

AN ECONOMETRIC EVALUATION OF EXCHANGE RATE AND EXTERNAL SECTOR PERFORMANCE IN NIGERIA, 1975-2005

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Abstract

This work sought to x-ray the impact of exchange rate policy on the external sector performance under the regulatory and deregulatory eras with a view to ascertaining the era, in which the sector performed better. This is necessitated by the fact that despite different policy measures adopted by successive governments to enhance the performance of the external sector, the sector's performance has continued to be unimpressive and the value of naira has also continued to dwindle. It is the objective of this study to empirically assess Nigeria's external sector performance under different exchange rate regimes with a view for ascertaining the best regime that ensured stability in the sector's performance. Data were obtained from both primary and secondary sources. The study employs econometric tool of multiple regression as the main tool of analysis. The researchers applied the OLS tools in developing and estimating models for the regulated and deregulated periods, and it was discovered that, the model for the deregulated period appeared better in terms of goodness of fit and the significance of the coefficients. The regression results reveal a fair relationship between the *dependent* and *independent* variables *during* the deregulated periods, as shown in the fairly high R^2 and F-ratio of 0.473 and 3.365 respectively, while the regression results for the regulated period revealed a poor relationship between the dependent and independent variables as seen in the poor R^2 and F-ratio of 0.27 and 0.556 respectively. On the whole, 47% variation in external sector performance during the deregulated period is explained by the model. The findings show that, the external sector performed better under deregulated regime than during regulated regime. In the light of the above, it is recommended among others, that the government should adopt a mixed exchange rate policy, diversify the productive base of the economy and also ensure macroeconomic and political stability in Nigeria, hence, the present democracy in the country should be sustained.

Introduction

A country's foreign exchange policy is derived from the perceived overall economic objectives to be achieved and the expected direction of growth. Consequently, non-conflicting sectoral policies are conceived within the ambit of the overall policy framework such that, the sectoral policies reinforce each other. Nigeria's economic policy prior to 1966, was characterized by the overwhelming influence of oil and public sector dominance of productive activities. While the stated objectives of foreign exchange policy continued to be the achievement of a healthy balance of payment position and the attainment of a realistic and sustainable exchange rate for the economy. The external sector has however, posed problems for economic management in Nigeria. There has been fast and persistent deterioration in export earnings, particularly receipts from crude petroleum export while foreign expenditure, has been high and rising. Therefore, successive Nigerian government has over the years tried various policy measures to boost local production and stimulate the level of exports, especially the non-oil export sub-sector. These measures include, the National Export Promotion Council (NEPC) of 1976, the National Accelerated Food Production programme of 1975, the Operation Feed the Nation (OFN), the River Basin Development Authority, the Green Revolution of 1980, the Import Substitution, Export Promotion and Self-Reliant Industrialization Policies. And the most recent of these policies is the Structural Adjustment Programme (SAP).

Before SAP, the external sector policies relied on foreign exchange allocation and administered exchange rates, but the sectoral objectives remained unrealized as the external sector reeled in

continued deficit, the exchange rate was volatile and depreciated at will in the autonomous market (which exerted pressure on the official foreign exchange market).

Under the Structural Adjustment Programme, Nigeria's economy was deregulated in 1980; a market based framework for the determination of exchange rate was adopted. This policy was made a tool for inducing the export promotion goal, coupled with other export targets such as the export incentives and miscellaneous provisions decreases of 1986. In spite of all the policy measures indicated above, the external sector performance has remained poor and uninteresting; the outcome of exchange rate policies remained unstable. Consequently, other sectoral policies failed woefully as the target of the other macroeconomic aggregates, which includes: interest rate, inflation rate, unemployment, money supply remained largely unrealized.

Specifically, in an attempt to examine the issues involved in managing the exchange rate in an economy that seeks to achieve a structural adjustment, eliminate the cause of disequilibrium in the balance of payment and the distortions in the economic development process, three key issues are considered namely:

- Analyzing the performance of the external sector with reference to exchange rate regimes.
- To identify the best regime that ensured stability in the sector performance.
- And to highlight on the factors that need to be reversed by the authorities.

The study covered the periods 1975 to 2005, and this is to enable us capture the effect of regulated and deregulated regimes on the performance of the sector under review'.

