

ISSN 111-4898

INTERNATIONAL JOURNAL OF SOCIAL SCIENCES

Vol. 6, No. 1 JUNE (2007)

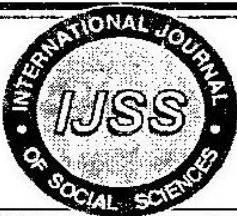
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The Impact of Export Instability on Nigeria Balance of Payment

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ABSTRACT - The major concern to less develop countries (LDC's) is the problem of fluctuation in their export earnings. Export earnings of LDC's depend on only a few number of commodities and their sales are geographically concentrated. Nigeria as a less developed country is endowed with abundant mineral and natural resources. It is a major producer of oil with petroleum products accounting for 90 percent of her foreign exchange receipt and about 70 percent of government revenue. Prior to the oil boom in the 1970 Nigeria depended on primary commodity export for its national income, the country at that time was self-sufficient in food production and even a net export of agricultural produce. But globalization of trade has forced less developed countries (LDC's) into the production of primary products with inelastic demand with respect to both price and income. The study which examines the impact of export instability on Nigeria balance of payment found that instability in export has negative implications on the country balance of payment. Based on the research findings, certain policy recommendations were made to reduce the country instability in export and improve the balance of payment.

Key words: Export, impact, balance of payment, Nigeria

INTRODUCTION

Developed and developing nations need foreign exchange earnings from their export to execute important development programmes. However, export earnings constitute a greater percentage of gross domestic product (GDP) of third world countries, much more than those of developed countries. In other words, less developed countries (LDC's) are more dependent on the export sector for national income and development than the developed nations. Most of the less developed countries (LDC's) are single product (primary products) exporting countries whose prices and earnings are affected by the dynamics of the international market situation.

Generally speaking international trade is dynamic and subject to constant changes over time to any given nation. Similarly, the composition and pattern of world trade tend to vary over time. Trade has many effects on a participating country including possibly economic growth. Nations of the world have become increasingly economically dependent in the 20th century. This global economic interdependence has been fostered by many factors including trade. However, Africa's export revenue has declined drastically, making its trade and current account to be in deficit and its external debt escalated.

The importance of this study is based on the understanding that trade is a determinant of balance of payment (BOP). Thus the less developed countries (LDC's) tend to rise or fall in their developmental effort on the threshold of their export performance. As such any instability in export proceeds is viewed with depressed sentiment as it affects balance of payment (BOP), foreign exchange earnings, exchange rate, foreign reserves and even inflationary trend. The purpose of this study is to investigate empirically the relationship between export instability and balance of payment in Nigeria. The study, which covers the period of 1970 – 2002, makes use of econometric technique of the ordinary least square (OLS) to ascertain the impact of export instability on the balance of payment in Nigeria.

THEORETICAL FRAMEWORK AND REVIEW OF RELATED STUDIES.

To appreciate this study, it is important we establish the importance or contribution of export earnings to the growth and development of less developed countries (LDC's) economy. In this regard, let us consider the work of Colman and Nixon (1978). According to them "A widely accepted hypothesis which has exercised an important influence on international trade policy is that, because of its influence upon primary commodities, the export earnings of the underdeveloped countries exhibit a high degree of short run instability. As an ancillary proposition, it is argued that such instability is damaging to growth and development prospects of these countries".

Consequently, Abebe (2000) however, assented that the major concern of less developed countries (LDC's) is the problems associated with fluctuation in their export earnings. According to him export earnings of less developed countries (LDC's) depend on only a few number of commodities and their sales are geographically concentrated. He further observed that a study of exports earnings fluctuation and commodity concentration in 29 African countries for the 1960 – 1982 period, such policies for commodity diversification may or may not lead to reduced fluctuation in export earnings. As key determinants of export earning fluctuations include not only commodity concentration, but also the relative importance of a country's major commodity, world-demand conditions affecting the major commodity, internal supply conditions, and relative effectiveness of various commodity agreements.

In complimenting this argument, the less developed countries (LDC's) are more dependant on export sector for their national income, balance of payment (BOP) stability and development than the developed nations. This is because most of the LDC's are single product exporting countries whose prices and earnings are affected by the vagaries of international market situation. Beside export instability other factors also stand to have impact on the balance of payment position in most LDC's. The Keynesian analysis of balance of payment (BOP) shows that the marginal propensity to import is a major determinant of the balance of payments (BOP). In the Keynesian analysis, an increase in domestic income or price level will lead to higher imports, and consequently, to larger balance of payment (BOP) deficits.

