An Empirical Examination of Policy Support of Foreign Direct Investment in Nigeria- a *Directional test of FDI on Export Promotion and Import Substitution Policies.*

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Abstract

Smoothening of disequilibria in the balance of payments is an essential feature of every developing economies, this is because most developing economies are prone to balance of payment difficulties due to unequal trade relationship between developing nations and the 'centre'. Adoption of foreign direct investment through enhanced liberalization of the economy could either reduce or add to the menace of BOP disequilibrium. This paper looked at policy direction of foreign direct investment in Nigeria, using error correction modeling, we found that foreign direct investment spurred both exportation and importation of goods and services, which implies that it favours export promotion policy strategy. We however concluded that Government should intensify effort to attract more foreign investment by providing enabling environment (laws and ethics, and infrastructural development in addition to socio political stability), with the belief that in the very long run FDI will promote import substitution.

Keywords: import substitution, export promotion, error correction model, balance of payment, and economic growth.

1.0 Introduction

The impact of foreign direct investments (FDI) has been measured in different degrees and categories on major macroeconomic variables by researchers with varying degree of outcomes. There exist links between FDI and pursuance of policies in Nigeria, the continuous deficit recorded in the balance of payment (BOP) account necessitated the adoption of export promotion and import substitution policies in Nigeria in order to smooth the deficit in the BOP.

Foreign Direct Investment (FDI) is direct investment by a company in production located in another country or by expanding operation of an existing business in the country, FDI is done for many reasons including to take advantage of cheaper wages in the country, special investment privileges such as tax exceptions offered by the country as an incentive for investment or to gain tariff free access to the market of a country or the region. FDI is in contrast to portfolio investment which is a passive investment in the securities of another company such as stocks and bonds.

As a part of the national account of a country FDI refers to the net inflow of investment for acquire a lasting management interest (10% or more of voting stock) in an enterprise operating on an economy other than that of the investors (Wikipedia). It is the sum of equity capital, other long term capital and short term capital has shown in the balance of payments. It usually involves participation in management, joint venture, transfer of technology and expertise. There are two types of FDI, inward foreign direct investment and outward foreign direct investment resulting in net inflows FDI (+ or -) and stock of foreign direct investment which is the cumulative number for a given period. Direct investment excludes investment through purchase of stocks or/and shares but its involves international factor movement.

The Motivation for the research. (Problem identified)

Since the adoption of structural adjustment programme (SAP) in Nigeria and its attendant effect of globalization –the programme that see to removal of barriers to movement of men and machine across the world's borders. Many have agitated much more policies that could enhance smooth implementation of this programme, such policies include the following among others; financial liberalization and trade liberalization, imbedded in these policies are foreign private investment and foreign direct investment. These programme and policies are not without their own cost despite the huge benefit accentuated to it by some scholars. Foreign direct investment has undisputable link with balance of payment (BOP) disequilibrium, at least in the short run, however it's important to know the effect of this policy on other policies aimed at correcting the menace created partly by this policy (FDI). Basically there are two major policies aimed at reducing or removing BOP deficit which includes export promotion strategy and import substitution strategy. However, it is our aim to uncover the impact of FDI in reducing the disequilibrium in BOP through its effect on either import substitution or export promotion strategies in Nigeria.

The Objective of the Study

The broad objective of this study is to establish the link betweenFDI and export promotion strategy and import substitution strategy. While the specific objectives include;

I.   To determine the relationship between FDI and the export promotion strategy.
II.   To establish the link between the import substitution policy and FDI.

2.0 The Review of Literature Cum Empirical and Theoretical Consideration

Forms of FDI

➢ Horizontal FDI arises when a firm duplicated its income country based activities at the same value chain stage in a host country through FDI Platform

➢ Vertical FDI takes place when a firm through FDI moves upstream and downstream in different value chain that is when firm platform value adding activities stage by stage in a vertical in a host country. it is noteworthy that horizontal FDI decrease informing in a trade (import substitution) as a product of them is aimed at host company the two other types generally act as a stimulus for it

Method of Acquiring FDI

The foreign direct investment may acquire voting power of an enterprising in an economy through any of the following method.

