Assessment of Ocean Shipping Trade and the Nigeria Economy

E. Emmanuel Ege, Adetomiwa Ibrahim Aderogba, & Olusegun Adeaga,
Department of Geography
University of Lagos, Akoka

Abstract
Poor and inadequate policy formulation and implementation problems have continued to plague the shipping industry in Nigeria. Thus, it is imperative to assess ocean shipping trade with regards to the Nigeria economy, most especially in the area of Gross Domestic Product and External Reserve. This study investigates the relationship between Ocean Shipping Trade and the Nigeria economy, covering the period 1981-2019. The Simple Regression analysis was used to analyse the relationship between the independent variable (Nigeria Export Trade) and the dependent variables (Nigeria External Reserve). Ocean Shipping Export Trade exerts a positive effect on Nigeria External Reserve. In the study, it was revealed that the GDP grew at a very rapid rate, while the export trade, import trade and external reserves grew at a very slow rate during the period under investigation. It was also revealed that the values of commodities in the year 2010 increased by more than 100% in 2019. In conclusion, the study recommends a sustainable policy towards encouraging an exportation and unification process of all institutions in-charge of the necessary certifications for export (both mineral resources and agricultural produce) with a supportive policy that fully imbeds the international market policy.

Key Words: Shipping, Ocean, Trade, Gross Domestic Product, External Reserve.

Introduction

Shipping has for a long time been recognized as one of the strong catalysts for socio-economic development services. The international shipping industry is responsible for the carriage of about 90% of world trade (ICS, 2019). Adam Smith, the father of modern economics, viewed shipping as one of the principal stepping stones to economic development providing a source of cheap transport to open up wider markets to specialization, offering prices way below every other means of transportation (Mshelia, 2002).

Historically, shipping constitutes a major source of political power and territorial influence “he who rules the sea, rules the world”, a fact underscored by the

various conquests of the Egyptians, Turkish, Roman, and Spanish, Greek, Portuguese and British empires (Mukherjee, 2010).

Thus, ocean shipping trade popularly known as Seaborne trade has continued to expand, bringing benefits for consumers across the world through competitive freight costs, with highly correlation between the industrialization, economic output, merchandise trade and seaborne trade shipments (OECD and WTO 2017). This is evident going by the considerable increment in seaborne trade in 2005, reaching 7.11 billion tons of loaded goods in 2016, while world seaborne trade expanded by 2.6 percent, up from 1.8 per cent in 2015, and by the 2017 upswing in the world economy (UNCTAD 2006, 2016, 2017 and 2018).

In addition, shipping also constitutes an indispensable component of the Nigerian maritime sector and an important driver of the economy (Ugwu, 2006). Nigeria has a long and proud maritime heritage which has played an integral role in the development of Western and central Africa, through provision of an efficient and cost effective seaborne trade. This will provide an outstanding fact for the African Continental Free Trade Agreement which is expected to increase the intra African Trade by 33 percent (UNCTAD, 2018). It is also noted that additional trade flows is expected to benefit shipping and support seaborne trade volumes in Africa (Brookings Institution, 2018), with Nigeria playing an important role considering her location and population with diverse economic capabilities and large investment opportunities. The country has a coastline of over 853km and eight major ports excluding oil terminals with a cargo handling capacity of 35million tonnes per annum. Over the past decade, Nigeria ports have accounted for around 99 percent by volume and 95 percent by value of the country's total seaborne trade (Buhari &Chima 2013). Hence, the Nigerian seaborne trade remains the focal point of West African traffic. For instance, the cargo throughput to and from Nigeria accounting for more than 70 percent of the total volume of cargo generated by the entire West Africa sub-region of Africa. (Buhari &Chima, 2013). Ndikom (2006) and Oladakun (2009) viewed seaborne as a mode of transport that has continued to represent the cheapest and most efficient means of moving very large volume of import and export trade goods in the Nigerian international trade. The success or otherwise of the Nigeria seaborne trading sector therefore has a reverberating impact on the sub-region.

Okoh (2004) explained that the concepts of exportation must be based on the principles of local sufficiency. This connotes that a country that will engage in any export trade mission, should have products in large quantities which must be

easily available in reasonable sufficiency. Measures relating to the availability of trade-related information affect exports (OECD and UNCTAD, 2017).

