

# The Impact of Exchange Rate Reforms on Trade Performance in Nigeria

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**ABSTRACT** Exchange rate reform (combined with trade policy reforms) under Nigeria's economic reform programme was anticipated to diversify the export base of the economy from oil to non-oil exports through competitiveness in the relative price of non-oil exports in addition to reducing imports, especially of consumer goods. This study investigates the effect of exchange rate reforms on Nigeria's trade performance during the period 1986-2007. It finds a small positive effect of exchange rate reforms on non-oil exports through the depreciation of the value of the country's currency. It was also found that the structure of imports which is pro consumer goods remained unchanged even after the adoption of exchange rate reforms. Exchange rate reforms were found not to constrain imports as anticipated. Rather, they stimulate imports, albeit insignificantly. A major policy lesson is that exchange rate reforms are not sufficient to diversify the economy and change the structure of imports. Major incentives in the form of conducive environment for domestic production, especially effective infrastructure that could lead to significant improvement in competitiveness are required.

## 1. INTRODUCTION

Trade is widely accepted as a major engine of economic growth. This has been the experience of Nigeria since the 1960s even though the composition of trade has changed over the years. For instance, in the 1960s, agricultural exports (including cocoa, cotton, palm kernel and oil, groundnuts and rubber) were the country's main sources of foreign exchange and revenue to the government. But with the discovery and export of crude oil in the late 1960s and early 1970s, the important role of agricultural exports began to wane, replaced by crude oil exports.

The dependence of Nigeria on crude oil exports had important implications for the Nigerian economy since the oil market is a highly volatile one. For example, being dependent on the export of crude oil, the Nigerian economy became subject to the vicissitudes and vagaries of the international oil market such that international oil price shocks were immediately felt in the domestic economy. Coupled with this, Nigeria implemented a fixed exchange rate system that engendered overvaluation of the domestic currency, serving as a disincentive for increased exports through non-competitiveness of the country's non-oil exports. On the other hand, the overvalued exchange rate enhanced imports thereby exacerbating the already precarious balance of payment position.

Although several ad hoc measures were taken to stem the deteriorating tide of the Nigerian economy from the late 1970s to early 1980s, it was until 1986 that a comprehensive economic adjustment programme was put in place to restructure the economy. Exchange rate reform was a major component of this economic reform agenda that was further intensified under the Nigerian Economic Empowerment and Development Strategy (NEEDS). The goal of exchange rate reform is to systematically attain an appropriate value for the Nigerian currency that would serve as a major incentive for exports but disincentive for increased imports. How effective has this reform been? Has exchange rate reforms been able to stimulate exports, especially non-oil exports? What has been the structure of imports since exchange rate reforms? Has there been shift in expenditure from consumer goods imports to capital and raw materials imports? Is there the need for any additional policy measures to complement existing exchange rate reforms in order to achieve the goals of exchange rate reforms? This paper examines the effects of exchange rate reforms on trade performance in Nigeria. In specifics, it examines the effect of exchange reforms on non-oil exports and on imports. The choice of non-oil exports is predicated on the fact that exchange rate reforms are not likely to affect oil prices and by extension oil exports.

The entire paper is organized in five sections. A review of related literature is undertaken in section 2. This is followed by a brief overview of exchange regimes in Nigeria in section 3. The analysis of the effects of exchange rate reforms on trade performance is presented in section 4 while section 5 concludes the paper.

## **2. REVIEW OF RELEVANT LITERATURE**

### **2.1 Theoretical Review**

The core of exchange rate reforms is the stimulation of the growth of exports beyond that of imports with a view to an overall improvement in the trade balance. The theoretical impact of exchange rate reforms on trade is still highly controversial (Agbola 2004). Three major approaches are proposed in the theoretical literature. These are the monetarist, elasticity and absorption approaches. The nub of the monetarists is that devaluation changes the relative price of traded and non-traded goods, thus improving both the trade balance and the balance of payments (Dornbusch 1973; Frenkel and Rodriguez 1975; Mills 1979). They propound that devaluation results in a fall in the real supply of money, resulting in an excess demand for money. The effect is hoarding and an increase in trade balance (Upadhyaya and Dhakal 1997).

