non-rival but partially excludable due to patent. Innovation which is a by product of research causes productivity growth by creating new varieties of products.

The theory employed the Dixit-Stiglitz-Ethier production function, in which final output is a function of labour and a continuum of intermediate products. This is expressed as:

$$Q = N^{1-\alpha} \int_0^{\rho} x(i)^{\alpha} di; \quad 0 < \alpha < 1 \quad - \quad - \quad (1)$$

Where:

Q = Final output

N = aggregate supply of labour which is assumed to be constant

X(i) = flow of input of intermediate products

$\rho$  = different intermediate products that are available for use

In the model, labour force is divided into labour employed in direct production of goods and those employed into the research and development section. This is expressed as:

$$N = N_Q + N_T \quad - \quad - \quad - \quad - \quad (2)$$

An increase in  $\rho$  raises productivity by permitting the country to expand its intermediate production across wider range of activities.

The final goods sector combined the intermediate input with labour not employed in the R&D sector to create final goods for consumption. This implies that the more discoveries from the R&D sector, the more will be the varieties of products and hence economic expansion. This model therefore shows that the growth process is driven by innovation from the R&D sector.

However, Grossman and Helpman (1991) noted that research and development activities in developing countries are scanty. Hence, there is scarcity of discovering's needed to propel the industrialization

process. On this basis, developing countries would be incapacitated in producing most of the machinery and equipment needed to push industrialization process. In this regard, economic growth can only be possible in these developing countries if these intermediate inputs are imported from the developed countries. This implies that economic growth in the less developed countries will be largely dependent on importation of capital and intermediate goods for their growth process.

Flowing from the above theoretical framework, there exist a theoretical link between import and economic growth. This study modified the growth model of Mankiw, Romer and Weil (1992) to examine the empirical relationship between import and economic growth in Nigeria for the period 1981 – 2017. In this study, import is disaggregated into consumer goods, manufactured goods, capital goods, raw materials and refined petroleum products. Other control variables such as money supply and government expenditure were included to control for the effect of government macroeconomic policy. The model which is an autoregressive distributed lagged model is expressed as:

$$RGDP_t = \alpha_0 + \alpha_1 \sum_{i=1}^n RGDP_{t-i} + \alpha_2 \sum_{i=1}^n GFCF_{t-i} + \alpha_3 \sum_{i=1}^n LFPR_{t-i} + \alpha_4 \sum_{i=1}^n HC_{t-i} + \alpha_5 \sum_{i=1}^n GEXP_{t-i} + \alpha_6 \sum_{i=1}^n MS_{t-i} + \alpha_7 \sum_{i=1}^n TOEXP_{t-i} + \alpha_8 \sum_{i=1}^n TOIMP_{t-i} + U_t \quad (3)$$

$$RGDP_t = \beta_0 + \beta_1 \sum_{i=1}^n RGDP_{t-i} + \beta_2 \sum_{i=1}^n GFCF_{t-i} + \beta_3 \sum_{i=1}^n LFPR_{t-i} + \beta_4 \sum_{i=1}^n HC_{t-i} + \beta_5 \sum_{i=1}^n GEXP_{t-i} + \beta_6 \sum_{i=1}^n MS_{t-i} + \beta_7 \sum_{i=1}^n TOEXP_{t-i} + \beta_8 \sum_{i=1}^n IMCG_{t-i} + U_t \quad (4)$$

$$RGDP_t = \beta_0 + \beta_1 \sum_{i=1}^n RGDP_{t-i} + \beta_2 \sum_{i=1}^n GFCF_{t-i} + \beta_3 \sum_{i=1}^n LFPR_{t-i} + \beta_4 \sum_{i=1}^n HC_{t-i} + \beta_5 \sum_{i=1}^n GEXP_{t-i} + \beta_6 \sum_{i=1}^n MS_{t-i} + \beta_7 \sum_{i=1}^n TOEXP_{t-i} + \beta_8 \sum_{i=1}^n IMMCG_{t-i} + U_t \quad (5)$$

$$RGDP_t = \beta_0 + \beta_1 \sum_{i=1}^n RGDP_{t-i} + \beta_2 \sum_{i=1}^n GFCF_{t-i} + \beta_3 \sum_{i=1}^n LFPR_{t-i} + \beta_4 \sum_{i=1}^n HC_{t-i} + \beta_5 \sum_{i=1}^n GEXP_{t-i} + \beta_6 \sum_{i=1}^n MS_{t-i} + \beta_7 \sum_{i=1}^n TOEXP_{t-i} + \beta_8 \sum_{i=1}^n IMCAG_{t-i} + U_t \quad (6)$$

