

An Assessment of Budget Deficit Financing and Nigeria's External Sector Performance (1990-2017)

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(Received August 16, 2019; Accepted September 18, 2019)

ABSTRACT

This paper assessed Budget Deficit Financing and Nigeria's External Sector Performance (1990-2017); the general objective of the study is to assess Budget Deficit Financing of Nigeria in the context of her performance in the External Sector while the specific objective is tied to evaluating the implications of Budget Deficit Financing on Nigeria's Net Trade and Foreign Direct Investment. The ADF unit root test and the Autoregressive Distributed Lag (ARDL) models were used as the estimation techniques of the data analysis. The findings of the study showed that 78% of the total variation in Nigerian Net Trade (NT) resulted from the explanatory variables (DFB and FDI) included in the model and conclude that: Budget Deficit Financing (DBF) has insignificant positive impact on the Nigerian External Sector Performance during the period reviewed, and that, FDI's impact is significant and positive on the Nigeria's External Sector Performance during the period reviewed. Hence, we recommend that government should focus on fiscal and monetary policies that will enshrine fiscal discipline for at levels of government and its agencies.

Keywords: Budget, Budget Deficit Financing, External Sector Performance, Net Trade.

INTRODUCTION:

A Budget is an estimation of planned Revenue and Expenditure over a specified future period of time; it is compiled and subjected to re-evaluation on a periodic basis. Budgets can be made for a: person, family, people, business, government, country, multinational organization or just about anything else that involves spending money (Olofin, 2001). For a nation, a budget shows the trade-off made when one good is exchanged for another and the likelihoods of the trade-off; a surplus means profits are anticipated, a balance means revenues are expected to equal expenditures, and a deficit means expenditures will exceed revenues (Jhingan, 2013). Therefore, judging by the difference between revenue and expenditure, a Balance Budget will present zero difference, a Surplus Budget is characterized by positive difference while a Deficit Budget will project a negative difference (a negative gap), which affirms shortfall in revenue (Olofin, 2001). Budget Deficit Financing involves the myriads of activities surrounding how that negative gap is funded (this includes but not limited to sale of bond and creating more money). An open economy is modelled around aggregate consumption, investment, expenditure and international trade. International Trade, Balance of Payment (BoP), International Investment Position, Exchange Rate, Foreign Investments and

External Reserves represents are proxies whose interplay would explain Nigeria's External Sector Performance.

STATEMENT OF THE PROBLEM:

In a bid to stimulate the economy; Less Developed Country like Nigeria would rather engage measures that would induce Foreign Direct Investment (FDI) than the ones that would repel it- that way the Exchange Rate Bargain is not likely to favour of the reporting economy (Nigeria). A far-reaching effect of the exchange rate favouring dollar than naira is that it would affect the value of naira, and to make matter worse; we do not produce most of the things we consume (Jhingan 2013). This dollar-friendly exchange rates if unchecked would continue to increment our demand for foreign exchange. Also, the exchange rate conundrum impacts adversely on inflation. Worthy of note is the fact that, there is a direct relationship between inflation and decline in the value of money. If naira appreciates against dollar, it would increment our External Reserve at naira value, but if otherwise, the value of the External Reserve would shrink. This is also true with the External Debt.

The foregoing attest to the fact that Budget Deficit Financing have inherent problems. In this research, effort would be made to identify these problems with their dimensions and then figure out how they affect Nigeria's External Sector Performance.

Research Question:

The research question goes does:

- i. Will increase in Budget Deficit Financing Enhance growth in performance of Nigeria's External Sector?
- ii. During the period under review, has increased inflow of Foreign Direct Investment into Nigeria's economy stimulate/enhance the performance of the Nigeria's external sector?

Objectives of the Study:

The general objective of the study is to assess Budget Deficit Financing of Nigeria in the context of her performance in the External Sector while the specific objective is tied to evaluating Budget Deficit Financing, Nigeria's Net Trade and Foreign Direct Investment; and then examine the implications.

Research Hypothesis:

H_{0A}: Increase in budget deficit financing (DBF) will retard the performance of the Nigerian external sector performance.