Robinson (1947) and Kreuger (1983) are the major proponents of the elasticity approach. At the heart of this approach is the point that transactions may dominate a short-term change in the trade balance thereby resulting in deterioration in the trade balance (Upadhyaya and Dhakal 1997). However, in the long-run, export and import quantities adjust and this causes elasticity's of exports and imports to increase and for quantities to adjust. This leads to a reduction in the foreign price of the devaluing country's exports but raises the price of imported goods and therefore lowers its demand. The result is that the trade balance improves. Quite obvious from this argument is that the effect of devaluation on trade balance depends on the elasticity of exports and imports. This reasoning has been extended by Williamson (1983) by noting that the higher import prices initiated by devaluation could stimulate increases in domestic prices of non-traded goods such that the inflation rate rises with the potential effect of reducing the benefits of devaluation as manifested in the increase in trade balance.

The debate of the absorption approach is that devaluation may change the terms of trade, increase production, switch expenditure from foreign to domestic goods, or have some other effect in reducing domestic absorption relative to production, and thus improving the trade balance (Alexander 1952; Johnson 1967).

### **2.2 Empirical Review**

There is no consensus in the empirical literature on the effect of exchange rate reforms on trade. For instance, in a study on the effect of 24 devaluation episodes in developing countries over the period 1959-66, Cooper (1971) found that overall, devaluation improved trade balance and balance of payments. In another study on devaluation and macroeconomic performance, Kamin (1988) discovered that the trade balance was improved by devaluation through its stimulation of exports. Similarly, (Salant 1977; Gylfason and Risager 1984) established that devaluation improved the balance of payments though not trade balance. On the other hand, the study of Miles (1979) found that devaluation did not improve trade balance. Devaluation was also found to worsen the trade balance and the balance of payments Solimano (1986), Roca and Priale (1987) and Horton and McLaren (1989)

Olayide (1969), Ajayi (1975), Komolafe (1995), Egwakhide (1999) fitted import demand functions using Nigerian data and found that import decisions are determined by the dynamics of foreign exchange availability. While Iyoha (2003) examined the determinants of exchange rate in Nigeria. Non of these studies explored the effects of foreign exchange reforms on trade performance in Nigeria.

## **3. OVERVIEW OF EXCHANGE RATE POLICY IN NIGERIA**

Foreign exchange operations in Nigeria have been influenced by a number of factors such as the changing pattern of international trade, institutional changes in the economy and structural shifts in production. Before the establishment of the Central Bank of Nigeria (CBN) in 1958 and the enactment of the Exchange Control Act of 1962, foreign exchange was earned by the private sector and held in balances abroad by commercial banks which acted as agents for local exporters. The boom experienced in the 1970s

made it mandatory to manage foreign exchange resources in order to avoid a shortage. However, shortages in the late 1970s and early 1980s compelled the government to introduce some ad hoc measures to control excessive demand for foreign exchange. However, it was not until 1982 that comprehensive exchange controls were applied. The increasing demand for foreign exchange at a time when the supply was shrinking encouraged the development of a flourishing parallel market for foreign exchange.

Because the exchange control system was unable to evolve an appropriate mechanism for foreign exchange allocation in consonance with the goal of internal balance, it was discarded on September 26, 1986 while a new mechanism was evolved under the Structural Adjustment Programme (SAP) introduced in 1986. The main objectives of exchange rate policy under the SAP were to preserve the value of the domestic currency, maintain a favourable external reserves position and ensure external balance without compromising the need for internal balance and the overall goal of macroeconomic stability. A transitory dual exchange rate system (first and second-tier - SFEM) was adopted in September, 1986, but metamorphosed into the Foreign Exchange Market (FEM) in 1987. Bureau de Change was introduced in 1989 with a view to enlarging the scope of the FEM. In 1994, there was a policy reversal, occasioned by the non-relenting pressure on the foreign exchange market. Further reforms such as the formal pegging of the naira exchange rate, the centralisation of foreign exchange in the CBN, the restriction of Bureau de Change to buy foreign exchange as agents of the CBN, etc. were introduced in the Foreign Exchange Market in 1994 as a result of volatility in exchange rates. There was another policy reversal in 1995 to that of "guided deregulation". This necessitated the institution of the Autonomous Foreign Exchange Market (AFEM) which later metamorphosed into a daily, two-way quote Inter-Bank Foreign Exchange Market (IFEM) in 1999. The Dutch Auction System (DAS) was re-introduced in 2002 as a result of the intensification of the demand pressure in the foreign exchange market and the persistence in the depletion of the country's external reserves. The DAS was conceived as a two-way auction system in which both the CBN and authorised dealers would participate in the foreign exchange market to buy and sell foreign exchange.