$$RGDP_t = \beta_0 + \beta_1 \sum_{i=1}^n RGDP_{t-i} + \beta_2 \sum_{i=1}^n GFCF_{t-i} + \beta_3 \sum_{i=1}^n LFPR_{t-i} + \beta_4 \sum_{i=1}^n HC_{t-i} + \beta_5 \sum_{i=1}^n GEXP_{t-i} + \beta_6 \sum_{i=1}^n MS_{t-i} + \beta_7 \sum_{i=1}^n TOEXP_{t-i} + \beta_8 \sum_{i=1}^n IMRM_{t-i} + U_t \quad (7)$$

$$RGDP_t = \beta_0 + \beta_1 \sum_{i=1}^n RGDP_{t-i} + \beta_2 \sum_{i=1}^n GFCF_{t-i} + \beta_3 \sum_{i=1}^n LFPR_{t-i} + \beta_4 \sum_{i=1}^n HC_{t-i} + \beta_5 \sum_{i=1}^n GEXP_{t-i} + \beta_6 \sum_{i=1}^n MS_{t-i} + \beta_7 \sum_{i=1}^n TOEXP_{t-i} + \beta_8 \sum_{i=1}^n IMFUEL_{t-i} + U_t \quad (8)$$

Equation 3 contains aggregate import, while equation 4 – 8 contains import in disaggregate components. Each component is added in turns to each model. All components were not added to a single model in order to reduce the possibility of multicollinearity. Also including all the components of import in a single model will increase the number of explanatory variables greatly making estimation impossible due to insufficient degree of freedom problem.

The description of the variables in the model and their aprior sign expectation are shown in the table below:

Table 1: Description of variables

Variable	Description	Measurement	Sign expectation
RGDP	Real Gross Domestic Product proxy for economic growth	Gross Domestic Product at 2010 constant basic Price (N' Billion)	
GFCF	Gross Fixed Capital Formation proxy for capital stock	Gross fixed capital formation at 2010 constant purchase price (N' Billion)	+
LFPR	Labour force	Labour Force Participation Rate (%)	+
HC	Human Capital Development	Secondary School enrollment rate (%)	+
GEXP	Government Expenditure proxy	Sum of recurrent and capital	+

	for Government Fiscal Policy	expenditure of the Federal Government (N' Billion)	
MS	Money supply proxy for monetary policy	Broad money (N' Billion)	+
TOEXP	Total Export	Total export (N' Billion)	+
TOIMP	Total Import	Total Import (N' Billion)	+
IMCG	Import of Consumer Goods	Import of food, animals, beverages, tobacco, animals and vegetable oils and fats (N' Billion)	+
IMMG	Import of Manufactured Goods	Import of final manufactured goods (N' Billion)	+
IMCAG	Import of Capital Goods	Import of Machinery and transportation equipment (N' Billion)	+
IMRM	Import of Raw Materials	Import of Crude materials inedible and chemicals (N' Billion)	+
IMFUEL	Import of refined petroleum products	Import of refine fuel (N' Billion)	+
U	Stochastic error term	Stochastic error term assumed to be white noise.	

Source: Authors compilation (2019)

All the variables were estimated in log form. Hence, the elasticity results were obtained directly. The data were obtained from Central Bank of Nigeria (CBN) statistical bulletin, CBN annual report and world development indicator (WDI).

## Results

### *Statistical Analysis of Import and Economic Growth Performance of Nigeria (1981 – 2017)*

The total import of Nigeria was relatively low between 1981 and 1994. Total import was N12.84 billion in 1981. It fell to N10.77 billion in 1982 representing a fall of 16.1%. In 1986 the total import has dropped to a record low level of N5.98billion. However, there was a drastic turn in the trend of Nigeria's import in 1987 a year after the implementation of the structural adjustment programme in the country. In 1987, total import increased to N17.86 billion, representing an increase of 198.7% compared with 1986 import figure. Between 1986 and 2011, the total import increased monotonically. In 2011, total import rose to a record high of N10, 229.43 billion. Another round of import decline began in 2012. In that year, total import dropped to N9, 426.14 billion which represent a fall of 7.9% compared to 2011 import figure. Coincidentally, 2012 was a year after the federal government of Nigeria implemented the transformation agenda, a reform programme aimed at transforming the economic base of the country. Between 2012 and 2017, the Nigerian total import maintained a downward trend, hitting a record low level of N5, 409.71 in 2017. The trend in total import of Nigeria from 1981 to 2017 is shown in the chart below.