❖ By incorporating and owned subsidiary or company
❖ By acquiring shares in associated enterprises.
❖ Through any acquisition of an unrelated enterprises.
❖ Participating in an equity joint venture with another investor or enterprise.

Incentives to Woo FDI

Foreign direct investment incentives may take the following forms;

❖ Low corporate tax and individual income tax rates, tax holiday.
❖ Other types of tax concessions.
❖ preferential tariff
❖ Special economy zones
❖ EPZ - Export processing zone
❖ bonded warehousing
❖ Maquiladoras
❖ Investment financial subsidies
❖ soft loan or loan guarantees
❖ Free land or land subsidies.
❖ relocation and expatriation
❖ infrastructure subsidies
❖ research and development support
❖ derogation from regulation (usually for very large project)

The UNCTAD proclaimed that there was no significant growth of global FDI in 2010. In 2010 there was $1222billion and in 2009 it was $1114 billion. The figure was 25% below the pre crises period average between 2005and 2007.

FDI in Developing World - A Review of Related Literature

The FDI provides an inflow of foreign capital and funds, investment in addition to an increase in the transfer of skills, technology and job opportunities. Many of the four Asian tigers benefit from investment abroad. A recent meta-analysis of the effect of FDI on local firms in developing countries and transition economies suggest that foreign investment robustly improved local productivity growth.

Carbajal, Canfield and De la Cruz (2008) examined both the existence of causality, in the Granger Sense, and its direction between Gross Domestic Product (GDP), Exports, Imports and Foreign Direct Investment (FDI) in Mexico. GDP was broken down into two sectors: industrial and services. The co integration methodology developed by Liu, Burridge and Sinclair (2002) and the tests of structural changes, for the vector of co integration

developed by Quintos and Phillips (1993); and Quintos (1997, 1998) were applied. The estimation showed a stable and causal relationship of FDI over variables such as the industrial GDP, Exports and Imports. However, the service sector tends not to have a direct effect over investments. Notwithstanding that Mexico greatly benefits from FDI, as such those benefits are triggered by Exports and the industrial GDP, variables that hold a stronger linkage with the economic activity of the United States and not with the actual evolution of the Mexican economy

Export Promotion: Export promotion is indispensable for overcoming disequilibrium in the balance of payments. As a first step, comprehensive commodity surveys should be made in developed countries to determine potential markets. On the basis of these surveys, production of commodities with export potentialities should be increased. Exports of non-traditional items should be encouraged for they are needed both by the developing and developed countries. Myrdal (2009) observes in this connection that it is not in the interest of underdeveloped countries to continue with their traditional exports. He therefore, suggests that "they should rather take good look at the composition of these exports they should rather leave alone or reduce. They should seek out for themselves the dynamic commodities with rising demand trends and with high income and price elasticities and try to get away from those with a doubtful future.

This policy, in turn, necessitates the adoption of the following measures: (i) An essential preconditions for the fulfillment of the export promotion programme is the realization of the production targets set in the agricultural mineral and industrial sectors of the economy (Nigeria); (ii) Restraining the growth of domestic consumption of commodities through fiscal or other measures in order to create adequate export surplus; (iii) Maintenance of reasonable internal price stability; (iv) Modernization of export-oriented industries; (v) Timely import of raw materials and capital equipments needed for the production of exportable goods and even supplying them at subsidized prices; (vi) Relaxation or removal of export restrictions on exportable goods; (vii) Provision of credit, insurance and transport facilities to exporters.