H_{0B}: Increase inflow of Foreign Direct Investment (FDI) into the Nigerian economy will stimulate and enhance the performance of the Nigerian external sector.

Significance of the Study:

Proper appraisal of the implications of Budget Deficit Finance on Nigeria's External Sector would enhance governments Public Finance Decisions and aid fiscal discipline.

Scope of the Study:

Nigeria's External Sector proxies are not limited to Foreign Direct Investment and Net Trade but these two are considered in this research since they are not autocorrelated.

LITERATURE REVIEW:

The Concept of Deficit Financing:

According to (Olofin 2001), Deficit Financing is a practice in which a government spends more money than it receives as revenue. Although budget deficits may occur for numerous reasons, the term usually refers to a conscious attempt to stimulate the economy by lowering tax rates or increasing government expenditures. The influence of government deficits upon a national economy may be very great. It is widely believed that a budget balanced over the span of a business cycle should replace the old ideal of an annually balanced budget. Some economists have abandoned the balanced budget concept entirely, considering it inadequate as a criterion of public policy. Deficit financing, however, may also result from government

inefficiency, reflecting widespread tax evasion or wasteful spending rather than the operation of a planned countercyclical policy where capital markets are undeveloped, deficit financing may place the government in debt to foreign creditors. In addition, in many less-developed countries, budget surpluses may be desirable in themselves as a way of encouraging private saving. (<https://www.britannica.com/topic/deficit-financing>); (<https://www.dezyre.com/questions/2442/difference-between-deficit-budgeting-and-deficit-financing->).

According to (Eze & Ogiji, 2016), fiscal deficits are financed majorly by borrowing or by expansionary monetary policy. However, they opined that borrowing is better since it abates the spillover effect of inflation.

The Concept of External Sector:

External sector seeks to aggregate private and public sector engagements in an economy with the rest of the world. These aggregates are basically four (4); they are: Balance of Payments, International Investment Position, External Debt and Reserve Assets (C.B.N. Bulletin Explanatory Notes, 2017). The record of international trade and financial transactions made by Nigerians in Nigeria and the rest of the world is her Balance of Payment (BoP); both Foreign Direct Investment (FDI) and Foreign Private Investment (FPI) explains Nigeria's Investment Position; External Debt is a cumulative of what Nigeria (borrower) owes her lenders (World Bank, Paris Club etc); while Reserve Assets in this context are external assets of Nigeria.

Theoretical Framework:

Keynes (1936) theory can be traced to the work of (Eze & Ogiji, 2016; Bakare, Adesanya & Bolarinwa, 2014; Ali 2014; Muhammad, Sofia, Syed & Abbas, 2014; Momanyi, Lucas & Alia, 2013; Ojong & Owui & Effiong 2013 and Okoro, 2013). Bowden (1982) as cited in (Eze & Ogiji 2016) states that Keynesian economics believes that knowing what determines the level of spending helps in knowing what determine the level of employment, production of output and income in the economy.

According to the works of (Momanyi, Lucas & Alia 2013; Usher 1998; Keho 2010 and Okpanachi & Abimiku 2007), deficit financing comes with rigidities. Some resources which the private sector could have assessed might be denied them since the public sector itself is scrambling for funds. Therefore, Keynesian theory upholds government intervention through stimulus plans and packages which can enhance savings and capital formation if effectively managed.

A basis for the use of the Keynesian model is that it was premised on emergency and deal with measures that can give anticipated objective in the short- run and Nigeria's budget cycle run on year-on-year basis.

Empirical Review:

Eze & Ozigi (2013), examined Nigeria's Deficit Financing and economic stability from 1970 to 2013 using regression analysis. Eze & Ozigi discovered that Deficit financing that are sourced externally, non-banking public source of deficit financing prove positive and significant for Nigeria's economic stability. They then assert strongly that government should channel her spending towards those sector that proved productive.

Ojong, Owui & Effiong (2013), examined deficit financing and economic development in Nigeria. Secondary data for proxies like Deficit Financing, Unemployment, Inflation, Balance of Payment, Gross Domestic Product and Government Revenue were assessed by regression analysis and spot that: the relationship between budget deficit financing and economic growth in Nigeria is significant; there exist an inverse relationship between Nigeria's GDP and unemployment, and that there exist a direct relationship between Nigeria's GDP and rate of Inflation in Nigeria. They advocated that transparency in managing public fund would enhance budget deficit performance for Economic Stability in Nigeria.