Literature Review and Theoretical Framework

The issue of exchange rate has been prevalent in the literature, real exchange rate is said to be a very important relative price in the economy. This is because, changes in the real exchange rate influences foreign trade flows, the balance of payment, the level and structure of production and consumption and therefore employment, the allocation of resources in the economy and domestic prices.

Many economics have shown the important role played by exchange rate in the performance of the external sector of the economy. Some of these studies include: Obadan (1996), Marline (1993); Anifowse (1983); and Grassman (1973). They illustrated that under a pegged exchange rate system; expansionary fiscal and monetary policy can be a cause of persistent real over valuation of the currency. They concluded (hat, exchange rate is a major determinant of economic performance. Conversely, Itsede (2003) pointed out that, severe macroeconomic disequilibrium and balance of payment crises in the developing countries are often cited as the direct consequence of exchange rate misalignment. But a study by the World Bank (1984) concluded that, overvalued exchange rates in African countries led to dramatic collapse of the agricultural sectors performance. Also Fosu (1992), has shown in his study that, the dismal performance of agricultural exports in Ghana could be explained by the trend of the exchange rate during the Post, 1960 Era.

Ojo (1999) observes that, disequilibrium in the international balance of payment of a country indicates a state of imbalance between autonomous international payment and receipts, in other words, the demand for and supply of foreign exchange which may arise from a shift in the foreign demand away from one country's product to another. International capital movements and the portfolio decisions of the wealth owners may also cause disequilibrium. The adjustment requires necessary changes in those variables to which the payments and receipts are functionally related. Some of these variables are foreign exchange rate, prices of internationally traded goods and services, levels of income and government control over internal transactions. Any change in one or more variables will materially affect the composition of the balance of payment of a country on account of their strong functional relationship with autonomous international payments and receipts.

Odozi (1990) stated that, despite the role exchange rate play in the economy, the choice of exchange rate regime is however, dependent on several other factors. These factors include: the objectives pursued by the policy makers, the sources of the shocks hitting the economy and the structural characteristics of the economy. He pointed that, whatever the objectives that determine the exchange rate regime, the authorities are presumed to adjust their domestic macroeconomic policies (especially, monetary and fiscal policies) to fit the chosen exchange rate policy.

Maskus (1986), however, provided a link between his study and previous work by comparing the effect of exchange rate risk across major sectors of an economy, example manufactured goods,

agriculture chemicals and others, lie found that, aggregate bilateral agricultural trade (the United States and its major Western (leading partners) is particularly sensitive to exchange rate uncertainty. Maskus argued that, agriculture, compared with manufactured goods trade, is more responsive to exchange rate changes because agricultural trade is relatively open to international trade (where openness is measured by the ratio of exports and imports to domestic agricultural output), and moreover agriculture exhibits a low level of industry concentration.

Alubi and Okunmadewa (1999), assert that, the more volatile the exchange rate is the lower the income earnings of farmers which subsequently leads to decline in output and export trade hence they suggested that, the monetary authorities should adopt a mechanism that will lead to the stability of the exchange rate since erratic changes in the exchange rate have a long-term negative effect on production of agricultural exports.

Theoretical Issues in Exchange Rate Management in Nigeria

Foreign Exchange Management in the Pre-SAP Period (1970 - June, 1986)

During the period under review, the exchange rate of the naira was administratively managed and backed up by control measures. The Nigerian pound was pegged to the British pound sterling before and immediately after the creation of the Central Bank of Nigeria. However, following the generalized floating of the major currencies in 1972, the Nigerian currency was devalued in February, 1973 by 10 per cent in sympathy with the dollar devaluation of that year. This was meant to prevent an adverse balance of trade in Nigeria external transactions and safeguard the external value of the naira since the level of reserves was relatively comfortable. Thereafter, both the pound sterling and the dollar were used as reference currencies, and a policy of progressive appreciation of the naira against the weaker of the two currencies was adopted. Due to the adverse effect of this measure, it was discontinued. The need for a change in policy was particularly influenced by the 1982 re-appearance of trade arrears, which proved difficult to tackle. Hence, in 1981, a policy of gradual depreciation was embarked upon. The policy was meant to increase foreign exchange receipts through increased export volume and value, stem the outflow of foreign exchange and reduce the pressure on the balance of payments. During the period of administrative management of the naira and particularly between 1978 and 1985, the Central Bank used a basket of currencies of Nigeria's major trading partners as one of several indicators to determine the value of the naira. Others were, the state of the balance of payments, level of reserves, foreign exchange supply and demands relationship, inflation and domestic output. The basic framework for foreign exchange management was the Exchange Control Act of 1962, which was reinforced by the Economic Stabilisation (Temporary Provisions) Act, 1962. The 1962 Act made provisions for measures to increase foreign exchange resources, reduce the disbursement of foreign exchange and preserve the nation's international reserves. Other policies that were either in pursuance of the objectives of the 1962 Act or meant to reinforce the provisions of the Act. The specific policies that were applied during this period are as follows: trade and exchange controls, export promotion, external reserves, diversification, external debt and exchange rate administration.