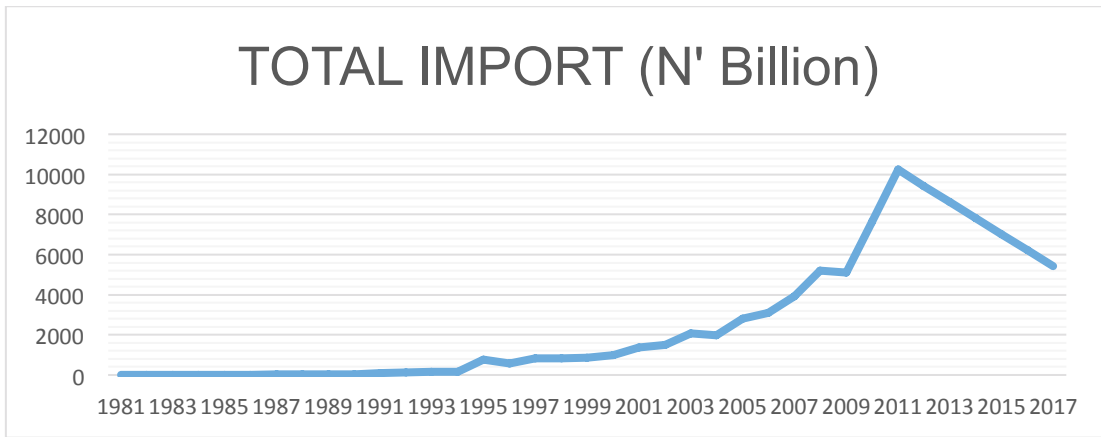


Figure 1: Trend of Total Import of Nigeria (1981 - 2017)

Another interesting aspect of Nigeria import trade is its composition. There was a change in the composition of the Nigerian import during the period under study. In the early 1980's, according to statistics from National Bureau of Statistics (2017) the dominant import in Nigeria was capital goods. In 1981, capital goods was 44.1% of total import, manufactured goods was 27.9% while consumer goods was 15.3%. Raw materials constitute 9.8% while fuel constitute only 1.1%. The remaining 1.8% represent miscellaneous import transactions. This trend was maintained throughout the 1980s and 1990s even up to 2012. Figure 2 below shows the import composition of Nigeria between 1981 and 1987 with import of capital goods dominating. A close look at figure 3 which is the import composition of Nigeria from 2010 to 2017 revealed that in 2010, 2011 and 2012, capital goods was still the leading import in Nigeria. However, in 2011 there was a gradual change in the import basket of Nigeria. Importation of fuel became a noticeable import item. From 2014 to 2017, consumer goods and fuel became the most dominant in the import basket of Nigeria. Capital goods which has been the dominant import item was relegated to the fourth position in the import basket of Nigeria. In 2017 as shown in figure 4, fuel constitute 23% of total import in Nigeria. Consumer goods constitute 38% while capital goods constitute only 14% of total import. This shows that consumer good represent the largest import component in 2017.

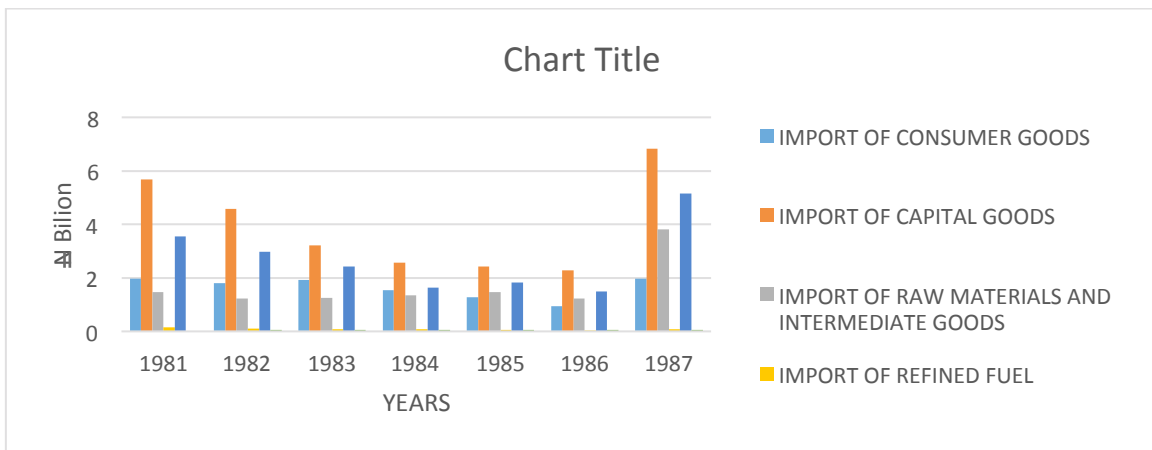


Figure 2: Import composition of Nigeria (1981 - 1987)