#### 4. THE EFFECT OF EXCHANGE RATE REFORMS ON TRADE

##### 4.1 Effect of Exchange Rate Reforms on Exports

The stimulation of non-oil exports is the major focus of exchange rate reforms through competitiveness in the relative price of non-oil exports to be occasioned by the depreciation of the naira and also other incentives such as the abolition of export licenses, retention of 25% of foreign currency proceeds (later increased to 100%) for the exporter's use, and the abolition of agricultural commodity marketing boards. Despite these incentives, the response of non-oil exports to exchange rate reforms has not been too impressive.

Figure 1 which gives indication of the performance of oil and non-oil exports in 1970-2005 shows that there has been virtually no change in the share of both oil and non-oil exports in total exports over the years, except a moderate increase in the share of non-oil exports in the period immediately following the commencement of exchange rate reforms in 1986. The figure reveals an increasing trend in the share of non-oil exports in 1987 and 1988 after which the share dropped in 1989. Another moderate increase in the share of non-oil exports was recorded in 1999. Since this period, the share of non-oil exports remained virtually as it was during the mid-1980s. Figure 2 which compares the share of oil exports with that of non-oil exports before and during exchange rate reforms reveals that the share of non-oil exports dropped from an annual average of 8.2% before reforms (i.e., 1970-1985) to 3.6% during reforms (1986-2005). On the other hand, the share of oil export rose from an average of 91.7% before reforms to 96.4% during reforms. This development is in spite of the positive growth experienced in the non-oil sector during the period under consideration. Figure 3 reveals that positive growth was recorded in non-oil exports in 1987-89, 1994-95, 1998-99 and 2002-05, periods during which the country also experienced real exchange rate depreciations. Overall, Figure 4 shows that there was some improvement in non-oil export growth during reforms as the average annual growth rate rose from -5.8% before reforms to 23.7% during reforms. However, this positive development was not robust enough to increase the share of non-oil exports in total exports. A number of factors account for the not too

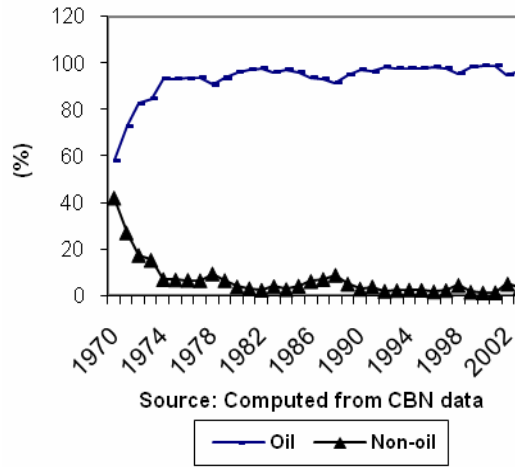


Fig. 1. Share of oil and non-oil in Nigeria's export

Fig. 2. Share of oil and non-oil in Nigeria's export

Fig. 3. Growth in real oil and non-oil exports of Nigeria

Fig. 4. Growth in oil and non-oil exports of Nigeria

impressive performance of non-oil exports. These include the high cost of raw materials, inaccessibility to credit, low consumer demand, poor state of infrastructure including roads and electricity supply, etc. which constrained production.