As a resource-rich country, Nigeria's economic performance has been unfortunately driven by only the oil and gas sector to the extent that even progress recorded towards genuine economic development prior to the discovering of oil in commercial quantity has been virtually eroded. Between 2000 and 2005, the GDP growth was about 5.7 percent and the growth in the non-oil sector contributed about 5.9 percent of the GDP. World economic growth decelerated in 2016 with GDP expanding by 2.2 per cent, global GDP is expected to grow by more than 3.0 per cent over the 2018–2023 period (UNCTAD 2018, International Monetary Fund, 2018).

Nigerian economy has persistently depended on export especially oil as the main source of foreign exchange earnings and a major contributor to the external reserve since 1970s (Nwachuckwu*et al,* 2016).

In the year 2005 the volume of world exports expanded by 6.0 percent after the remarkable 9.0 per cent recorded the previous year (UNCTAD 2016), while in 2016 exports expanded at the faster rate of 1.7 per cent up from 1.4 per cent in 2015, (UNCTAD 2017).

The simple measure of any economy is the gross domestic product (GDP) is the value of goods and services produced in a given year (Ojinaka, 2005). Thus, GDP and trade reflect structural factors such as the slowdown in the pace of globalization and supply chain fragmentation (UNCTAD, 2016; Bems, et al, 2013).

Shipping operation has some impact on the economy of a nation, which has resulted into significant increase in global official reserves in recent years. This phenomenal growth is a reflection of the enormous importance countries attach to their international reserves. IMF defined international reserves as "consisting of official public sector foreign assets that are readily available to, and controlled by the monetary authorities, for direct financing of payment imbalances, and directly regulating the magnitude of such imbalances, through intervention in the exchange markets to affect the currency exchange rate and/or for other purposes" (Wikipedia).

The study therefore tends to determine the relationship between export trade and Nigeria's Gross Domestic Product (GDP) & export trade and Nigeria's External Reserve; in order to determine the relationship between Nigeria GDP, External reserve, import and export trade within the years 1981 to 2019. This is necessary considering the fact that over the years, Nigeria GDP has been growing at a high rate, with expectation that the external reserve is growing rapidly, but the reverse is the case, since the external reserve has been fluctuating in recent time. The general aim of this study therefore is to Assess Ocean Shipping Trade and Nigeria Economy.

Methodology

This study focuses on ocean shipping trade and Nigeria economy, using GDP and external reserve as an economic indicator, for the period (1981-2019) base on the Annual Statistics booklet (CBN Statistical Bulletin, annual reports and statement of accounts, economic and financial review, research seminar papers, etc.).

The Statistical Tools of Measurement

Descriptive analysis such as mean, Minimum, Maximum, Standard Deviation, Line Graph, percentages and frequencies were used to interpret data on Nigeria GDP, External reserve, Import and Export Trade within the years 1981 to 2019.

Simple Regression Model was used to analyse the relationship between the dependent variables (External Reserve) and the independent variable (Export Trade).

Line graph was used to interpret the relationship between Nigeria GDP, External reserve, import and export trade within the years 1981 to 2019.

The Regression analysis was carried out using Statistical Package for Social Sciences (SPSS) to compute the correlation coefficient and some other tests. The result of data was subjected to test of hypothesis at 0.05 level of confidence.

The regression analysis is expressed as:
Simple Regression Analysis $Y= a+bx$…….(1)
Where; Y= dependent variable (GDP & External Reserve), a= constant, b= slope, x= independent variable (Export).

Coefficient of determination (R-Square) is used to test the statistical significance of the estimated regression model.