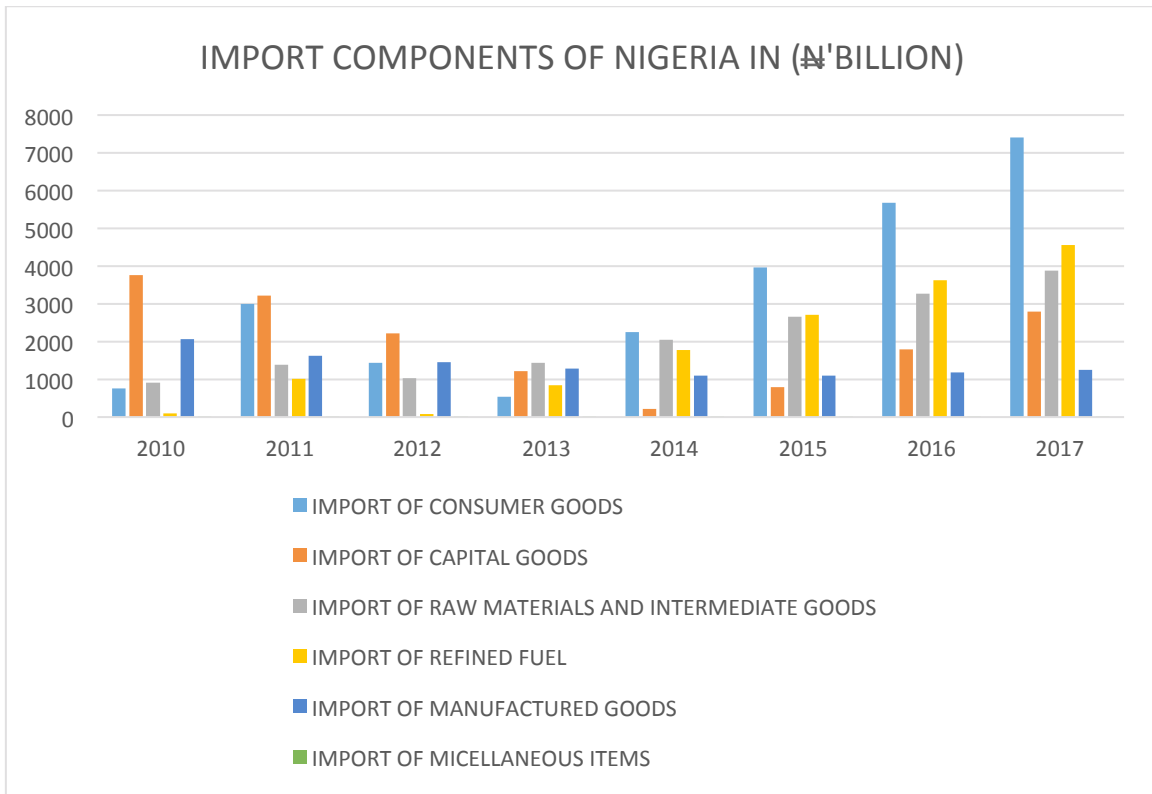


Figure 3: Import Composition of Nigeria (2010 - 2017)