Fasoranti & Amasoma (2013), analyzed Fiscal Deficit and External Sector Performance of Nigeria from 1961 to 2011 using granger causality and error correction modelling techniques from secondary data fetched from Central Bank of Nigeria Statistical Bulletin with findings that the relationship between fiscal deficit and external sector performance is not significant. They recommended that the current size of fiscal deficit should be minimized so as to avoid its impending negative effect on the external sector.

Uduakobong (2014), in a bid to examine money supply and inflation in Nigeria from 1970 to 2011. With data sourced secondarily, regression analysis was used to examine the relationship between money supply and inflation and found out that money supply has a significant negative relationship with inflation rate in

Nigeria and recommends that by effectively managing the money stock, monetary policy and instrument improve and be strengthened.

According to (Momodu & Monegbe, 2017), they examined the relationship Budget Deficit Financing and Economic Development using Vector Autoregressive estimation from 1981 to 2015 and found out that Budget Deficit Financing significantly affects Economic Growth and recommends effective use of borrowed funds to achieve sustainable growth.

Fagbohun (2017), examined Nigeria's Budget Deficit Finance and Economic Performance in Nigeria (1970-2013), using proxies like money supply, bank rate external reserve and fiscal balance as the independent variable (IV) while per capita income, price stability and unemployment are used to project Economic Performance which is the dependent variable (DV). Using least square method, they discovered that the relationship between Nigeria's Budget Deficit Financing is significant and positive and recommends that the government should bring on measures that would curtail waste when expending borrowed funds.

Ehinomen & Ugwu (2017), using VAR and Johansen Cointegration Test, relationship between Budget Deficit Financing, Inflation and Money Supply in Growth in Nigeria was empirically examined and the interplay amongst these parameters suggest Budget Deficit Financing as a viable option for growth especially during recession and prove wrong the view that Budget deficit Financing engenders inflation and posit further that this would only happen if it is not properly managed.

METHODOLOGY:

Introduction:

It describes, to significant users, how hypotheses were tested and the basis for which conclusions were drawn. This research work borders on the Implication of Budget Deficit Financing on Nigeria's External Sector Performance.

Research Design:

The data used are secondary data. This method of data collection was determined by factors such as the research topic and purpose.

Population of the Study:

The population of this study is based on the Budget Deficit Finance Aggregates, Net Trade and Foreign Direct Investment estimates of Nigeria.

Sample Size and Sampling Techniques:

Twenty eight (28) years (1990 - 2017). Stratified sampling technique was adopted; the variables that are stationery at first difference were sampled in this research effort.

Source and Method of Data Collection:

All data used in the analysis are from secondary source gathered from The Central Bank of Nigeria Statistical Bulletin (2017).

Technique and Instruments of Data Analysis:

The Technique and Instrument of Data Analysis is informed by the peculiarity of the data set, as such, this study adopted the Unit Root Test, Autoregressive distributed Lag (ARDL), and Bound Testing procedure was chosen over other approaches to co-integration due to the fact that it does not require cointegration of the same order. The bounds testing approach is suitable for small or finite sampling data unlike other conventional co-integration approach. Its suitability for small sample study is worth noting given that the sample period of this study is limited (28 years).

Model Specification:

The model for an assessment Budget Deficit Financing and Nigeria's External Sector Performance is presented thus:

$$XSP_t = \alpha + \delta_1 DBF_t + \delta_2 NT_t + \delta_3 FDI_t + \varepsilon_t \dots \dots \dots \text{[Research Model]}$$

The dependent variable of this study that is, external sector performance (XSP). It would be measured by fiscal deficit (DBF), Net Trade (NT), and Foreign Direct Investment (FDI) of the reporting country.