#### 4.2 Effect of Exchange Rate Reforms on Imports

Raw materials, capital goods and consumer goods imports are the major categories of imports in Nigeria. Exchange rate reform is expected to shift expenditure on imports from consumer goods

to raw materials and capital goods. Figure 5 shows a declining trend in the share of imported consumer goods between 1986 and 1990. After this period, the share began to rise. Although there was a decline in the share of consumer goods imports between 1994 and 1996, the general pattern was that of an increasing share. The figure also reveals that the share of consumer goods imports was generally higher during the 1990s and 2000-05 than in the 1970s and 1980s. This later point could account for the average share of consumer goods import being higher during reforms than before reforms (see Figure 6). Such a substantial increase

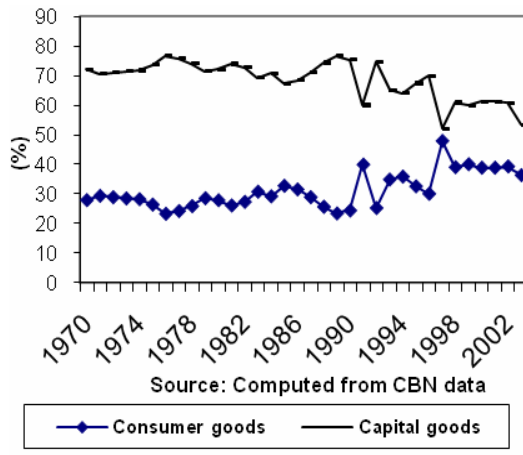


Fig. 5. Share of consumer and capital goods in total imports

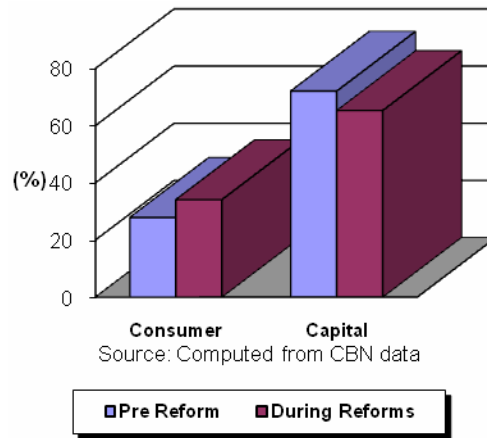
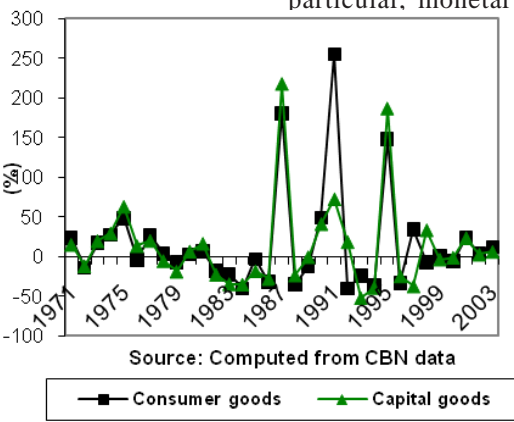


Fig. 6. Share of consumer and capital goods in total imports

in the level of imports during a period that the naira has depreciated more or less steadily casts doubt on the efficacy of exchange rate reforms as currently administered in curtailing the level of imports and the success of other measures, in particular, monetary and fiscal policies, in



the impact of exchange rate reforms, a potential explanatory factor in the share of consumer goods and of exchange rate reforms is the depreciation of the country's currency. This is not surprising given that despite official measures designed to ensure that the allocation of foreign exchange for imports give priority to raw materials and capital goods for industry, the proportion so allocated has not been significantly higher than they were before exchange rate reforms. Figure 7 gives indication of the growth in real imports. The figure shows that growth in real imports of consumer and capital goods was massive in 1987, 1991 and 1995. In these periods, growth rates were 181%, 254% and 148% respectively for consumer goods, 218%, 73% and

reform has not been significantly successful in shifting foreign exchange expenditure in favour of raw materials and capital goods. This is not too surprising given that despite official measures designed to ensure that the allocation of foreign exchange for imports give priority to raw materials and capital goods for industry, the proportion so allocated has not been significantly higher than they were before exchange rate reforms.

Figure 7 gives indication of the growth in real imports. The figure shows that growth in real imports of consumer and capital goods was massive in 1987, 1991 and 1995. In these periods, growth rates were 181%, 254% and 148% respectively for consumer goods, 218%, 73% and

While the share of consumer goods import was higher during reforms, this was not the case with raw materials and capital goods. Figure 6 shows that the share of raw materials and capital goods imports was lower during reforms. This could be partly accounted for by the shortage of foreign exchange for raw materials and capital goods import during the reform period. Foreign exchange may have been diverted from raw materials and capital goods to the importation of consumer goods. It appears that exchange rate

Fig. 7. Growth in real consumer and capital goods imports

187% respectively for capital goods. For the period 1987-95, the average growth rates for real imports of consumer and raw materials and capital goods were 54.22% and 47.15% respectively. It appears that exchange rate reforms succeeded in curtailing real imports during the 1996-05 period as the average growth rates of imports during this period were 3.97% and 0.24% for consumer and raw materials and capital goods respectively. However, the reduction in the growth rate in real imports during the 1996-03 period was not large enough to counteract the huge growth in real imports during the 1987-95 period, hence a higher average growth rate of real imports during reforms (see Fig. 8).