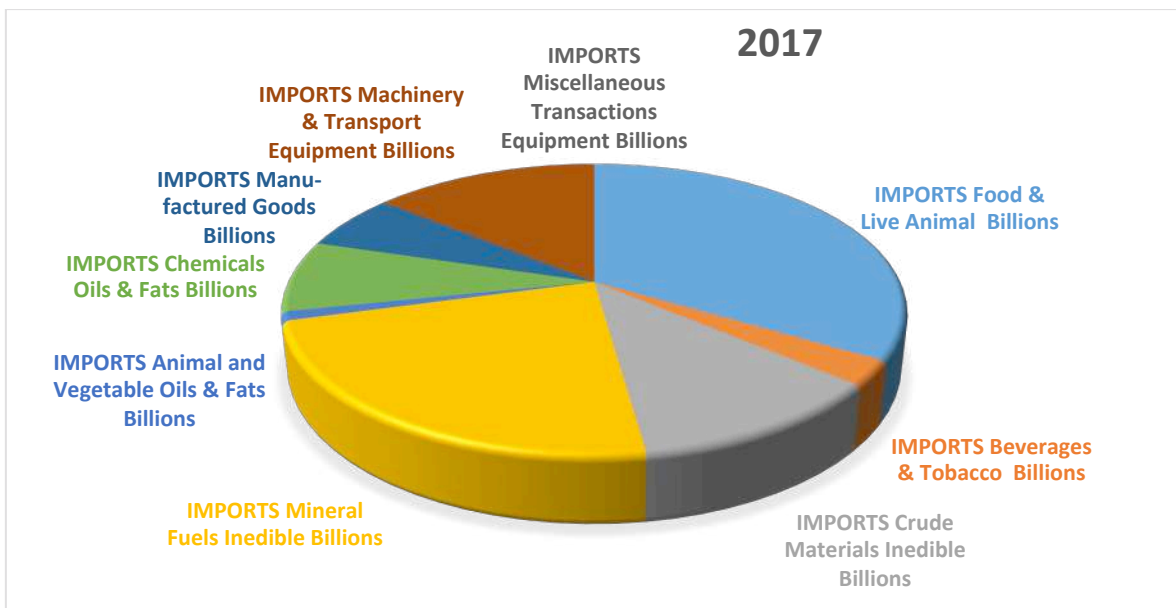


Figure 4: Import Composition of Nigeria for 2017

Nigeria experienced different phases of economic growth between 1981 and 2017. From the statistics of the National Bureau of Statistics (2017), Nigeria’s economic growth started with a negative growth rate of -13.1% in 1981. Between 1981 and 1984, the country experience a negative growth rate. However, in 1985, there was a change in the trend of economic growth as the growth rate moved from negative to 9.7%. But this was short lived as the growth rate fell to 2.5% in 1986 and 0.7% in 1987. Interestingly, this was the period of Structural adjustment programme in Nigeria. This period also coincided with the period of sharp increase in Nigeria’s import. The growth rate was relatively high between 1988 and 1990 with a growth rate as high as 12.8% in 1990. Between 1991 and 1999, the

Nigeria economic growth rate was relatively stable around 2.5%. The country experienced a high growth performance between 2000 and 2014 with the real GDP of the country growing at an average rate of 8%. During this period Nigeria was rated as one of the fastest growing economy in Africa. However, there was a pulse in the high growth performance of Nigeria in 2015 and the growth rate of real GDP of Nigeria dropped sharply to 2.7%. In 2016, the country recorded a negative growth rate of -1.6%, while in 2017 the country recovered slightly with a growth rate of 0.8%. The period 2015 – 2017 also coincided with the period when Nigeria experienced high importation of consumer goods as against capital goods. The trend in Nigeria economic growth rate is shown in figure 5 below.

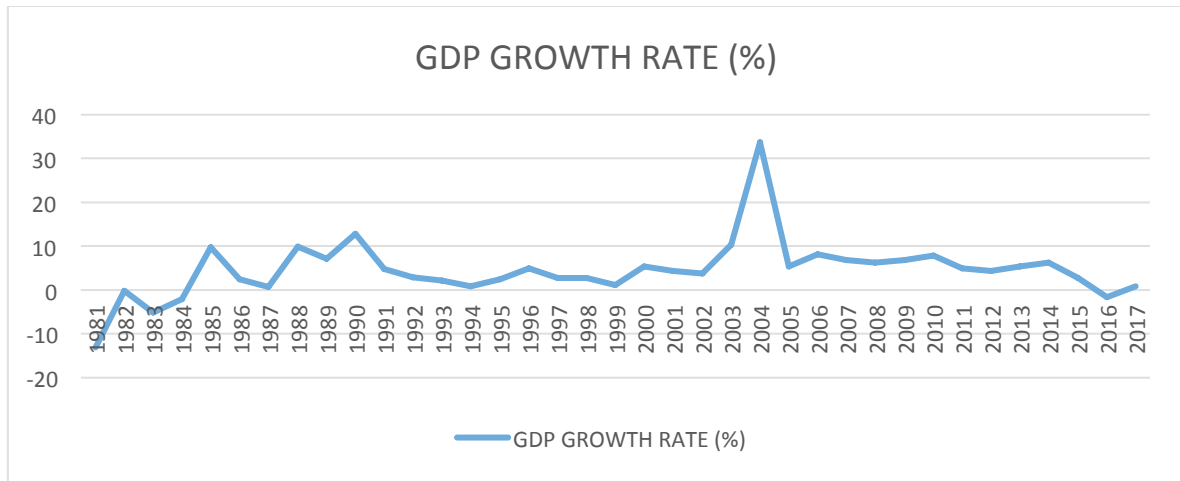


Figure 5: Economic Growth of Nigeria (1981 - 2017)

**Estimation Results**

The estimation of the specified models commenced with unit root test of the selected variable to test for stationarity of the variables. The test was based on Augmented Dickey Fuller test and Phillips-Parron unit root test. The result is shown in the table below:

Table 2: Unit Root Test of Variables

Variable	Augmented Dickey Fuller unit root Test				Phillips-Parron unit root test			
	ADF In Level	Critical value at 0.05	ADF in first Diff.	Critical value at 0.05	PP in levels	Critical value at 0.05	PP in first diff.	Critical value at 0.05
RGDP	0.7112	-2.9484	2.9702	-2.9484	2.3145	-2.9458	3.1063	-2.9484
GFCF	1.0673	-2.9458	4.7640	-2.9484	1.0673	-2.9458	4.7640	-2.9484
LFPR	2.0900	-2.9540	6.6578	-2.9484	2.2504	-2.9458	6.6841	-2.9484
HC	0.5160	-2.9458	4.6196	-2.9484	0.5160	-2.9458	4.6067	-2.9484
GEXP	2.6705	-2.9604	3.5548	-2.9540	1.3580	-2.9458	6.3714	-2.9484
MS	0.8580	-2.9484	3.3089	-2.9484	1.8898	-2.9458	3.3355	-2.9484
TOEXP	1.7397	-2.9571	4.6639	-2.9571	-0.0010	-2.9458	3.0205	-2.9484
TOIMP	1.1588	-2.9484	3.6345	-2.9584	0.9102	-2.9458	3.6627	-2.9484
IMCG	1.9623	-2.9604	7.9083	-2.9584	1.7086	-2.9458	7.5496	-2.9484
IMMG	-1.3279	-2.9571	-2.9657	-2.9571	0.8655	-2.9458	7.6231	-2.9484
IMCAG	-0.1135	-2.9571	-5.6556	-2.9571	0.5045	-2.9458	2.9682	-2.9484
IMRM	1.3732	-2.9458	6.8837	-2.9484	2.2498	-2.9458	6.8339	-2.9484
IMFUEL	-2.3472	-2.5677	-4.3882	-2.9484	-2.1986	-2.6115	-6.0976	-2.9484

Source: Authors computation

From the result, all the variables were not stationary in levels however, there were all stationary in in first order difference. This result was consistent in both the ADF and Philips-Parron tests. This implies



that the selected variables are integrated of order one  $\{I(1)\}$ . Since the variables have unit root it was necessary to conduct a co-integration test to ascertain if a long run or equilibrium relationship exist among the variables. This was done using the Johansen Co-integration test based on trace statistics and Maximum-Eigen statistics. Both results shows that there exist at least six co-integrating equations. This is shown in the table 3 below:

Table 3: Johansen Co-integration test result

Hypothesized No. of CE(s)	Trace statistics	0.05 critical value	Max-Eigen Statistics	0.05 critical Value
None*	365.806	159.529	106.699	52.362
At Most 1*	259.106	125.615	74.942	46.231
At Most 2*	184.164	95.753	61.091	40.077
At Most 3*	123.072	69.818	58.045	33.876
At Most 4*	65.027	47.856	32.308	27.584
At Most 5*	32.718	29.797	20.663	20.131
At Most 6	12.055	15.494	11.348	14.264
At Most 7	0.707	3.841	0.707	3.841

Source: Authors computation

The result of the estimation of the autoregressive distributed lagged model is shown in table 4 below:

Table 4: Estimation result Autoregressive distributed lagged model

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
RGDP (-1)	0.535* (4.126)	0.988* (6.606)	1.000* (10.014)	1.012* (9.446)	0.852* (8.541)	0.933* (12.474)
RGDP (-2)	0.350* (2.636)	-	-	-	0.191 (1.762)	-
TOIMP	0.286 (1.208)	-	-	-	-	-
TOIMP(-1)	1.287* (4.475)	-	-	-	-	-
TOIMP(-2)	-1.932* (-6.187)	-	-	-	-	-
IMCG	-	0.749 (1.585)	-	-	-	-
IMCG(-1)	-	0.749 (1.385)	-	-	-	-
IMCG(-2)	-	-1.637* (-4.202)	-	-	-	-
IMMG	-	-	2.994*** (1.836)	-	-	-
IMMG(-1)	-	-	1.860*** (1.916)	-	-	-
IMMG(-2)	-	-	1.884*** (1.816)	-	-	-
IMCAG	-	-	-	0.638** (2.068)	-	-
IMCAG(-1)	-	-	-	1.783* (2.206)	-	-
IMCAG(-2)	-	-	-	0.703** (2.027)	-	-
IMRM	-	-	-	-	-0.997	-