Todaro(2003) emphasized that prior to 1980, the conventional development strategy had LDC's operating with sizeable current account deficits, for imports of capital and intermediate goods were required to provide the machinery and equipment for rapid industrialization. Export earnings paid for most, but not all, of these imports; the implication is that import level is another major determinant of balance of payment level in less developed countries (LDC's). But unfortunately import level in less developed countries are always higher than export receipt or revenue.

REASONS FOR EXPORT INSTABILITY IN LDC'S

Obadan (2001) gave a number of mutually reinforcing factors for the wide gap between Africa's economic integration into world market and its development at large. These relate to the structure of production and export, and the policy and institutional environment. The factors that account for such instability were given as follows:

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- (a) Monocultural economics and over dependence on primary commodity export.
- (b) Low level of manufactured export:
- (c) Low level of domestic investment

KEY PROBLEMS OF PRIMARY COMMODITY EXPORT

In the past two decade a number of key issues have confronted primary commodity export in LDC's. Todaro (2003) identified the following factors as working against the rapid expansion of LDC's primary products export:

- (a) Low income elasticity of demand for primary commodities.
- (b) Low price elasticity of demand for primary commodities.
- (c) The development of synthetic substitution.
- (d) The growth of agricultural protection.

THE ROLE OF EXPORT IN ECONOMIC DEVELOPMENT

The export sector yields revenue (internal and external) which are used to finance development programmes. It enables the importation of equipments, and raw materials, soft and hard technologies and entrepreneurship which assist in more efficient exploitation of income resource and above all, allow for favourable balance of payment. The healthy competition fostered by international trade is essential for the development of export sector in the LDC's and for checking inefficient exploitative monopolies that are usually established on the growth of infant industry protection.

Some theoretical objective on the conventional theory of international trade on which the argument are based place limit to the benefits of foreign trade (Salvatore 1975). Ellsworth (1964) argued that the idea that international trade can benefit the LDC's have been attacked on theoretical and empirical ground. Obviously, technical changes; for instance has reduced the relative industrial use of raw materials and so depressed the income term of trade on the capacity to import of the LDC's (Jhingan 1997).

THE STRUCTURE OF NIGERIAS EXPORT SECTOR

The Nigeria export sector is characterized by the predominance of primary products and relatively insignificant of manufacture. The structure has persisted since independence, except that there has been a shift of emphasis from agricultural products to petroleum in this export contents of Nigeria trade. Alongside growth in oil, has been a steady decline in the contribution of non-oil products to the total export. In 1970, non-oil products though had started to decline, contributing 42.4 percent to the export earning of Nigeria. By 1981, 1992 and 1996 their contribution

had decline to all time low percentage of 1.8 percent, 1.9 percent and 1.8 percent respectively.

Meier (1984) observed that the larger the volume of trade, the greater will be the volume of foreign capital that can be expected to become available under realistic assumption. This is a pure case for favourable balance of payment position of any country whether developed or less developed. Obadan (2001), however, agree that the capital flows which feature prominently in globalization process can be quite beneficial to a country's growth and development. But they also have their own risk or costs. Accordingly the growth of the export sector has attributed foreign investment to Nigeria, especially in the area of mining. Federal office of statistic (FOS) (1984) reveal that between 1975 and 1981 the proportion of labour force engaged in mining has remain constant at 0.4 percent, while those of manufacturing and service distribution increased from 16.8 to 17.3 percent and 12.2 to 15.4 percent respectively. This observation is our evidence that foreign direct investment in Nigeria economy within this period has being bias on oil sector with low or no benefit to the labour force.

Obadan (1983), attributed the persistent decline in the performance of non-oil export to growth of population and income with resultant increase in local demand that tend to out strip the growth in output of these product. The result is that local consumption take up all that is produced without leaving any for export. The sale of vegetable oil is cited as an example of products that falls into this category.

Ojo (1973), has examined the relationship between the instability of export proceeds and some growth indicators. In estimating his instability index, he used the method of regression equation as did by Voivodas (1973). In the model Ojo chose as independent variables some economic growth indices which he believed would enable him assess development with in the period of his study. The variables were GDP growth rate, fixed investment and the ratio of GDP to capital formation.

When he regressed the GDP growth rate on instability index, he obtain a poor fit of $R^2 = 0.078$ with the coefficient of instability not significant, even at the 10 percent level. However, the result had the right sign that confirmed the hypothesis that export instability is negatively related to economic growth. He stated that in developing country like Nigeria, most investment goods had to be imported and baring foreign loans and aids, they had to be paid for by exports. He concluded that severe fluctuations in export proceeds might be expected to affect the rate of growth of investment. However, instability of export proceeds does not significantly affect the long-run growth of the economy. His results were therefore not impressive to lend support to the usual concern shown by the LDC's over instability in export earning.