Result and Discussion

Table 1.1 Nigeria's Ocean Shipping Import and Export trade, Gross Domestic Product and External Reserve (#'Billion) from 1981 to 2019

	Imports (cif)			Exports & Re-Exports (fob)							
Year	Oil (#'Billion)	Non-Oil (#'Billion)	Total (#'Billion)	Oil (#'Billion)	Non-Oil (#'Billion)	Total (#'Billion)	GDP at 2010 Constant Basic Prices (#'Billion)	GDP at Current Basic Prices (#'Billion)	EXTERNAL _RESERVE ($'Million)	EXCHANGE _RATE (At Year End)	EXTERNAL_ RESERVE (#'Billion)
1981	0.12	12.72	12.84	10.68	0.34	11.02	15,258.00	144.83	2,441.60	0.6356	1.55
1982	0.23	10.55	10.77	8.00	0.20	8.21	14,985.08	154.98	1,043.30	0.6720	0.70
1983	0.17	8.73	8.90	7.20	0.30	7.50	13,849.73	163.00	224.40	0.7486	0.17
1984	0.28	6.90	7.18	8.84	0.25	9.09	13,779.26	170.38	710.10	0.8081	0.57
1985	0.05	7.01	7.06	11.22	0.50	11.72	14,953.91	192.27	1,657.90	0.9595	1.59
1986	0.91	5.07	5.98	8.37	0.55	8.92	15,237.99	202.44	2836.6	3.18	9.02
1987	3.17	14.69	17.86	28.21	2.15	30.36	15,263.93	249.44	7504.6	4.17	31.29
1988	3.80	17.64	21.45	28.44	2.76	31.19	16,215.37	320.33	5229.1	5.35	27.98
1989	4.67	26.19	30.86	55.02	2.95	57.97	17,294.68	419.20	3047.6	7.62	23.22
1990	6.07	39.64	45.72	106.63	3.26	109.89	19,305.63	499.68	4541.4	8.71	39.56
1991	7.77	81.72	89.49	116.86	4.68	121.54	19,199.06	596.04	4149.3	9.87	40.95
1992	19.56	123.59	143.15	201.38	4.23	205.61	19,620.19	909.80	1554.6	19.44	30.22
1993	41.14	124.49	165.63	213.78	4.99	218.77	19,927.99	1,259.07	1429.6	21.89	31.29
1994	42.35	120.44	162.79	200.71	5.35	206.06	19,979.12	1,762.81	9009.1	21.89	197.21
1995	155.83	599.30	755.13	927.57	23.10	950.66	20,353.20	2,895.20	1611.1	21.89	35.27
1996	162.18	400.45	562.63	1,286.22	23.33	1,309.54	21,177.92	3,779.13	3403.9	21.89	74.51
1997	166.90	678.81	845.72	1,212.50	29.16	1,241.66	21,789.10	4,111.64	7222.2	21.89	158.09
1998	175.85	661.56	837.42	717.79	34.07	751.86	22,332.87	4,588.99	7107.5	21.89	155.58
1999	211.66	650.85	862.52	1,169.48	19.49	1,188.97	22,449.41	5,307.36	5424.6	97.61	529.5
2000	220.82	764.20	985.02	1,920.90	24.82	1,945.72	23,688.28	6,897.48	9386.1	106.71	1001.59
2001	237.11	1,121.07	1,358.18	1,839.95	28.01	1,867.95	25,267.54	8,134.14	10267.1	112.99	1160.08
2002	361.71	1,150.99	1,512.70	1,649.45	94.73	1,744.18	28,957.71	11,332.25	7681.1	126.88	974.58