Foreign Exchange Management Under SAP (July, 1986 - 1995)

The pitfalls of exchange control led to its abandonment. Consequently, a market based system commenced in July, 1986, with the Structural Adjustment Programme (SAP). The SAP objectives include the achievement of balance of payments and fiscal viability, the rationalisation of public enterprises through privatization and commercialization, the reduction in the level of unemployment and the attainment of sustained economic growth. To achieve the objective of balance of payments and fiscal viability, a market-determined exchange rate mechanism was put in place, fiscal and monetary policies were tightened to be consistent with the achievement of balance of payments equilibrium. The key element of the SAP is the free market determination of the naira exchange rate through an auction system. Apart from the shift to market-determined exchange rates and exchange control deregulation, other policy measures adopted under the previous system were continued with modifications, where necessary, to accord with the policy framework of deregulation.

Under the new dispensation, the Foreign Exchange Market (FEM) was conceived as a mechanism for the determination of an appropriate exchange rate for the naira in order to reduce the pressure on foreign exchange resources and stabilize the balance of payments. In effect, the exchange rate mechanism was expected to result in a more rational allocation and utilization of foreign exchange resources and reduce foreign volatility, thus, making foreign exchange management less

difficult. The major source of foreign exchange to the market is the Central Bank of Nigeria, which incidentally earns most of the nation's foreign exchange from crude petroleum exports. The main users of foreign exchange are the manufacturers who ironically contribute little to the pool of foreign exchange resources. This asymmetry has resulted in continuous pressure on official foreign exchange resources. Since the inception of the market determined system in September, 1986, the naira has undergone substantial devaluation. However, the authorities have constantly adjusted the modalities of operating the system to make it more efficient in order to be able to realize the objectives for which it was set up. Thus, in January, 1989, the autonomous market was abolished and the Inter-Bank Foreign Exchange Market (IFEM) emerges. A set of criteria were used to determine the exchange rate. Due to the persistent decline in the value of naira, the Bureaux de Change was established in 1989, to enlarge the scope of the officially recognized foreign exchange market and make foreign exchange available to small users in a less formal manner. In addition, the Dutch Auction System (DAS), first operated in 1987, but abandoned in 1989, was re-introduced in December, 1990. It was meant to check the sharp practices that led to the persistent pressure on the naira. The sharp practices that emanated from the system, in the form of round-tripping of funds leading to persistent instability in the exchange rate, informed the merger of the official Foreign Exchange Market and the Inter-Bank Market in 1989, into an enlarged Inter-Bank Foreign Exchange Market (IFEM). Thus, the inter-bank market was outlawed. The Bureaux de Change was established with the abolition of the inter-bank market in 1989 and exchange rate in the Bureaux de Change are market determined. With the introduction of the AFEM in 1995, the banks were once more allowed to engage in inter-bank dealings with only private sourced Foreign Exchange.

Foreign Exchange Management in the Post-SAP Period (July, 1995 - 2005)

The reversal of the policy in 1995 to that of a guided deregulation necessitated the institution of the autonomous Foreign Exchange Market (AFEM) and the liberation of foreign exchange dealings through the active participation of the Bureaux de Change in the AFEM. In 1997, the policy thrust of guided deregulation through the AFEM was retained with some adjustments. Current account transactions were further liberalized. Although, the dual exchange rate system was retained in 1998, its operation was modified, unlike in the past, all ministers and parastatals were to source their foreign exchange requirements from the AFEM. Thus, most of the transactions were conducted at AFEM. Consequently, the fixed official exchange rate was applicable to only a small proportion of foreign exchange transactions as such unification of the dual exchange rates was almost accomplished. At presents, the dichotomy has been totally eliminated and we now have only IFEM rate applicable to all transactions.