IMRM(-1)	-	-	-	-	(-1.418) 0.884	-
					(0.888)	
IMRM(-2)	-	-	-	-	2.572*	-
					(3.023)	
IMFUEL	-	-	-	-	-	-0.906***
						(-1.919)
IMFUEL(-1)	-	-	-	-	-	-0.071**
						(-2.120)
IMFUEL(-2)	-	-	-	-	-	-1.117***
						(-1.943)
GFCF	8.804*	1.565*	6.143**	1.248*	1.124	7.074
	(2.101)	(2.671)	(2.195)	(2.523)	(0.228)	(1.295)
GFCF(-1)	2.348*	2.114*	-	1.020	1.589*	1.738*
	(5.156)	(3.302)		(1.555)	(4.074)	(3.969)
GFCF(-2)	8.118*	5.980	-	-	-	-
	(2.417)	(0.951)				
LFPR	-	-2.055	4.481	-3.262	-7.552	-3.839
	3.501***	(-0.581)	(1.522)	(-0.871)	(-0.413)	(-1.295)
LFPR(-1)	(-1.729)	-1.311*	1.159*	-6.851	-1.343*	-2.956***
	-8.302*	(-3.101)	(3.911)	(-1.748)	(-6.941)	(-1.981)
LFPR(-2)	(-4.073)	4.448	4.194	-6.525	-	-4.602
	-4.658*	(1.215)	(1.631)	(-1.070)		(-1.757)
HC	(-2.514)	4.136*	1.402*	1.955*	2.877*	1.580***
	3.246*	(3.902)	(2.525)	(2.830)	(6.806)	(1.946)
HC(-1)	(6.529)	3.100*	7.107	1.769*	2.378*	9.673***
	9.409***	(2.654)	(1.539)	(3.091)	(4.890)	(1.981)
HC(-2)	(1.859)	1.351	-	-	4.090	-
	2.071*	(1.415)			(0.905)	
GEXP	(5.189)	-1.878***	-1.749*	-1.178*	-2.705*	-0.852**
	-1.286*	(-1.847)	(-3.079)	(-2.370)	(-3.890)	(2.213)
GEXP(-1)	(-2.775)	0.591	0.668	0.585	-	-1.298**
	-	(0.819)	(1.209)	(1.021)		(-2.041)
GEXP(-2)	-	-1.865*		-1.499***	-	-1.046
	-	(-2.391)		(1.983)		(-1.526)
MS		3.863*	4.369*	2.488*	4.418*	1.534*
	2.569*	(3.531)	(6.096)	(2.308)	(7.216)	(2.541)
MS(-1)	(5.914)	4.413*	3.415*	0.365	2.671*	-
	-	(2.707)	(3.820)	(0.226)	(3.935)	
MS(-2)	-	1.363		1.492***	-	-
	-	(1.210)		(1.828)		
TOEXP		0.303***	0.454*	0.332*	0.020**	0.035*
	0.270*	(1.878)	(4.545)	(2.392)	(2.153)	(2.384)
TOEXP(-1)	(2.816)	0.380**	0.280*	0.246**	0.696	0.471*
	0.844*	(2.271)	(2.310)	(2.024)	(4.378*)	(3.146)
TOEXP(-2)	(6.011)	0.897*		0.580*	0.698*	-
	0.874*	(2.881)		(4.101)	(4.049)	
C	(5.387)	6.273*	1.447	9.464*	7.943*	6.345*
	9.298*	(3.022)	(0.783)	(3.620)	(7.766)	(3.516)
	(6.454)					
Goodness of fit statistics						
R <sup>2</sup>	0.999	0.999	0.999	0.999	0.999	0.999
F-Statistics	6298.962	2698.52	3750.70	2781.66	7420.99	2714.46
(P-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

\*=sig at 1% \*\* =sig at 5% and \*\*\* = sig at 10%

Table 4 above shows estimation result for the growth model with aggregate import in column 2. Columns 3 to 6 contains estimates of the growth model with various component of import in Nigeria. From the results, the impact of aggregate import on economic growth was not statistically significant in its current period. However, in the first and second lagged periods it was statistically significant with a negative sign in the second lagged period. From the model with disaggregate import variable, the impact of consumer goods was not statistically significant in the current period and one lagged period. It was however, significant in the second lagged period though with the wrong sign. The impact of manufactured goods was not statistically significant at 5% level, but at 10% level it was statistically significant. Import of raw materials was not statistically significant in the current and in one lagged period. However, in the second lagged period it was significant at 1% level. Import of capital goods was statistically significant with positive sign in both current and lagged periods. The import of fuel was statistically significant but with a negative sign.

Other results shows that export, money supply and human capital development contributed significantly and positively to economic growth in Nigeria. Surprisingly, government expenditure though had significant impact, its sign was negative. This shows that increase in government expenditure retard economic growth in Nigeria.

Table 5: Diagnostic Test of Model

Diagnostic test	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(Normality test)						
Jarque-Bara test	2.008	3.498	1.800	0.463	0.359	0.770
(Probability)	(0.366)	(0.173)	(0.406)	(0.792)	(0.835)	(0.680)
(Serial correlation test)						
Breusch-Godfrey test						
F- Statistics	0.773	1.313	1.642	1.153	0.606	0.871
(Probability)	(0.899)	(0.311)	(0.224)	(0.348)	(0.557)	(0.438)
(Heteroscedasticity test)						
Breusch-Pagan Godfrey test						
F-Statistics	0.867	0.539	0.962	1.587	0.822	0.710
(Probability)	(0.620)	(0.898)	(0.526)	(0.189)	(0.650)	(0.755)

The above results were subjected to diagnostic test. This involve normality test, serial correlation test and heteroscedasticity test. The Jarque-Bare test and their corresponding probability values shows that all the models passed the normality test. This shows that the error term is normally distributed. Similarly, the Breusch-Godfrey test revealed that all the models passed the serial correlation test at 0.05 level. This shows that the null hypothesis of the presence of serial correlation is rejected. The Breusch-Pagan-Godfrey test also confirm that all the models passed the heteroscedasticity test at 0.05 level. The result therefore revealed that  $u \sim N(0, \sigma^2)$  in line with the classical linear regression model assumptions.