MODEL SPECIFICATION

The review of various literature and theoretical consideration highlighted some of the factors that account for export instability and its influence on balance of payment (BOP). Our knowledge of economic theory suggest that the critical factor in measuring balance of payment (BOP) is foreign exchange earnings and level of imports. Our model shall contain balance of payment (BOP) as dependent variable while export instability, total imports, inflation, exchange rate and foreign direct investment shall constitute our independent or explanatory variables in the equation.

The variables filled in the equations of the model include: Balance of payment (BOP), Export instability (XINST), Total imports (TOT), Foreign direct investment (FDI), Inflation (INFL) and Exchange rate (EXR).

The functional relationship are specified as follows:-

$$BOP_t = f(XINST_t, TOT_t, FDI_t, EXR_t, BOP_{t-1}) \dots\dots(1)$$

Equation (1) can be transformed into an econometric model as follows:-

$$BOP_t = a_0 + a_1 XINST_t + a_2 TOT_t + a_3 FDI_t + a_4 INFL_t + a_5 EXR_t + a_6 BOP_{t-1} + U_{it} \dots\dots(2)$$

Where:

BOP_{t-1} is lagged value of Balance of payment, t is Present Time period, a_0 is Intercept Term, a_1 is Coefficient of Export Instability, a_2 is Coefficient of Total Imports, a_3 is Coefficient of Foreign Direct Investment, a_4 is Coefficient of Inflation, a_5 is Coefficient of Exchange Rate, a_6 is Coefficient of lagged value of BOP and U_{it} is Error Term.

We acknowledge the fact that there are other factors which affect the dependent variable but which might not be present in the model, it is necessary therefore to capture these variables with the error term (u).

EMPIRICAL ANALYSIS OF REGRESSION RESULTS

Using data from 1970 to 2002 the model specified above was estimated using the statistical package for social scientist (SPSS) software package. The estimated result is presented below;

$$\begin{aligned} BOP = & -28804.6 + 259.7XINST - 2.7 TOT \\ & (-0.53) \quad (1.11) \quad (-0.01) \\ & -40.6FDI + 820.1 INFL - 1671.4EXCHR \\ & (-2.72) (0.90) \quad (-3.22) \\ & -0.64 BOP_{-1} \\ R^2 = & 0.624, DW = 2.517, F = 7.179. \end{aligned}$$

In the above equation, we have attempted to examine the joint impact of export instability, total import, foreign direct investment, inflation rate, exchange rate and lagged value of balance of payment on the balance of payment. All signs of the explanatory variable except exchange rate did not agree with the *apriori* expectation.

The result shows that export instability, total imports, foreign direct investment, inflation rate, exchange rate and lagged value of balance of payment explained about 62 percent of the total variation in the balance of payment. The *t* – values of the coefficients of foreign direct investment, exchange rate and lagged value of the balance of payment are significant at the 1 percent level but that of export instability, total imports and inflation rate failed the significant test. The *F*-value of 7.179 is significant at the 1 percent level indicating that there is a significant linear relationship between the six regressors and the dependent variable. The Durbin Watson Statistic however indicates that auto correlation is highly minimized.

The estimated coefficients indicate that a hundred percent increase in export instability, total imports, foreign direct investment, inflation rate, exchange rate and lagged value of the balance of payment will generate 25 percent increase, 27 percent decrease, 40 percent decrease, 82 percent increase, 17 percent decrease and 64 percent decrease in the balance of payment respectively.

POLICY IMPLICATIONS AND CONCLUSION

The result has shown that there has been a display of consistent impact of export instability on the balance of payment (BOP) in Nigeria. The linear relationship between the regressors has also shown that they have direct or indirect impact on the balance of payment. The most important policy implication here is that Nigeria balance of payment could be enhanced by Smoothing out the country export instabilities, reducing the level of inflation and efficient management of the exchange rate.

It is therefore evidence from the analysis that Nigeria's balance of payment could be improved upon by smoothing out export instabilities and expanding export. The magnitude of instability has shown the behavior of the dominant commodity in the export trade with agricultural commodities showing greater instability than oil.

The high instability observed in this period of study has shown serious adverse effect on exchange rate. Its effect on foreign direct investment has never encourage the type of investment that could enhance the growth and development of the economy. There have also been serious adverse effect of export instability on the balance of payment, resulting to payment deficits, thereby reducing the international reserve of the nation.

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Furthermore, conspicuous consumption resulting to high level of import has never helped in the balance of payment correction, irrespective of the exchange rate manipulation within the period of study. The conclusion is that optimum balance of payment is achievable by reducing export instability because this will enhance foreign exchange flow, exchange rate and investment variables to promote or stabilize the balance of without resulting to balance of payment deficit finance through other means.