FINDINGS AND DISCUSSION:

Table 4.1: Unit Root Stationary Test (1990-2017)

Variables	ADF Test	Critical Value 5%	Order of Integration
D(NT)	-4.915965	-2.981038	Fulfilled at 1(I)=1 st Diff
D(DBF)	-4.229793	-2.981038	Fulfilled at 1(I)=1 st Diff
D(FDI)	-6.861630	-2.981038	Fulfilled at 1(I)=1 st Diff

Source: Computed Result (E-view 9.0) from Appendices

The table above shows that at 5% level the time series data were stationary. Note also that since, all the time series data in this study are stationary in the long run. The, A.R.D.L. was employed in analyzing the set of data of the research. The ARDL analysis result is presented in Table 4.2.

Autoregressive Distributed Lag (ARDL) Model:

Table 4.2: Autoregressive Distributed Lag (ARDL) Model

Dependent Variable: NT				
Method: ARDL				
Date: 06/07/19 Time: 16:46				
Sample (adjusted): 1994 2017				
Selected Model: ARDL(2, 4, 3)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
NT(-1)	0.702214	0.280024	2.507696	0.0275
NT(-2)	-0.601657	0.396569	-1.517154	0.1551
DBF	-15.50100	9.282157	-1.669978	0.1208
DBF(-1)	-5.994981	12.18990	-0.491799	0.6317
DBF(-2)	18.82477	11.90981	1.580611	0.1400
DBF(-3)	-16.60556	13.46465	-1.233270	0.2411
DBF(-4)	26.10465	13.83583	1.886743	0.0836
FDI	2.095115	1.654739	1.266131	0.2295
FDI(-1)	2.678501	1.314863	2.037095	0.0643
FDI(-2)	-0.443986	1.267957	-0.350158	0.7323
FDI(-3)	-2.315600	1.394869	-1.660084	0.1228
C	280.0344	324.7866	0.862211	0.4055
R-squared	0.779564	Mean dependent var		1520.000
Adjusted R-squared	0.577497	S.D. dependent var		1389.270
S.E. of regression	903.0282	Akaike info criterion		16.75624
Sum squared resid	9785518.	Schwarz criterion		17.34526
Log likelihood	-189.0748	Hannan-Quinn criter.		16.91251
F-statistic	3.857958	Durbin-Watson stat		2.507786
Prob(F-statistic)	0.014248			

Source: Computed Result (E-view 9.0) from Appendices

The estimated ARDL model above establishes that the coefficient of determination (R^2) of 0.779564 reveals that 78% of the total variation in Nigerian net trade (NT) resulted from the explanatory variables (DFB and FDI) included in the model while the remaining 22 percent is explained by other variables that influence Nigerian net trade (NT) which were excluded from the model but were however, taken into consideration in the error term. F-stat of 3.857958 and prob. (F-Statistics) of $0.01428 < 0.05$ which proved significant at 5%. There was no indication of serial correlation (i.e. autocorrelation) as shown by the DW – stat. (Durbin Watson) of 2.507786. Similarly, the 1st and 2nd lag length periods of the coefficient of NT shows that the coefficient of NT is positive at the 1st lag length period but negative at the 2nd lag length period, that is, the previous coefficient of Nigerian net trade for the model is positive at 1st lag length period but negative at 2nd lag length period but proved significant at 5% level of significance at only 1st lag length period. This implies that Nigerian net trade (NT) does depend on its previous value; as such the higher the value of NT in the previous period, the higher its value will be in the current and future period and vice-versa during the period reviewed in Nigeria.

The coefficient of DBF is negative and conforms to economics theory at current, 1st and 3rd lag length periods but positive at 2nd and 4th lag length periods. It is however statistically insignificant at five percent (5%) level at all the lag length periods. This implies that an increase in the deficit budget financing of the Nigerian government may not necessary contribute positively or retard the performance of the Nigerian external sector.

The FDI coefficient came out positive and conforms to economics theory at only current and 1st lag length periods but negative at 2nd and 3rd lag length periods. It is however; at 5% level of significance, it statistically significant at 1st lag length period. This indicates that when a more liberal trade policy is adopted by the Nigerian government to attract more foreign direct investment into the country, it will contribute positively to the performance of the Nigerian external sector.