Import Substitution: Another important method to overcome the balance of payments difficulties has been the import substitution. The strategy is to cut down imports of consumer goods and produce them at home. As Myrdal (2009) has pointed out, "The danger on the foreign exchange front provides a reason for directing investments in industry towards production of commodities that are substitutes for imports. According to Hirschman (2007), there are four impulses of import substituting industrialization. They are the balance of payments difficulties, wars, gradual growth of income, and deliberate development policy. The first leads to a bias in favour of non-essential industries and the last are likely to produce exactly the opposite bias. The two motivating forces of industrialization by import substitution in developing countries have been balance of payments difficulties and deliberate development policy. The measures which are adopted in pursuance of these two impulses are import duties, quotas and import of exchange surcharges and multiple exchange rates as price-protective devices, while tax exemption and subsidies are used to reduce costs in import-competing industries. Import substitution necessarily begins with the manufacture of durable consumer goods at the final stages of production. The country imports many converting assembling and mixing plants and turns out finished consumer goods that were previously imported and then moves on, more or less rapidly and successfully, to the higher stages of production − to intermediate goods and machinery through backward linkage effects.

Case for Import Substitution: The case for import substitution rests on the grounds that trade had operated historically as a mechanism of international inequality to the disadvantage of backward countries. They are, therefore, justified in adopting the strategy of

industrialization by import substitution for the purpose of achieving self-sufficiency in the long run and to save foreign exchange by substituting imports by home production.

Case against Import Substitution: The policy of import substitution being followed in India, Pakistan and in many Latin American countries has not been smooth. Rather, it has tended to disrupt the economies of underdeveloped countries thereby making their process of industrialization a costly one. Santiago Macario, a Latin American economist, writes in this connection that anxiety to relieve the chronic shortage of foreign exchange has induced many Latin American countries to pursue an industrialization policy essentially geared to import substitution; and that the substitution process has not been effected gradually, in accordance with a plan, and in anticipation of development requirements but in make-shift fashion, frequently to meet emergencies, and on the basis of excessive and indiscriminate protection. Consequently, in many instances it has been carried a good deal beyond the economically advisable limits, with the result that serious distortions have been introduced in the economic structure in the countries concerned and the development of more efficient and productive activities has been adversely affected to the special detriment of export possibilities..

3.0 Method and Techniques of Analysis.

For the purpose of this study we adopt Ordinary Least Square (OLS) techniques, while Error Correction Model (ECM) would be our method of analysis. The justification for these technique and method is that time series data is adopted and that OLS is BLUE (best, linear, unbiased, estimator) and the ECM is a dynamic model that allows for effect of changes in regressor on the regressand and gives opportunity for adjustment mechanism.

The models

$$D(EXPT) = \beta_0 + \beta_1 D(EXPT(-1)) + \beta_2 D(FDI(-1)) + \beta_3 D(FDI) + \delta ECV(-1) + U_t \ldots.(1)$$

$$D(IMPT) = \beta_0 + \beta_1 D(IMPT(-1)) + \beta_2 D(FDI(-1)) + \beta_3 D(FDI) + \delta ECV(-1) + U_t \ldots(2)$$

EXPT = Export---- a proxy for export promotion strategy

IMPT = Import --- a proxy for import substitution Strategy

FDI = Foreign Direct Investment.

ECV = Error Correction Variable

β_0; β_1; β_2; β_3; δ = are parameters to be estimated, where β_i (i= 0,1.2,3) of model 1 are expected to be positive while the first two of model 2 are expected to be positive and the last two to be negative. δ which is the co efficient of the ECV is the speed of adjustment in the two model and it is theoretically expected to be negative.

However, it should be clear at this junction that positive relation between FDI and Export imply that FDI promote export while the inverse relationship in the second model imply, FDI discourages importation by making goods erstwhile imported available locally.

4.0 Results and Discussion

The static model (the OLS results)

From the result in appendix 1, FDI is statistically significant in influencing Export in Nigeria which imply that, the more foreign investment she is able to attract the much more the available tradable to sell across borders. However for every 10 per cent increase in export, foreign direct investment is responsible for 6% of it. The R2and adjusted R 2 which measure goodness of fit, show that at most 77% variation in Export in Nigeria is caused by FDI, and at least 76% respectively. The F − statistic testifies to the robustness of the model, although D − Watson show some presence of serial auto correlation which is hope to be corrected in the long run.