2003	398.92	1,681.31	2,080.24	2,993.11	94.78	3,087.89	31,709.45	13,301.56	7467.8	137.22	1024.73
2004	318.11	1,668.93	1,987.05	4,489.47	113.31	4,602.78	35,020.55	17,321.30	16955	132.86	2252.64
2005	797.30	2,003.56	2,800.86	7,140.58	105.96	7,246.53	37,474.95	22,269.98	28279.1	130.29	3684.48
2006	710.68	2,397.84	3,108.52	7,191.09	133.59	7,324.68	39,995.50	28,662.47	42298.1	128.29	5426.42
2007	768.23	3,143.73	3,911.95	8,110.50	199.26	8,309.76	42,922.41	32,995.38	51333.2	118.21	6068.1
2008	1,315.53	4,277.65	5,593.18	9,861.83	525.86	10,387.69	46,012.52	39,157.88	53000.4	126.48	6703.49
2009	1,068.74	4,411.91	5,480.66	8,105.46	500.86	8,606.32	49,856.10	44,285.56	42382.5	149.69	6344.24
2010	1,757.14	6,406.83	8,163.97	11,300.52	710.95	12,011.48	54,612.26	54,612.26	32339.3	150.48	4866.42
2011	3,043.60	7,952.27	10,995.86	14,323.15	913.51	15,236.67	57,511.04	62,980.40	32639.8	158.21	5163.94
2012	3,064.26	6,702.30	9,766.56	14,259.99	879.34	15,139.33	59,929.89	71,713.94	43830.4	157.32	6895.4
2013	2,429.38	7,010.05	9,439.42	14,131.84	1,130.17	15,262.01	63,218.72	80,092.56	42847.3	157.27	6738.59
2014	2,215.17	8,323.75	10,538.91	12,006.97	955.06	12,962.03	67,152.79	89,043.62	34241.5	169.68	5810.1
2015	1,725.22	9,350.84	11,076.07	8,184.48	660.68	8,845.16	69,023.93	94,144.96	28284.8	196.99	5571.82
2016	2,384.41	7,095.95	9,480.37	8,178.82	656.79	8,835.61	67,931.24	101,489.49	26990.6	305.22	8238.07
2017	2,615.45	8,189.39	10,804.85	12,913.24	1,074.90	13,988.14	68,490.98	113,711.63	39353.5	306.31	12054.4
2018	3,686.89	9,758.34	13,445.23	17,282.25	1,425.71	18,707.96	69,799.94	127,736.83	42,594.84	306.9211	13073.25
2019	3,534.52	16,914.40	20,448.92	16,702.73	3,207.02	19,909.75	71,387.83	144,210.49	38,092.72	306.9500	11692.56
Mean	**862.97**	**2,920.91**	**3,783.89**	**4,843.72**	**348.6**	**5,192.36**	**34,690.67**	**30,559.51**	**17959.3**	**96.82**	**2977.77**
Standard Deviation	**1,151.11**	**3,937.53**	**5,035.67**	**5,665.52**	**618.5**	**6,194.22**	**20,237.78**	**41,655.36**	**17479.6**	**95.99**	**3831.73**
Max	**3,686.89**	**16,914.40**	**20,448.92**	**17,282.25**	**3,207.0**	**19,909.75**	**71,387.83**	**144,210.49**	**53000.4**	**306.95**	**13073.25**
Min	**0.05**	**5.07**	**5.98**	**7.20**	**0.2**	**7.50**	**13,779.26**	**144.83**	**224.4**	**0.64**	**0.17**