Coefficient Diagnostics Test:

Table 4.3.1: Autoregressive Distributed Lag Bound Test

F-statistic	26.12340	(2)
Critical Value Bounds		
Significance at 5%	I(0) Bound (3.79)	I(1) Bound (4.85)

Source: Computed Result (E-view 9.0) from Appendices

From table 4.3.1 the bound signifies that at 5% level; the critical values of bounds, F-stat is higher accompanied by less upper bound value (i.e. $26.12340 > 4.85$); this means there is co-integration in the relationship of the dependent and explanatory variables.

Table 4.3.2: ARDL Co-integration and Long Run Results (Error Correction Form) Results

$$\text{Cointeq} = \text{NT} - (7.5912 \cdot \text{DBF} + 2.2392 \cdot \text{FDI} + 311.3422)$$

Long-Run Coefficient	
Variable	Prob.
DBF	0.4927
FDI	0.0611
C	0.4287

Source: Computed Result (E-view 9.0) from Appendices

From Table 4.3.2 the co-integration and long run results reveal that only the coefficient of FDI of the explanatory variables is statistically significant at five percent level while the other (DBF) is statistically insignificant. However, the coefficients of both FDI and DBF are positive. This significantly positive

foreign direct investment impact on the Nigerian net trade (NT) coupled with deficit budget financing has insignificant positive impact on the Nigerian net trade (NT) during the period reviewed in Nigeria. This shows that with the implementation of a more liberal trade by the Nigerian government to attract more inflow of foreign direct investment; foreign direct investment will contribute positively to the Nigerian external sector and the entire Nigerian economy in the long run.

DISCUSSION OF FINDINGS:

The Nigerian Net Trade (NT) and Deficit Budget Financing (DBF):

Given that the coefficient of DBF is statistically insignificant at 5% level. As such, we do not accept the hypothesis that deficit budget financing will retard the performance of the Nigerian external sector and conclude that deficit budget financing has insignificant positive impact on Nigerian external sector performance during the period reviewed.

The Nigerian Net Trade (NT) and Foreign Direct Investment (FDI):

Given that the coefficient of FDI is statistically significant at 5%. We do accept the hypothesis that increase inflow of foreign direct investment into the Nigerian economy will stimulate and enhance the performance of the Nigerian external sector and conclude that foreign direct investment has significant positive impact on Nigerian external sector performance during the period reviewed.

CONCLUSION AND RECOMMENDATIONS:

This study carried out an empirical investigation of deficit budget financing and Nigerian external sector performance in Nigeria between 1990 and 2017. The findings of the study showed that 78% of the total variation in Nigerian net trade (NT) resulted from the explanatory variables (DFB and FDI) included in the model while the remaining 22 percent is explained by other variables that influence Nigerian net trade (NT) which were excluded from the model but were however, taken into consideration in the error term.

The study therefore concluded that:

- a) DBF has insignificant positive impact on the Nigerian external sector performance during the period reviewed. Since DBF has insignificant positive impact on the Nigerian external sector performance; the government should focus on holistic fiscal and monetary policies that will enshrine fiscal discipline for all levels of government and its agencies. This will enhance the performance of the Nigerian external sector.
- b) FDI has significant positive impact on the Nigerian external sector performance proved positive and significant during the period reviewed, as such; the government should implement an investment friendly policy that will attract foreign investors into the country's real sector and oil and gas sector.

ACKNOWLEDGEMENT:

As Ph.D. candidates, we acknowledge Professor Odi Nwankwo (our lecturer) for encouraging us to dare this; and also, for his contribution to the organization of this research effort.

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APPENDICES**NIGERIA EXTERNAL SECTOR DATA 2017**