The dynamic model (the parsimonious result 1)

$$D(EXPT) = \beta_0 + \beta_1 D(EXPT(-1)) + \beta_2 D(FDI(-1)) + \beta_3 D(FDI) + \delta ECM(-1) + U_t$$
………..(3)

$$D(EXPT) = 254222.5 + 0.789D(EXPT(-1)) - 2.263D(FDI(-1)) + 1.240 D(FDI) - ECM(-1) + U_t$$ …………………………………(4)

The above parsimonious result is extracted from appendix 2 and interpreted thus, the coefficient of error correction variable (ECV) is negative as expected which show short run disequilibrium among all included variables. It equally indicate that 56.2% of the error could be corrected annually, which means that adjustment to long run equilibrium from short run drift could be made in a space of two years.

The value of the R^2 and adjusted R^2 show that at most 71.5% variation in export is explained by FDI and at least 65.5% respectively. F-statistic P-value shows the robustness of the model, implying a fitted combination of both regressor and regressand at one per cent level of significant.

Model Re-Statement

MODEL 2

The dynamic model (the parsimonious result 2)

$$D(IMP) = \beta_0 + \beta_1 D(IMP(-1)) + \beta_2 D(FDI(-1)) + \beta_3 D(FDI) + \delta ECM(-1) + U_t$$
………(5)

$$D(IMP) = 89203.70 + 0.139D(IMP(-1)) + 1.612D(FDI(-1)) + 0.653 D(FDI) - 0.123ECM(-1) + U_t$$ ……………..…..(6).

The result from model 2 in appendix 3, it could be seen that FDI induced importation in Nigeria, this was revealed from the value and sign of it co-efficient, this could be as a result of importation of raw materials, technology and the technical know-how at least in short run. For a 10 per cent variation (increase) in importation 3.5% is due to foreign direct investment, this is supported by value of R^2 and the corrected R^2 which stood at 65% and 64% respectively. Also F-statistics confirms the robustness of the model at 1 per cent level of significance.

From the parsimonious result in appendix 4 (table $\overset{*}{2}$), that is, the error correction model, it was revealed that current FDI does not have much impact on current import this could be to delay in plan implementation (take-off period) but FDI of previous year (Y_{t-1}) has significant impact on current year import, whereas, it one year lag value does not. Also FDI in previous two years has significant impact on current importation.

The sign and value of the coefficient of the ECV confirms the presence of disequilibrium and that the short run disequilibrium could be adjusted within 5 years or thereabout since 23.4% of the error is corrected annually as shown by the speed of adjustment.

The R^2 and R^2 shows the goodness of fit of the model and declared that at most 55.4% of variation in IMP is explained by FDI and at least 46.1%. Durbin Watson statistics show absence of serial auto-correction while the F- statistics shows the overall robustness of the model which significant at 1% level. It is clear that FDI in Nigeria promote importation both in the short and long run, we can conclude that FDI in Nigeria is not of import substitution but rather support export promotion.

5.0 Conclusion and Policy Reccomendation

From the foregoing, we have been able to establish that foreign direct investment in Nigeria promote both importation and exportation and that since it promotes export it has

contributed to the potency of export promotion strategy and invariably contributed to reduction in balance of payment deficit in Nigeria and also lifted the exchange rate value and conservation. On the other hand, it also contributed to the increase in importation of goods in Nigeria, meaning that it does not help in upholding the strategy of import substitution, thereby increase the BOP deficit gap. This is a clear indication that FDI has dual effect on the Nigerian balance of payment and in totality may either have insignificant positive effect (when juxtaposed the effect on both importation and exportation) or a neutral effect.

We, however recommend as follows;

(i)   That Government should intensify effort to attract more foreign investment by providing enabling environment (laws and ethics, and infrastructural development in addition to socio political stability), with the belief that in the very long run FDI will promote import substitution.