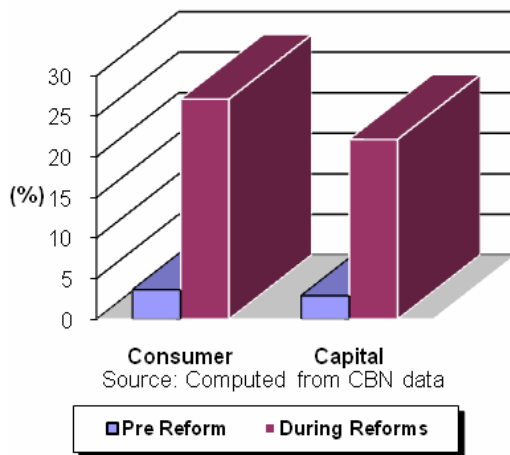


Fig. 8. Growth in real consumer and capital goods imports

#### 4.3 Effect of Exchange Rate Reforms on the Trade Balance

Exchange rate reforms seek to equilibrate the balance of payment by improving the trade balance. The performance of Nigeria's trade balance is indicated by Figures 9 and 10. Figure 9 shows clearly a rising trend in the country's surplus trade balance since 1983. The trend continued till 1990 before declining and then rising again. Although there were fluctuations in the country's surplus trade balance between 1994 and 2005, the overall picture is that of a rising trend. This point is supported by Figure 10 which shows that Nigeria's trade balance of 1.7 during reform was better than that of 1.3 before reforms. This suggests that exchange rate reforms could have been instrumental in the marginal

Fig. 9. Trade balance of Nigeria

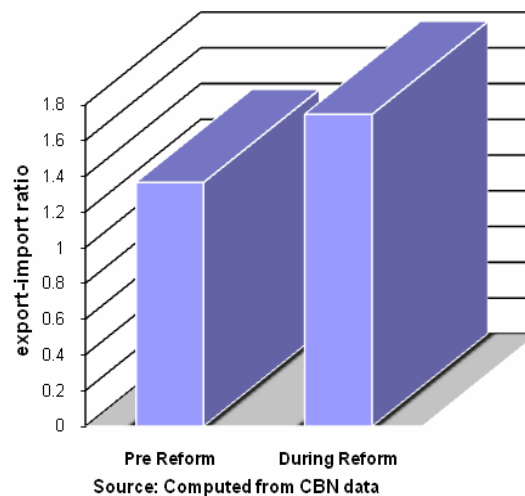


Fig. 10. Nigeria's trade balance

improvement recorded in the country's trade balance.

#### 4.4 Model Specification, Estimation and Discussion of Results

##### 4.4.1 Model Specification and Estimation

The standard export and import demand models are estimated in order to rigorously analyze the impact of exchange rate reforms on Nigeria's trade performance (see Adewuyi and Akpokodje, 2009). This is to further validate the

findings of the previous section. In these models, export and imports depend on the real effective exchange rate. In addition, foreign income and domestic income influence export and import respectively. The specific equations estimated are:

$$x_t = f(reer_t, fgdp_t) \dots\dots\dots(1)$$

$$m_t = f(reer_t, dgdpt) \dots\dots\dots(2)$$

Where  $x$  and  $m$  are export and import growth respectively;  $reer$  is the real effective exchange rate;  $fgdp$  is the growth in foreign GDP capturing growth in foreign income. It is the weighted average income of Nigeria's major trading partners;  $dgdpt$  is growth in domestic income.

A few comments on these variables and their expected signs are in order. A decrease in the  $reer$  indicates depreciation in the value of the naira. On the one hand, this should make Nigeria's export more competitive and therefore should stimulate non-oil exports. On the other, the depreciation should result in an increase in the price of imports and therefore constrain import demand. Foreign income is expected to induce exports while domestic income is anticipated to stimulate imports.