Year	Budget Financing (=N=Billion)	Export (=N=Billion)	Import (=N=Billion)	Eternal Debt (=N=Billion)	External Reserve (=N=Billion)	Fdi (=N=Billion)	Average Exchange Rate (N/\$)
1990	2.21	109.89	45.72	29.86	36.51	4.69	8.04
1991	3.58	121.54	89.49	32.85	41.12	6.92	9.91
1992	3.95	205.61	143.15	54.43	26.89	14.46	17.30
1993	6.52	218.77	165.63	63.31	31.55	29.66	22.07
1994	7.03	206.06	162.79	64.88	197.17	22.23	21.89
1995	- 0.10	950.66	755.13	71.69	113.36	75.94	70.36
1996	-3.20	1,309.54	562.63	61.73	237.75	111.29	69.84
1997	0.50	1,241.66	845.72	59.59	518.56	110.45	71.80
1998	13.34	751.86	837.42	63.30	545.93	80.75	76.81
1999	28.51	1,188.97	862.52	257.74	500.91	92.79	92.34
2000	10.38	1,945.72	985.02	309.74	954.10	115.95	101.65
2001	22.10	1,867.95	1,358.18	317.63	1,149.30	132.43	111.94
2002	30.14	1,744.18	1,512.70	393.29	929.18	225.22	120.97
2003	20.27	3,087.89	2,080.24	447.83	966.03	258.39	129.36
2004	17.26	4,602.78	1,987.05	489.03	2,263.50	248.22	133.50
2005	16.14	7,246.53	2,800.86	269.51	3,737.08	654.19	132.15
2006	10.14	7,324.68	3,108.52	45.15	5,441.65	624.52	128.65
2007	10.49	8,309.76	3,911.95	43.89	6,459.25	759.38	125.83
2008	4.74	10,387.69	5,593.18	52.33	6,284.14	971.54	118.57
2009	81.00	8,606.32	5,480.66	59.04	6,309.91	1,273.82	148.88
2010	110.54	12,011.48	8,163.97	68.98	4,860.51	905.73	150.30
2011	115.85	15,236.67	10,995.86	89.68	5,021.96	1,360.31	153.86
2012	97.57	15,139.33	9,766.56	102.69	6,903.27	1,113.51	157.50
2013	115.35	15,262.01	9,439.42	138.73	6,740.31	875.10	157.31
2014	83.57	12,960.49	10,538.78	163.15	5,414.29	738.20	158.12
2015	155.78	8,845.16	11,076.07	211.15	5,596.04	602.07	197.85
2016	220.82	8,835.61	9,480.37	347.89	6,833.74	1,124.15	253.19
2017	227.39	13,988.14	10,804.85	578.75	12,033.75	1,069.42	305.79

Source: CBN Statistical Bulletin 2017

**ADF UNIT ROOT TEST:
UNIT ROOT TEST OF DBF AT I(0) (AT LEVEL):**

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.846291	0.9930
Test critical values:	1% level	-3.699871	
	5% level	-2.976263	
	10% level	-2.627420	

*MacKinnon (1996) one-sided p-values.	
Augmented Dickey-Fuller Test Equation	
Dependent Variable: D(DBF)	
Method: Least Squares	
Date: 06/07/19 Time: 10:46	
Sample (adjusted): 1991 2017	
Included observations: 27 after adjustments	

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DBF(-1)	0.074180	0.087653	0.846291	0.4054
C	5.085772	6.286301	0.809025	0.4261
R-squared	0.027850	Mean dependent var		8.340000
Adjusted R-squared	-0.011036	S.D. dependent var		25.69939
S.E. of regression	25.84080	Akaike info criterion		9.412974
Sum squared resid	16693.68	Schwarz criterion		9.508962
Log likelihood	-125.0751	Hannan-Quinn criter.		9.441516
F-statistic	0.716208	Durbin-Watson stat		1.987868
Prob(F-statistic)	0.405419			

UNIT ROOT TEST OF DBF AT I(1) (1ST DIFF):

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.429793	0.0018
Test critical values:	1% level	-3.711457	
	5% level	-2.981038	
	10% level	-2.629906	
*MacKinnon (1996) one-sided p-values.			