Analysis and Trends of Nigeria's Balance of Payments and External Reserve (1975 - 2005)

Balance of payments generally is a part of a large system of social accounts, which records the economic transactions, or activities of an economy over a period of time. The Balance of Payments shows the relationship between one country's total payments to all other countries and its total receipts from them. The state of the Nigeria's balance of payment position and low level of her external reserves was as a result of increased external debt service burden, expansion in domestic credits, and low net capital inflows. During the post independent era, which is period before SAP, Nigeria experienced a momentous economic growth and development, which resulted in both structural and cyclical changes. After the civil war, the balance of payments improved because of rapid increase on the export of crude petroleum. The auspicious developments led to the accumulation of foreign exchange reserves. The period 1970 to 1975, is tagged the 'oil boom era' in the country. Statistics revealed that, the sector contributed to about 57.5 per cent, 70.4 per cent and 70.7 per cent of the total foreign exchange earnings in 1970, 1972 and 1973 respectively.

The changes in the external sector were highly pronounced in the 1970s and early 1980s due to the phenomenal growth and significant impact of oil exports. Thus, Table 3.1 shows the trends of the country's overall balance of payments and the external reserve position for the period under review. The significant role the oil sector played in conditioning the balance of trade is easily seen from the fact that, when international oil prices collapsed in the late 1970s, the balance of trade quickly turned into deficit in 1976 to 1978, 1981 to 1983 and again another deficit was recorded in

1986 and 1988. Balance of payment showed surpluses of ₦41,575 million, ₦41,293 million, ₦41,868.9 million, ₦42,402.2 million, ₦4354.9 million and ₦4349.1 million in 1975, 1978, 1979, 1980, 1984 and 1985 respectively.

Below SAP, the capital account recorded surpluses in all the years excepting 1976 (£450.6 million) and 1985 (£42,555.0 million). And this deficit was due to the effects of the indigenization decrees of the 1970s and consequent substantial repatriation of capital by some multinational corporations operating in the country. The balances of payments were in deficits in 1976 and early 1980s, which reflected an era of recession. This explains why the highest deficit of £43,020.8 million was recorded in 1981. In the same way, the largest overall balance of payments surpluses of £43,102.2 million and £42,404.2 million were recorded during the peak years of the oil boom in 1974 and 1980 respectively. Balance of payment deficits have mainly been financed by running down beginning from 1974, Nigeria accumulated large amounts of reserves. During the period of oil boom beginning from 1974, Nigeria accumulated large amounts of foreign exchange reserves. Indeed between 1973 and 1974, reserves increased by more than eight fold to £43,460.8 million.

From 1976 to 1978, dwindling foreign exchange receipts in the face of increasing payments led to serious depletion of reserves. But following the jumbo loan of 1978, the phenomenal oil receipts in 1979 and 1980, the external reserves increased by a huge amount of £42,402.2 million in relation to the 1979 level, and £45,445.2 million in 1980. But with the collapse of oil prices in mid 1981, a foreign exchange crisis emerged in Nigeria, external reserves moved from £45,445.2 million in 1980 to £42,424.8 million at the end of 1981 and to £4,725.2 million by the end of 1983. As at 1985, external reserves stood at £41,641.1 million.

Balance of Payments and Internal Reserve in the SAP Period (1986 - 1994)

The merchandise trade account of the balance of payments recorded positive balances during SAP period mainly because of the improved oil sector performance. The expectation of SAP was that the correction of cost price distortions through a realistic exchange rate, combined with other positive export incentives and institutional reforms, should make it possible for Nigeria to earn at least \$10 billion from non-oil export by 1990. But not only was this expectation not realized, non-oil exports indeed declined from \$612.7 million in 1988 to \$405.5 million in 1990 and \$244.4 million in 1992. From 1986 to 1992, the current account showed a persistent surplus and deficit in 1993 to 1995 and 1998 and thereafter surpluses. This is largely because of huge increases in oil earnings caused by Gulf War and successful negotiation of debt rescheduling agreements with the Paris and London Clubs of creditors. The deficit recorded in this period was due to decline in non-oil exports, poor performance of the international oil market, chronic and growing deficit on the services account and the upward growth of merchandise imports since 1990.