Ordinary Least Square (OLS) and the Generalized Method of Moments (GMM) were employed in the estimation of the equations. Since the growth rates of the trade variables are trade values and not trade volumes, this present serious endogeneity problem which is taken care of by the GMM approach. The instruments are the one period lag of the variables. The period of coverage is 1986-2007 during which the country implemented exchange rate reforms. The data for

imports, non-oil exports, real effective exchange rate and domestic income were derived from the Central Bank of Nigeria Statistical Bulletin, 2008 and complemented by the Central Bank of Nigeria, Annual Report and Statement of Accounts, 2008. Those for foreign income were obtained from the World Bank, World development Indicators, 2008.

#### 4.4.2 Discussion of Results

The results of the estimated models reported in Table 1 shows that the estimated models fulfill the conditions of serial non-correlation, homoscedasticity and no specification errors. The adjusted R-squared is 0.56 and 0.62 for the export models and 0.53 and 0.59 for the import models. These demonstrate that over 50% of the variations in exports and imports are captured by the explanatory variables. The Durbin Watson statistics test results also indicate the absence of autocorrelation problems.

Focusing on the results of the export model, Table 2 shows that the coefficients are appropriately signed. The real effective exchange rate is negatively signed. This suggests that exchange rate depreciation stimulates non-oil exports in consonance with the aspirations of policy makers in the adoption of exchange rate reforms. However, the effect is very minimal. Foreign income has a strong positive effect on non-oil exports as revealed by the results. The results of the estimated export model show that there is no significant difference between the OLS

**Table 1: Results of estimated export and import models**

Variables	Export equation		Import equation	
	OLS	GMM	OLS	GMM
Constant	-0.41 (3.39)***	-1.13 (2.60)***	-0.59(3.16)***	-038(3.41)***
REER	-0.001(1.78)*	-0.001(2.16)**	0.06(0.34)	0.10(0.67)
Foreign income	0.7 (2.11)**	0.57 (3.43)***		
Domestic income			0.75(4.81)***	0.81(3.89)***
Adj. R-Squared	0.56	0.62	0.53	0.59
DW	1.74	1.83	1.99	1.85
F-statistics	28.67		91.31	
Breusch-Godfrey	0.88 (0.42)		0.12(0.88)	
Serial Correlation LM Test				
ARCH Test	0.24 (0.62)		0.01(0.90)	
White Heteroskedasticity Test	2.54(0.27)		1.13(0.38)	

Note: \*\*\*, \*\*, \* indicate significant at 1%, 5% and 10% respectively.

Source: Authors calculations

**Table 2: Summary of Nigeria's oil and non-oil exports**

Period	Value (Billion Naira)			Share of total (%)		Growth (%)		
	Oil	Non-oil	Total	Oil	Non-oil	Oil	Non-oil	Total
1970s	4.78	0.44	5.23	87.75	12.25	43.37	10.97	41.22
1980s	19.01	1.05	20.07	95.48	4.52	32.96	37.13	32.71
1990s	630.45	15.16	645.62	97.43	2.57	58.25	40.13	57.31
2000-07	4,324.34	95.74	4,420.09	97.58	2.42	33.24	43.18	32.80
Pre-reform	6.85	0.41	7.26	91.11	8.89	28.64	9.05	27.17
Reform	1,864.89	42.09	1,906.99	96.79	3.21	52.43	49.22	51.82

Source: Underlying data from Central Bank of Nigeria, Annual Report and Statement of Accounts

**Table 3: Summary of categories on Nigeria's Imports**

Period	Value (Billion Naira)			Share of total (%)		Growth (%)		
	Capital goods	Consumer goods	Total imports	Capital goods	Consumer goods	Capital goods	Consumer goods	Total imports
1970s	2.10	1.63	3.74	55.52	44.48	33.28	33.04	33.01
1980s	8.05	5.14	13.20	59.05	40.95	27.89	22.42	25.56
1990s	248.18	198.91	447.09	56.00	44.00	63.64	74.39	60.87
2000-07	1,202.64	996.64	2,199.28	54.38	45.62	26.08	25.84	25.93
Pre-reform	3.27	2.55	5.83	55.72	44.28	20.94	20.02	20.37
Reform	552.37	454.05	1,006.42	56.78	43.22	50.42	53.26	48.34