It is also believed that long- run stability of balance of payment is favor by expanding export than by removing instability in export earnings. This implies that when faced with the option of removing instability and increasing export with a view of enhancing the balance of payment, the latter is a more attractive option.

REFERENCES

- Abebe, T., (2000), "Commodity Concentration and Export Earnings Instability; Evidence from African Countries," *CBN Economic and Financial Review*, Vol.40, No.3.
- Colman, D. & Nixon, (1978), *Economics of Change in Less Developed Countries*, McGraw-Hill, New York.
- Ellsworth, P.T. (1964); *The International Economics*, Macmillan Book Co. New York.
- Federal Office of Statistics, 1984, Annual Statement of Accounts.
- Jhingan, M.L. (1997); *Monetary, Banking, International and Public Finance*, Vikas Publishers, New Delhi, India
- Meier, G.M, (1984), *Leading Issues in Economic Development*, Oxford University Press Inc., New York.
- Obadan, M.I, (1983), Prospect for Diversification in Nigeria Export Trade, *The Nigeria Economic and Financial Review*.
- Obadan, M.I, (2001), "Africa and the challenges of globalisation: *The Nigeria Economic and Financial Review*
- Ojo, .O, (1973), "A Medium –term planing model of the Nigerian Economy", *Nigerian Journal of Economic and Social Studies*, 15 (1)
- Salvatore, D, (1975), *International Economics*, McGraw-Hill, New York.
- Todaro, M.P, (2003), *Economic Development*, Pearson Educational Publication, Singapore Pte ltd.
- Voivodas, C.S, (1973), Exports, Foreign Capital Inflow and Economic Growth. *Canadian Journal of International Economics*, Vol.3 No.4.

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APPENDIX

OBS	BOP	XINST	TOT	FDI	INFL	EXR
1970	-46.600	NONE	63.8000	.2500	13.8000	.71000
1971	-117.4000	200.0000	82.3000	49000	15.7000	.70000
1972	-57.2000	49.0196	78.7000	.43000	28.6000	.66000
1973	197.5000	34.2105	94.5000	.58000	5.7000	.66000
1974	-3102.2	264.7059	190.2000	.51000	12.6000	.63000
1975	-157.5000	14.7849	155.9000	76000	33.6000	.62000
1976	339.0000	25.7611	165.6000	.52000	24.6000	.63000
1977	-527.2000	13.2216	245.3000	.72000	13.5000	.65000
1978	-1293.6	-25.0000	227.2000	.66000	22.0000	.61000
1979	-1868.9	94.7368	213.8000	.70000	11.5000	.60000
1980	-2402.2	39.0766	329.7000	.79000	10.3000	.55000
1981	3020.8	-30.6883	348.3000	.58000	20.6000	.61000
1982	1398.3	-8.7617	301.0000	2.2000	7.7000	.67000
1983	301.3000	-7.1703	276.9000	1.7000	23.3000	.72000
1984	-354.9000	14.0690	283.4000	1.4000	39.5000	.76000
1985	-349.1000	32.0435	262.4000	1.4000	7.500	.87000
1986	784.3000	-25.7326	127.4000	4.0000	5.8000	2.0200
1987	-159.2000	134.6486	132.5000	5.1000	11.2000	4.0200
1988	2294.1	4.2039	111.2000	6.2000	54.5000	4.5400
1989	8727.8	97.3273	136.4000	4.7000	50.5000	7.3900
1990	-18498.2	83.7209	161.5000	10.5000	.74000	8.9400
1991	-5959.6	14.9951	136.1000	5.6000	13.9000	9.9100
1992	-65271.8	98.4759	117.3000	11.7000	44.6000	17.3000
1993	-13615.9	-1.2067	108.2000	42.6000	57.2000	22.0500
1994	-7194.9	-1.1783	102.3000	57.8000	57.0000	21.8900
1995	15325.1	102.6032	100.0000	56.0000	72.8000	81.0200
1996	-183950.6	13.7544	156.7000	5.7000	29.3000	81.2500
1997	-251593.1	12.8985	118.7000	10.0000	8.5000	81.6500
1998	36960.3	-30.5367	80.5000	32.4000	10.000	83.8100
1999	152356.4	150.2055	107.6000	4.0000	6.600	92.3400
2000	-453413.5	119.7178	180.1000	16.5000	6.9000	100.8000
2001	24729.9	192.3758	348.0976	3377.0	16.4500	111.4921
2002	-525691.5	194.4897	325.5141	8206.8	16.1250	120.4700