The exchange rate policy of the SAP was expected to attract substantial capital inflow and discourage outflow, this did not materialize. Rather, net external resources transfers have characterized the country's external transactions. Oluksadebe (1993), has rightly observed that, "the high debt service payments coupled with the low levels of disbursement of loans has resulted in a paradoxical situation where there is substantial net transfer of scarce resources abroad by a country in dire need of external financial support and the transfers have severely constrained the ability of government to develop (the economy)". After seven years of implementing SAP, the overall balance of payments and external reserves position remained under pressure. The overall trade balance, defined as the sum of current and capital account balances, has been in persistent deficit. Since 1986, the deficit increased from £45,667.7 million in 1986 to £422,993.5 million in 1989. It improved significantly in 1990 to N5,761.9 million, but shot up phenomenally again, to £4101,404.9 million in 1992 and 1995 (£4195,316.3 million), 'flic deficits during the period 1986 to 1995 have been due to the weakness of both the current and capital accounts, but mainly the latter. The heavy debt amortization and interest payments eroded the balance of trade/current account surpluses. And so, the bane of the balance of payments in recent years has been the external debt servicing.

The poor performance of the balance of payments is also due to the ineffectiveness of monetary, fiscal and exchange rate policies in establishing balance of payments equilibrium. The SAP period was characterized by the phenomenon of expansionary monetary and fiscal policies. This resulted in significant pressure on the exchange rate and balance of payments. Actual monetary variables deviated significantly from targets and produced excess liquidity in the economy, for example, over the 1986 to 1992 period; the average growth rate of narrow money supply (M1) was 30.70 per cent compared to the target rate of 14.0 per cent. The large deviations of actual growths of monetary variables from targets were largely accounted for by over-runs in the banking systems credit to government (Obadan, 1996). The problem of monetary instability is linked to the expression of

government's fiscal operations with deficit/GDP ratio rising from an average of 5.7 per cent in 1981-1985 to 10.6 per cent in 1986-1992. The increased fiscal operations of government led to increased deficit financing with monetary policy tending to accommodate the excesses of fiscal operation, reflected in excessive growth in demand including import, coupled with expansionary monetary policy created the situation of macroeconomic instability, weak overall balance of payment and erratic external reserves position.

A combination of options has been used in financing the balance of payments deficits, namely deferment of payment obligations falling due, debt restructuring and draw-down on foreign exchange reserve. The option of deferring payments obligations falling due is particularly uncomfortable for the balance of payments essentially because it comprises a country's credit-worthiness and were partly stunts the inflow of fresh money. Although balance of payments deficits were partly financed by external reserves draw down, the stock of such reserves did not assume a precarious level until 1992, when it was sufficient to finance only 1.2 months of imports. The reserves dropped to less than \$1.0 billion in 1992 forcing the authorities to suspend dealing in the foreign exchange market. The uncomfortably low level of reserves reflected high demand for foreign exchange fuelled by excessive liquidity on the system.

Balance of Payment and External Reserve in the Post SAP Period (1995 - 2005)

In this period, the state of the BOP worsened drastically due to inflationary trend. The balance of payment position was in deficit from 1996 to 2005. The overall BOP in 1996 was ₦453,152.0 million which shot up in 2002 to ₦4565,353.3 million and reduced in 2005 to ₦265,123.8 million. Excepting the year 2000 and 2001 which recorded surpluses of ₦43,141,399.2 million and ₦42,479.9 million respectively (CBN, 2003).

Data Presentation and Analysis

In this section, we intend to carry out the investigation of the extent to which our selected variables explain BOP performance in the Nigerian economy. The variables we are interested in include exchange rate, external debt, debt service, external reserve and exchange rate regime.