### Discussion of Findings

The empirical results of this study shows that import of capital goods promote economic growth in Nigeria. This result is in line with the finding of Kim et al (2007) and a validation of the postulation of Grossman and Helpman (1991). The import of refine fuel retard economic growth, while the impact of consumer goods import is not statistically significant. This implies that the importation of consumer goods and fuel which currently dominate the import basket of Nigeria are not growth enhancing import items. The export variable was consistently significant and positive. This is an indication that the export led growth strategy (particularly non-oil export) is viable policy option for Nigeria.

The findings implies that a deliberate policy aim at promoting the importation of capital goods is a viable policy option for Nigeria. This has the capacity of improving the productive base of the economy which will in turn stimulate export of manufactures in the long run and hence stimulate economic growth.

However, the full benefits of this would be realized only if the government put in place policies to stimulate the development of technical skills of the labour force through improvement in human capital development. Only a well-trained labour force can utilized the technological transfer associated with importation of capital goods.

## Conclusion

The study revealed that importation of capital good promote economic growth, while import of consumer goods and fuel retard economic growth in Nigeria. Therefore, it is recommended that there should be a deliberate government policy to relax restrictions on the importation of capital good into the country. Also, efforts should be made by the government to discourage the importation of fuel by promoting local refining of the fuel for domestic consumption. The huge amount spent on fuel importation is drain on the economic growth process of Nigeria as revealed by the result of this study.

This study has therefore revealed that if strategic polices are not put in place to alter the current import composition of the country, efforts targeted at attaining accelerated and sustained economic growth for Nigeria may not yield positive outcome.

## References

- Abiodun, K., (2017). Contribution of international trade to economic growth in Nigeria. 2017. *Award for excellence in students research and creative activity- documents.1* retrieved from [http://thekeep.eiu.edu/lib\\_awards\\_2017\\_docs/1](http://thekeep.eiu.edu/lib_awards_2017_docs/1)
- Adeleye, J. O., Adeteye, O. S., & Adewuyi, M. O (2015) Impact of international trade on economic growth in Nigeria. *International Journal of Financial Research* 6(3), 163 – 172.
- Afaf, A. J. S., & Hussain, M. A., (2015) Impact of export and import on economic growth: Evidence from Tunisia. *Journal of Emerging Trend in Economics and Social Sciences* 6(1), 13 – 21.
- Afolabi, B., Danladi, J. D., & Azeez, M. I., (2017) International trade and economic growth in Nigeria. *Global journal of human-social sciences*. 17(5), 29 – 39.
- Agbo, E. I., Ebere, A. R., & Oluchukwu, E. L., (2018) Impact of international trade on economic growth in Nigeria. *European Journal of Business and Management* 10(18), 22 – 30.
- Ali, A. A., Ali, Y. S. A & Mohammed, S. D (2018) The impact of imports and exports performance on the economic growth of Somalia. *International journal of economics and Finance* 10(1), 110 – 119. <https://doi.org/10.5539/ijef.v10nlp110>.
- Bakari, S., & Mabrouki, M. (2016) The relationship among exports, imports and economic growth Turkey. *MPRA paper No. 76044*. <https://mpra.ub.uni-muenchen.de/76044/>
- Grossman, G.M., & Helpman, E. (1991) Trade, knowledge spillovers and growth. *European economic review* 35(2), 517 – 526
- Kim, S., Lim, H., & Park, D., (2007) Could import be beneficiary for economic growth? Some evidence from republic of Korea. *Asian Development Bank (ADB), Economic and Research Department working paper series No. 103*
- Lawal, E.O. & Ezeuchenne, K (2017) International trade and economic growth in Nigeria. *Journal of humanities and social sciences* 22(4), 35 – 43
- Mankiw, N. G., D. Romer and D. N. Weil (1992) A Contribution to the Empirics of Economic Growth, *Quarterly Journal of Economics* 107(2), 407 – 437
- Mori, K., Dallah, D., Kok, S.C., & Jaratin, L., (2011) Does import affect economic growth in Malaysia? *The Empirical Economic Letters* 10(3), 297 – 307

- Moyo U. & Mapfumo, A., (2015) Causal relationship between imports and economic growth in Zimbabwe: An empirical analysis 1975 – 2013. *The Economic and Finance Letters* 2(4), 35 – 44.
- Romer, P. (1990) Endogenous Technical Change, *Journal of Political Economy*, 98: 71–102.