Source: Underlying data from Central Bank of Nigeria, Annual Report and Statement of Accounts

results and those of the GMM. These results appear to buttress those of Adewumi and Akpokodje (2009)

The strong effect of domestic income on imports in Nigeria is demonstrated by the results of the estimated import model (Table 3). This effect is highly significant. This implies that growth in the country's income has a high propensity to increase the demand for foreign goods. With respect to exchange rate reform that is anticipated to constrain imports, the results show that exchange rate depreciations are not likely to constrain imports. Rather, they show that irrespective of exchange rate reforms, imports are likely to increase. Perhaps, a potential explanatory factor for this is the limited availability of import-substitute goods in the country. This could also be responsible for the inability of exchange rate reforms to change the structure of imports from that of consumer goods to raw materials and capital goods. However, the effect of exchange rate reforms as captured by the effective exchange rate is not significant.

## 5. CONCLUSIONS AND RECOMENDATIONS

The study has shown that exchange rate reforms in Nigeria accounted for a marginal improvement in the country's trade balance. The study does not support the view that exchange rate reforms discourage the importation of

consumer goods. The study shows that during the reforms, the importation of raw materials and capital goods did surpass the pre-reform era.

Nigeria has come a long way in evolving an enduring exchange rate management policy. The objective of achieving a realistic exchange rate is very vital as this would result in the simultaneous achievement of internal and external balances and facilitate the achievement of sustainable economic growth and development. Exchange rate reform is merely a price instrument adjustment which favours only those who possess flexible and efficient structures to take full advantage of price changes. Markets provide signals but where the capacity to respond is lacking, then the country cannot take full advantage of the benefits of free markets. For example, to the extent that exchange rate reform actually reduces the capacity of the economy to respond to market signals, such reforms become counter-productive. Reaping the full benefits of a flexible exchange rate policy presupposes resolving the crisis of domestic production. This implies that there must be an appropriate policy mix that not only ensures a realistic exchange rate but also a conducive atmosphere for production. The important challenge is that of how to increase productivity of the domestic economy. This is because higher productivity will reduce the pressure on exchange rate and its volatility. Increasing productivity requires that all structural rigidities facing the

economy are eliminated or at least reduced to the barest minimum. The evil effect of having an over-valued exchange rate is legion. The most critical is the creation of a high propensity to import because an over-valued currency makes import cheaper and promotes balance of payments deficits.

A strong naira will obviously cheapen imports. However, a major consequence of such a policy is the inability of the domestic economy to create wealth and generate employment for its increasingly unemployed population. The country needs to shore up its non-oil exports through the creation of an enabling environment.