Table 3.1

Year	BOP	Exchange	Ex Rev	Exter Debt	Debt Service
1975	157.5	0.63	3380	349.9	32.7
1976	-339	0.63	3057.6	374.6	34.4
1977	-527.2	0.65	2521	496.9	25.6
1978	1293.6	0.64	1249.1	1252.1	160.8
1979	1868.9	0.56	3043.2	161.5	182.9
1980	2402.2	0.54	5445.6	1866.8	101.6
1981	-3020.8	0.63	2424.8	2331.2	518.6
1982	-1398.3	0.67	1026.5	8819.4	775.2
1983	-301.3	0.72	781.7	10577.7	1335.2
1984	354.9	0.7649	1143.8	14808.7	2640.5
1985	349.1	0.8938	1641.1	17300.6	3718
1986	-5667.7	2.0206	3587.4	41452.4	2502.2
1987	-18264.8	4.0179	4643.3	100789.1	3590.2
1988	-20795	4.5367	3272.7	133956.3	8012.5
1989	-22993.5	7.3916	13457.1	240393.7	13382
1990	-5761.9	8.0378	34953.1	298614.4	34414.6
1991	-15796.6	9.9095	44249.6	328453.8	29579.4
1992	-101405	17.2984	13992.5	544264.1	33784
1993	-42060.4	22.0511	67245.6	633144.4	39721.7

1994	-42623.3	21.8861	30455.9	648813	40546
1995	-195316	21.8861	40333.2	716865.6	131592.7
1996	-53152	21.8861	174309.9	617320	153881.2
1997	1076.3	21.8861	262198.5	595931.9	122713
1998	-220675	21.8861	226702.4	633017	106635.5
1999	-326634	92.3428	546873.1	2577374.4	162140.6
2000	314139.2	100.1194	1090148	3130250.9	174344.3
2001	24729.9	111.5166	1181652	3176291	26732.5
2002	-565353	120.47	1013514	3932884.7	158331.8
2003	-162840	129.223	1065093	4478329.3	249683.4
2004	-441783	133.5004	1567123	4643901.7	310123.5
2005	-555316	135.6002	196533.4	5456967.9	378867.9

Source: CBN Annual Bulletin Various Issues.

The Model

We specify below a model for external sector performance under the regulated and deregulated periods.

$$BOP = B_0 + B_1 LiR + B_2 HI + B_3 DS + B_4 XR + B_5 RR + U$$

Where

BOP	=	Balance of Payment
ER	=	Exchange Rate
ED	=	External Debt Burden
DS	=	Debt Service
XR	=	External Reserve
RR	=	Exchange Rate Regime
U	=	Stochastic Variable or unexplained variation.

$$\hat{Y} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + U$$

Where

Y	=	$B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + U$
Thus, Y	=	Balance of Payments (Proxy for External Sector)
X ₁	=	Exchange Rate
X ₂	=	External Debt Burden
X ₃	=	Debt Service
X ₄	=	External Reserve
X ₅	=	Exchange Rate Regime (Dummy variables)
U	=	All other variables not included in the model (Stochastic Variable).

The Regression Result and Discussion

Table 3.2: The Regression Results for Regulated Regime (Period, 1975 – 1985) are Presented as Below

\hat{Y}	=	6899.312	- 12778.863X ₁	- 0.0142X ₂	+ 1.146X ₃	+ 0.333X ₄
SE	=	(12910.011)	(18869.048)	(0.660)	(0.360)	(2.450)
Tcal	=	0.534	- 0.677	0.505	- 0.041	0.468
Tprob	=	0.612	0.523	0.632	0.969	0.657
R ²	=	0.270				
R ²	=	0.216				
F statistic	=	0.556 = F*				
F probability	=	0.703				
F tabulated	=	2.99				

Durbin Watson = 1.617

The regression result above shows that, the degree of correlation between the dependent (BOP) variable and the independent variables (ER, ED, DS, XR) is about 27 per cent implying a poor relationship between the regressed and the regressors. Also, with the coefficient of determination R^2 of 0.27 indicates that, about 27 per cent variation in external sector performance in Nigeria is explained by the model during the regulated period (1975 - 1985), the remaining 73 per cent variations in external sector performance during that period is explained by other variables not included in the model. Apart from debt service all the other regression coefficients appeared with their correct signs.

The low F-value indicates that the entire model is not significant in explaining variations in external sector performance during the regulated regime. The Durbin Watson statistic of 1.1617 indicates presence of autocorrelation in the model.

During the regulated regime, the intercept (B_0) value is 6899.312 meaning that the value of BOP when the explanatory variables are zero is 6899.312.