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DBF(-1))	-0.898288	0.202783	-4.429793	0.0002
C	7.752876	5.482764	1.414045	0.1702
R-squared	0.449832	Mean dependent var		0.200000
Adjusted R-squared	0.426909	S.D. dependent var		35.09851
S.E. of regression	26.57055	Akaike info criterion		9.471287
Sum squared resid	16943.86	Schwarz criterion		9.568064
Log likelihood	-121.1267	Hannan-Quinn criter.		9.499156
F-statistic	19.62307	Durbin-Watson stat		1.977953
Prob(F-statistic)	0.000177			

DEFICIT BUDGET FINANCING OK AT 5% ACCEPTABLE:

UNIT ROOT TEST OF NET TRADE (NT) AT I(0) (AT LEVEL):

Null Hypothesis: NT has a unit root				
Exogenous: Constant				
Lag Length: 0 (Automatic - based on SIC, maxlag=6)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-2.015402	0.2788
Test critical values:	1% level		-3.699871	
	5% level		-2.976263	
	10% level		-2.627420	
*MacKinnon (1996) one-sided p-values				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
NT(-1)	-0.265512	0.131741	-2.015402	0.0547
C	407.1236	249.2538	1.633370	0.1149
R-squared	0.139766	Mean dependent var		63.90370
Adjusted R-squared	0.105356	S.D. dependent var		999.8631
S.E. of regression	945.7266	Akaike info criterion		16.61297
Sum squared resid	22359972	Schwarz criterion		16.70896
Log likelihood	-222.2751	Hannan-Quinn criter.		16.64151
F-statistic	4.061844	Durbin-Watson stat		1.831589
Prob(F-statistic)	0.054733			

UNIT ROOT OF NET TRADE (NT) AT I(1) (1ST DIFF):

			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-4.915965	0.0005
Test critical values:	1% level		-3.711457	
	5% level		-2.981038	
	10% level		-2.629906	

*MacKinnon (1996) one-sided p-values.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(NT(-1))	-1.131604	0.230190	-4.915965	0.0001
C	64.01126	202.7802	0.315668	0.7550
R-squared	0.501731	Mean dependent var		94.86923
Adjusted R-squared	0.480969	S.D. dependent var		1434.523
S.E. of regression	1033.485	Akaike info criterion		16.79306
Sum squared resid	25634170	Schwarz criterion		16.88984
Log likelihood	-216.3098	Hannan-Quinn criter.		16.82093
F-statistic	24.16671	Durbin-Watson stat		1.836405
Prob(F-statistic)	0.000051			

NET TRADE OK AT 5% WHICH IS ACCEPTABLE:

UNIT ROOT TEST OF FDI AT I(0) (AT LEVEL):

			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-1.028635	0.7281
Test critical values:	1% level		-3.699871	
	5% level		-2.976263	
	10% level		-2.627420	
*MacKinnon (1996) one-sided p-values.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI(-1)	-0.090854	0.088325	-1.028635	0.3135
C	81.60383	56.54526	1.443160	0.1614
R-squared	0.040605	Mean dependent var		39.43444
Adjusted R-squared	0.002229	S.D. dependent var		202.5916
S.E. of regression	202.3657	Akaike info criterion		13.52922
Sum squared resid	1023797.	Schwarz criterion		13.62521
Log likelihood	-180.6444	Hannan-Quinn criter.		13.55776
F-statistic	1.058090	Durbin-Watson stat		2.512092
Prob(F-statistic)	0.313501			

UNIT ROOT TEST OF FDI AT I(1) (1ST DIFF):

		t-Statistic	Prob.*	
Augmented Dickey-Fuller test statistic		-6.861630	0.0000	
Test critical values:	1% level	-3.711457		
	5% level	-2.981038		
	10% level	-2.629906		
*MacKinnon (1996) one-sided p-values				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI(-1))	-1.328386	0.193596	-6.861630	0.0000
C	55.00441	39.93109	1.377483	0.1811
R-squared	0.662362	Mean dependent var		-2.190769
Adjusted R-squared	0.648293	S.D. dependent var		335.7631
S.E. of regression	199.1238	Akaike info criterion		13.49953
Sum squared resid	951607.2	Schwarz criterion		13.59631
Log likelihood	-173.4939	Hannan-Quinn criter.		13.52740
F-statistic	47.08197	Durbin-Watson stat		1.981533
Prob(F-statistic)	0.000000			

FOREIGN DIRECT INVESTMENT OK AT 5% WHICH IS ACCEPTABLE:

THE AUTOREGRESSIVE DISTRIBUTED LAG (ARDL) MODEL RESULTS:

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
NT(-1)	0.702214	0.280024	2.507696	0.0275
NT(-2)	-0.601657	0.396569	-1.517154	0.1551
DBF	-15.50100	9.282157	-1.669978	0.1208
DBF(-1)	-5.994981	12.18990	-0.491799	0.6317
DBF(-2)	18.82477	11.90981	1.580611	0.1400
DBF(-3)	-16.60556	13.46465	-1.233270	0.2411
DBF(-4)	26.10465	13.83583	1.886743	0.0836
FDI	2.095115	1.654739	1.266131	0.2295
FDI(-1)	2.678501	1.314863	2.037095	0.0643
FDI(-2)	-0.443986	1.267957	-0.350158	0.7323
FDI(-3)	-2.315600	1.394869	-1.660084	0.1228
C	280.0344	324.7866	0.862211	0.4055
R-squared	0.779564	Mean dependent var		1520.000
Adjusted R-squared	0.577497	S.D. dependent var		1389.270
S.E. of regression	903.0282	Akaike info criterion		16.75624

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Sum squared resid	9785518.	Schwarz criterion		17.34526
Log likelihood	-189.0748	Hannan-Quinn criter.		16.91251
F-statistic	3.857958	Durbin-Watson stat		2.507786
Prob(F-statistic)	0.014248			

Coefficient Diagnostics Test:

AUTOREGRESSIVE DISTRIBUTED LAG BOUND TEST:

ARDL Bounds Test		
Date: 06/07/19 Time: 16:51		
Sample: 1994 2017		
Included observations: 24		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	k
F-statistic	26.12340	2
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36
Test Equation:		
Dependent Variable: D(NT)		
Method: Least Squares		
Date: 06/07/19 Time: 16:51		
Sample: 1994 2017		
Included observations: 24		

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(NT(-1))	0.601657	0.396569	1.517154	0.1551
D(DBF)	-15.50100	9.282157	-1.669978	0.1208
D(DBF(-1))	-28.32386	13.18615	-2.148001	0.0528
D(DBF(-2))	-9.499095	14.25934	-0.666166	0.5179
D(DBF(-3))	-26.10465	13.83583	-1.886743	0.0836
D(FDI)	2.095115	1.654739	1.266131	0.2295
D(FDI(-1))	2.759585	1.329255	2.076040	0.0600
D(FDI(-2))	2.315600	1.394869	1.660084	0.1228
C	280.0344	324.7866	0.862211	0.4055

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DBF(-1)	6.827877	8.318094	0.820846	0.4277
FDI(-1)	2.014030	1.702312	1.183115	0.2597
NT(-1)	-0.899443	0.412001	-2.183108	0.0496
R-squared	0.623278	Mean dependent var		72.35417
Adjusted R-squared	0.277950	S.D. dependent var		1062.717
S.E. of regression	903.0282	Akaike info criterion		16.75624
Sum squared resid	9785518.	Schwarz criterion		17.34526
Log likelihood	-189.0748	Hannan-Quinn criter.		16.91251
F-statistic	1.804885	Durbin-Watson stat		2.507786
Prob(F-statistic)	0.162388			

ARDL Co-integration and Long Run Results (Error Correction Form) Results:

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(NT(-1))	0.601657	0.396569	1.517154	0.1551
D(DBF)	-15.501002	9.282157	-1.669978	0.1208
D(DBF(-1))	-18.824765	11.909805	-1.580611	0.1400
D(DBF(-2))	16.605558	13.464653	1.233270	0.2411
D(DBF(-3))	-26.104653	13.835826	-1.886743	0.0836
D(FDI)	2.095115	1.654739	1.266131	0.2295
D(FDI(-1))	0.443986	1.267957	0.350158	0.7323
D(FDI(-2))	2.315600	1.394869	1.660084	0.1228
CointEq(-1)	-0.899443	0.412001	-2.183108	0.0496
Cointeq = NT - (7.5912*DBF + 2.2392*FDI + 311.3422)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DBF	7.591230	10.728468	0.707578	0.4927
FDI	2.239198	1.083689	2.066274	0.0611
C	311.342167	380.145038	0.819009	0.4287