(ii)   However, that FDI should not be grossly relied upon for it has its own cost, such as capital flight, increase in importation which could further dis-equilibrate the Nigerian balance of payment, etc. This is because FDI in Nigeria stimulate both export and imports both in the short and long run, a considerable mild FDI is needed in the long run in order not to widen the existing exchange rate gap.

(iii)   That Government should create more jobs which would simultaneously increase domestic output, income, savings and consumption and through multiplier effect generates further jobs.

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Appendices
Appendix 1

Table 1 Statics OLS Result 1

Dependent Variable: EXPT
Method: Least Squares
Date: 05/26/12   Time: 21:28
Sample: 1980 2011
Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	198175.7	277335.1	0.714572	0.4810
FDI	6.305635	0.663068	9.509793	0.0000

R-squared	0.770088	Mean dependent var		1403935.
Adjusted R-squared	0.761573	S.D. dependent var		2720263.
S.E. of regression	1328278.	Akaike info criterion		31.10314
Sum squared resid	4.76E+13	Schwarz criterion		31.19743
Log likelihood	-448.9955	F-statistic		90.43615
Durbin-Watson stat	1.170018	Prob(F-statistic)		0.000000

Appendix 2

Table 1 Parsimonious Error Correction 1

Dependent Variable: D(EXPT)
Method: Least Squares
Date: 05/28/11   Time: 14:49
Sample (adjusted): 1985 2010
Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	254222.5	138252.4	1.838828	0.0816
D(EXPT(-1))	0.789323	0.234067	3.372216	0.0032
D(FDI(-1))	-2.263461	0.644346	-3.512806	0.0023
D(FDI)	1.238790	0.577341	2.145682	0.0450
ECM(-1)	-0.562616	0.228133	2.466178	0.0233

R-squared	0.714920	Mean dependent var		407899.6
Adjusted R-squared	0.654904	S.D. dependent var		1024296.
S.E. of regression	601721.5	Akaike info criterion		29.63603
Sum squared resid	6.88E+12	Schwarz criterion		29.88146
Log likelihood	-350.6323	F-statistic		11.91201
Durbin-Watson stat	1.646386	Prob(F-statistic)		0.000052

Appendix 3

Table 2 the Ols Results 2

Dependent Variable: IMP
Method: Least Squares
Date: 05/26/11   Time: 21:24
Sample: 1980 2010
Included observations: 31

Variable	Coefficient	Std. Error	tStatistic	Prob.
C	208112.3	210032.9	0.990856	0.3306
FDI	3.578938	0.502158	7.127117	0.0000

R-squared	0.652938	Mean dependent var	892474.4	
Adjusted R-squared	0.640083	S.D. dependent var	1676758.	
S.E. of regression	1005939.	Akaike info criterion	30.54721	
Sum squared resid	2.73E+13	Schwarz criterion	30.64151	
Log likelihood	-440.9346	F-statistic	50.79580	
Durbin-Watson stat	1.637491	Prob(F-statistic)	0.000000	

Appendix 4

TABLE 2*   THE PARSIMONIOUS OLS 2

Method: Least Squares

Date: 05/28/11   Time: 14:43
Sample (adjusted): 1985 2010
Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	89203.70	124267.7	0.717835	0.4816
D(IMP(-1))	0.139224	0.175602	0.792839	0.4377
D(FDI)	0.653079	0.517996	1.260782	0.2227
D(FDI(-1))	1.612325	0.365073	4.416447	0.0003
ECM(-1)	-0.123170	0.196950	-0.625386	0.5392
R-squared	0.509127	Mean dependent var	207034.9	
Adjusted R-squared	0.405786	S.D. dependent var	691853.2	
S.E. of regression	533317.1	Akaike info criterion	29.39467	
Sum squared resid	5.40E+12	Schwarz criterion	29.64010	
Log likelihood	-347.7361	F-statistic	4.926643	
Durbin-Watson stat	2.088404	Prob(F-statistic)	0.006767	