Source: *CBN Statistical Bulletin (2020)*

Import and Export & Re-export Trade

Table 1.1 shows the values of Nigeria's Shipping Import and Export trade, GDP and External Reserve from 1981 to 2019 (data derived from CBN Statistical Bulletin 2019).

Fig 1.1 below shows that there has been increment in the Total Import (Non-Oil and Oil), while the Export values have been fluctuating within the years (1981 to 2019) under review, with a notable fall witnessed in the years 2015 and 2016 basically as a result of downturn in global crude oil price. From table 1.2 , the distribution for Total Export trade and Total Import Trade take the shape of **3,783.89 ± 5,035.67 and 5,192.36 ± 6,194.22** (₦' Billion)for mean ± Standard deviation respectively. It can be deduced that there is a huge rate of dispersion of other values from the mean.

From fig 1.2, it can be deduced that the bulk of what constituted the Export Trade within the period under review (1981 to 2019) was oil, which contributed 93.3% of Total Export Trade, while Non-Oil contributed 6.7%.

From fig 1.2, it can be deduced that the bulk of what constituted the Import Trade within the period under review (1981 to 2019) was Non-oil, which contributed 77.2% of Total Import Trade, while Oil contributed 22.8%.

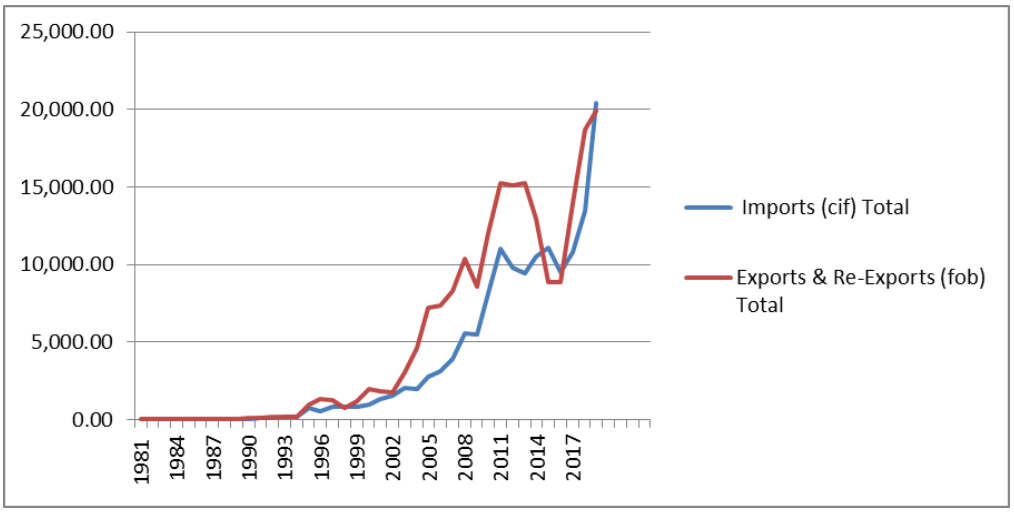

Fig 1.1: Line Graph of Total Import (cif) and Export (fob) for the year 1981 to 2019

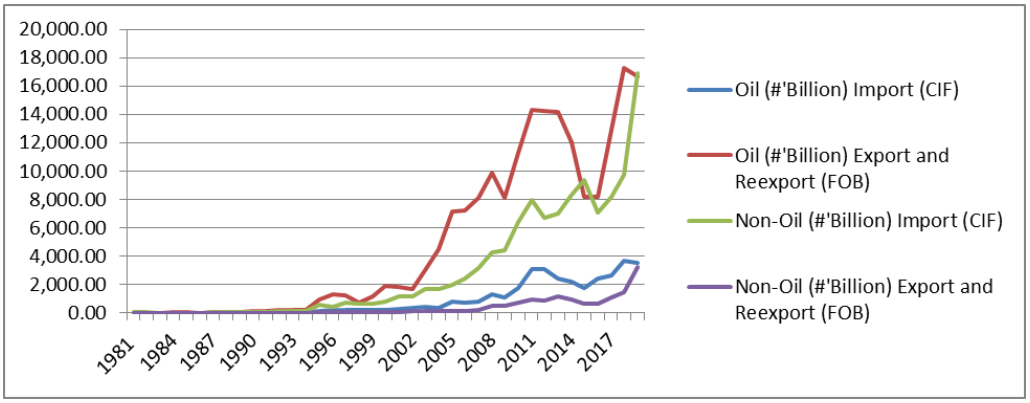

Fig 1.2: Line Graph of Import (cif) and Export (fob) (Non-Oil and Oil) for the year 1981 to 2019

Gross Domestic Product (GDP)

Going by the GDP values, there has been a rapid increment - which is more pronounced from the year 2002 till date which shows the monetary values of Nigeria's market.

From Figure 1.3, it can be deduced that the values of commodities in the year 2010 have increased by more than 100% in 2019, this can testify to the level of inflation that bedevil Nigeria.