### REFERENCES

- Adewumi AO, Akpokodje G 2009. Impact of Trade Reform on Nigeria's Trade Flows. *The International Trade Journal*, 25: (in press)
- Agbola FW 2004. Does Devaluation Improve Trade Balance of Ghana? *Paper to be presented at the International Conference on Ghana's Economy at the Half Century, M-Plaza Hotel, Accra, Ghana, July 18-20.*
- Ajayi SI 1975. Economic Analysis of Import Demand Functions for Nigeria. *The Nigerian Journal of Economic and Social Studies*, 17: 169-182.
- Alexander SS 1952. Effects of a Devaluation on a Trade Balance. *International Monetary Fund Staff Papers*, 2: 263-278.
- Bahmani-Oskooee M 1991. Is There a Long-Run Relation Between the Trade Balance and the Real Effective Exchange Rate of LDCs? *Economic Letters*, 36: 403-407.
- Bahmani-Oskooee M, Alse J 1994. Short-Run Versus Long-Run Effects of Devaluation: Error-Correction Modeling and Cointegration. *Eastern Economic Journal*, 20: 453-464.
- Balassa B 1990. Incentive Policies and export performance in sub-Saharan Africa. *World Development*, 18: 383-387.
- Buluswar M, Thompson H, Upadhyaya KP 1996. Devaluation and the Trade Balance in India: Stationarity and Cointegration. *Applied Economics*, 28: 429-432.
- Cooper RN 1971. Currency Devaluation in Developing Countries. *Essays in International Finance*, No. 86, Princeton University
- Cotanni J, Cavallo D, Khan MS 1990. Real exchange rate behaviour and economic performance in LDCs. *Economic Development and Cultural Change*, 39: 61-76.
- Dornbusch R 1973. Devaluation, Money, and Nontraded Goods. *American Economic Review*, 5: 871-880.
- Egwakhide FO 1999. Determinants of Imports in Nigeria: A Dynamic Specification. African Economic Research Consortium. *Research Paper No. 91*. Nairobi.
- Frenkel JA, Rodriguez C 1975. Portfolio Equilibrium and the Balance of Payments: A Monetary Approach. *American Economic Review*, 65(4): 674-688.
- Ghura D, Grennes TJ 1993. The real exchange rate and macroeconomic performance in sub-Saharan Africa. *Journal of Development Economics*, 43: 155 - 174.
- Gylfason T, Risager O 1984. Does devaluation improve the current account? *European Economic Review*, 25: 37-64.
- Haynes SE, Stone JA 1982. Impact of the Terms of Trade on the U.S. Trade Balance: A Re-examination. *The Review of Economics and Statistics*, 64: 702-706.
- Himarios D 1989. Do Devaluations Improve the Trade Balance? The Evidence Revisited. *Economic Inquiry*, 27: 143-168.
- Horton S, McLaren J 1989. Supply Constraints in the Tanzanian Economy: Simulation Results from a Macroeconometric Model. *Journal of Policy Modeling*, 11: 297-313.
- Iyoha MA 2003. Determinants of Exchange Rates: Theoretical and Policy Perspectives. *The Nigerian Economic and Financial Review*, 8: 26-38.
- Johnson HG 1967. Towards a General Theory of the Balance of Payments. In: *International Trade and Economic Growth: Studies in Pure Theory*. Cambridge, Mas.: Harvard University Press.
- Kamin SB 1988. Devaluation, External Balance, and the Macroeconomic Performance: A Look at the Numbers. *Princeton Studies in International Finance*, No. 62.
- Komolafe OS 1995. Modeling Nigeria's External sector: A co integration Approach. *Interim Report Presented during the Biennial Conference of African Economic Research Consortium in South Africa*, 2-8 December 1995.
- Komolafe OS 1995. Modeling import Demand Under Quantitative Trade Restrictions: An Application to Nigerian Data. *Journal of Economic Management*, 2: 55-77.
- Krueger AO 1983. *Exchange-Rate Determination*. Cambridge: Cambridge University Press.
- Miles MA 1979. The Effects of Devaluation on the Trade Balance and Balance of Payments: Some New results. *Journal of Political Economy*, 87: 600-620.
- Obadan IM 1994. Real exchange rates in Nigeria. National Centre for Economic Management and Administration (NCEMA) Ibadan, Nigeria. Mimeo. 53-70.
- Olayide SO 1969. Import Demand Model: An Econometrics Analysis of Nigeria's Import Trade. *The Nigerian Journal of Economics and Social Studies*, 10: 13-26.
- Robinson J 1947. *Essays in the Theory of Employment*. Oxford: Basil Blackwell.
- Roca S, Priale R 1987. Devaluation, Inflationary Expectations and Stabilization in Peru. *Journal of Economic Studies*, 14: 5-33.
- Rodrik D 1998. Why is trade reform so difficult in Africa? *Journal of African Economies*, 7 (Supplement): 10 - 36.
- Salant WS 1977. International Transmission of Inflation. In: Lawrence B Krause, Walter S Salant (Eds.): *Worldwide Inflation*. Washington, D.C.: Brookings Institution, pp. 167-232.
- Solimano A 1986. Contractionary Devaluation in the

- Southern Cone: The Case of Chile. *Journal of Development Economics*, 23: 135-151.
- Upadhaya KP, Dhakal D 1997. Devaluation and the Trade Balance: Estimating the Long Run Effect. *Applied Economic Letters*, 4: 343-345.
- Williamson J 1983. *The Open Economy and the World Economy*. New York: Basic Books Inc.
- World Bank 1994. *Adjustment in Africa: Reforms, Results and the Road Ahead*. Oxford: Oxford University Press.