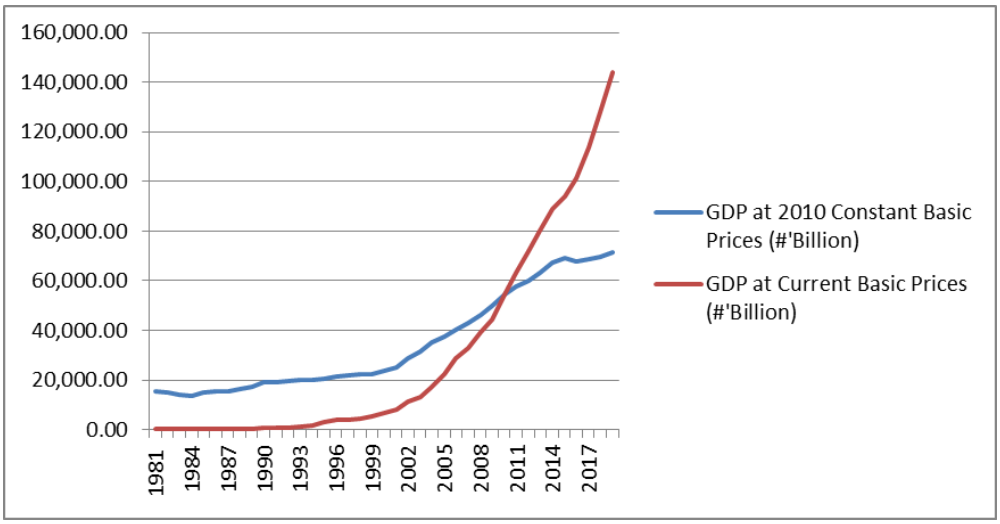

Figure 1.3: Line Graph of GDP at 2010 Constant Basic Prices and GDP at Current Basic Prices (#'Billion)

The Relation between Export Trade and Nigeria's External Reserve

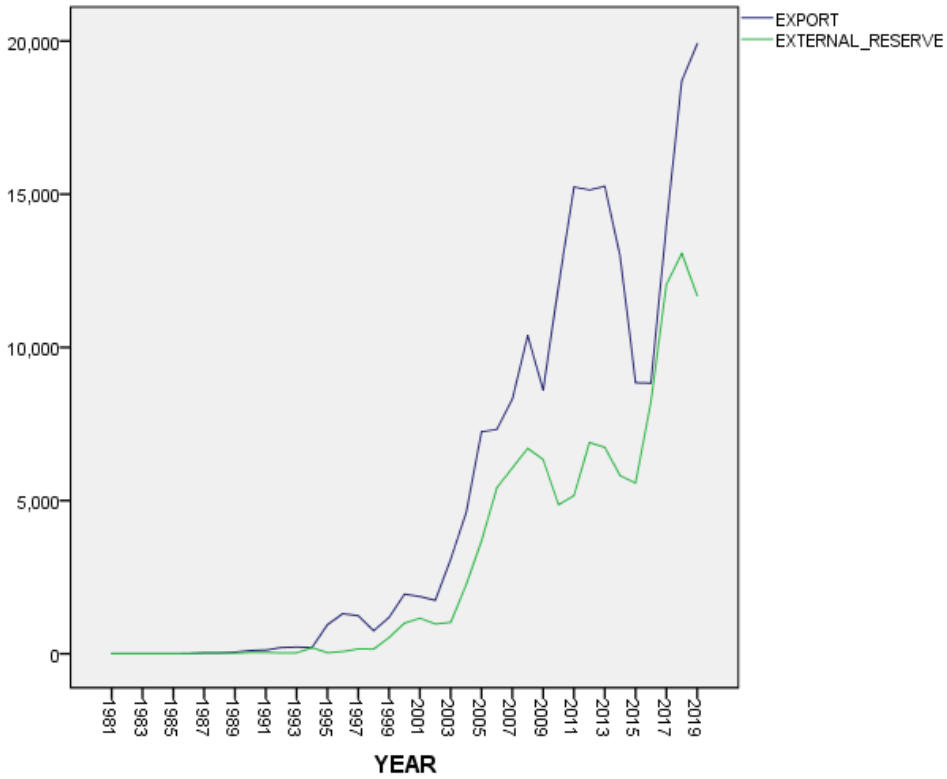

Figure 1.4: Line graph of Export and External Reserve (#' Billion) against Year (From table 1.1)

Data Analysed Using SPSS Statistical Package

Table 1.2 Model Summary (Export and External Reserve)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.938[a]	.881	.877	1342.12738

a. Predictors: (Constant), EXPORT

Interpretations

Correlation
From Table 1.2 above, R = 0.938
Using Pearson's Product-Moment correlation coefficient "R" which is used to ascertain the level of correlation between EXPORT and External Reserve; is0.938, that is; the two variables Export and External Reserve are strongly positively correlated.

R-SQUARE (Coefficient of Determination)
R-Square = 0.881

From Table 1.2 above, the R-Square (Coefficient of Determination) shows the percentage of the total variation of the dependent variable (External Reserve) explained by the independent variable (Export), which is 88% (very high).
This implies that there is relationship between the Export and External Reserve.

Table 1.3: Regression coefficient (Export and External Reserve)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	36.274	281.951		-.129	.898
	EXPORT	.580	.035	.938	16.515	.000

a. Dependent Variable: EXTERNAL_RESERVE

Interpretation

Regression model
External Reserve = 36.274+ 0.580(Export)

Remarks

Since R-Square (Coefficient of Determination) is 0.881 which is greater than 0, we accept that there is significant relationship between Export and External Reserve.

Relationship between Nigeria GDP, External Reserve, Import and Export Trade within the Year 1981 to 2019

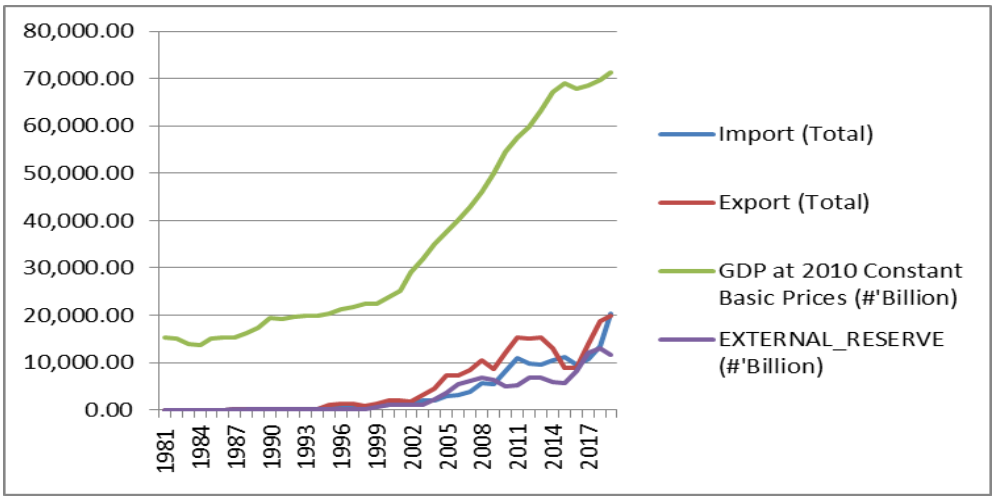

Figure 1.5: Line graph of Nigeria GDP, External Reserve Import and Export (#' Billion) against Year (From table 1.1)

The figure 1.5 above shows that Nigeria GDP grew at a rapid rate, especially from the year 2000 to the year 2015. The Nigeria External reserve, export trade and the import trade also grew at a much lower pace compared to the GDP.

From the figure 1.5, it depicts that the Naira values of the total production (GDP) that took place in Nigeria within the considered period of time (1981 - 2019) were high, this is expected to have a significant impact on the export trade and External reserve. Considering the facts mentioned, the export trade and external reserve were meant to increase at the same pace (both in trend and volume) as the GDP, but the case was not the same.

It can be concluded that with the huge amount of production that took place in Nigeria within the considered period of time (1981 - 2019), only a small fraction of the total production could get into the international market, this could have increased the export trade if it was the other way round. Larger part of the production was consumed and sold internally considering Nigeria consistent increase in population, some of this product could not get into international market because they do not meet international standard and they do not carry the necessary certificate for export (Isiegbe, 2017), some are being smuggled out of the country and majority of the produce get spoiled within the country especially

fruit and vegetables. The impact of the aforementioned has made the export trade and external reserve to grow at a very slow rate.

Conclusion & Recommendations

The study is on the assessment of ocean shipping trade and Nigeria economy, covering a period of 1981-2019. The values of commodities in the year 2010 have increased by more than 100% in 2019; Ocean Shipping Export Trade exerts a significant positive effect on the Nigeria's External Reserve. Nigerian GDP grows at a very rapid rate, while the Nigerian export trade, import trade and external reserve grow at a very slow rate. It is therefore concluded that:

- More efforts should be put to encourage export in Nigeria by ensuring that all the institutions in-charge of the necessary certifications for export (both mineral resources and agricultural produce) are consulted and the export items are well certified to be acceptable at the international market.
- Nigerian government efforts toward combating smuggling (both in and out the country) should be intensified, to encourage meaningful impact of sales made on export items and duty collected on import items on the economy especially her external reserve.
- Finally, there is need for Nigerian government to establish and fund an agricultural program across the 36 states in Nigeria that will solely major on farming for sales at the international market to encourage export trade and increase external reserve which will directly affect the GDP.

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