The regression coefficient of exchange rate on BOP equals (12778.86) implying that a negative (inverse) relationship exists between BOP and exchange rate, and this is in line with our a priori expectation. Every 1 per cent increase in exchange rate brings about 12778.86 per cent decreases on BOP. Also, with t-value of -0.677 exchange rate was not statically significant in explaining the variation.

The regression coefficient of external debt is (-0.0142) indicating a negative (inverse) relationship between external debt and BOP and this also conforms to economic theory implying that every 1 per cent increase in external debt results in 1.4 per cent decrease on BOP.

The regression coefficient of debt service is equal to (1.146) which indicates a positive relationship between the dependent and the independent variables. Implying that during regulated regime, 1 per cent increase in debt service increased BOP by 114 per cent. This does not agree with economic theory. Although this could be as a result of the economic policies pursued by the government under the regulated regime.

Finally, the coefficient of external reserve on BOP is 0.333; this shows a positive relationship between external reserve and BOP. Again, this conforms to economic theory. It is observed that, the regression coefficient of external reserve for the regulated regime is higher than that of deregulated regime.

The Result For Deregulated Regime (Period, 1986- 2005)

The regression equation is:

Y	=	5649.597	- 1204.359	- 0.05150X ₁	+ 0.613X ₂	+ 0.211X ₃
SE	=	(67592.160)	(8008.266)	(0.193)	(0.222)	(0.809)
Tstat	=	0.084	-0.150	1.142	-0.232	-0.757
Tprob	=	0.934	0.882	0.271	0.8891	0.460
R^2	=	0.473				
R^2	=	0.332				
F statistic	=	3.365 = F*				
F probability	=	0.037				
F tabulated	=	2.99				

Durbin Watson Stat. = 2.554

Under deregulation, $R^2 = 0.47$ showing that, the explanatory variables X_1 , X_2 , X_3 , and X_4 explained 47 per cent of total variation in Y (BOP). This implies that, there is a fair relationship between the dependent and the independent variable during the deregulation period.

$F^* > F_{0.05}$, this shows that, the model is statically significant in explaining variations in the external sectors performance during the deregulated period. Durbin Watson statistic of 2.554 indicates that, there is absence of autocorrelation in the model. During deregulated regime, the intercept (B_0) value is 5649.597 and this is the value of BOP when the explanatory variables are zero.

The coefficient of exchange rate in the fitted model is (-1204.359) and this indicates that, there is a negative (inverse) relationship between exchange rate and BOP. Meaning that every 1 per cent increase in exchange rate will cause a decrease in BOP by 1204.36 per cent. However, the negative relationship agrees with our a priori expectation.

External debt and debt services coefficients equals (-0.05150) and (-0.613) respectively, showing that, an inverse relationship exist between the variables and BOP. This also is in line with economic

theory. Again, the coefficient of external reserve is (0.221), also this indicates that, a positive relationship exists between external reserve and BOP, and this is in conformity with economic theory.

When we compare the two results, we observe that, the external sector performed better under the deregulated exchange regime than the regulated regime. This is so because apart from the fairly high R^2 of 0.47 all the independent variables appeared with correct signs and their t-values were statistically significant in explaining the variation in external sector performance during that period.

Recommendations

In the light of the above findings, we recommend:

- (i) Since neither the freely flexible exchange rate regime nor the fixed exchange rate regime is ideal for any economy. We therefore, recommend a mixed exchange rate policy, though with caution. In fact, access should be made without unnecessary bottlenecks, protocols, and bureaucracy for users and investors to get foreign exchange, as this would boost investments, hasten production, and ensure confidence in the economy.
- (ii) To increase the supply of foreign exchange to the economy and to ensure favourable balance of payment, current measures to stimulate non-oils exports should be vigorously pursued in particular, the diversification of the non-oil exports should be intensified in order to reduce reliance on the oil sector and raise the level of non-oil receipts. Exporters should be allowed to exchange their foreign exchange earnings at any source of their choice. Also, government agencies dealing with the promotion of Nigeria's exports should be more aggressive in sourcing favourable markets for our exports. In addition, the packaging and quality of Nigeria's exports should be enhanced to make them internationally competitive.
- (iii) The present democracy in the country should be sustained since there is a need for a stable government with clearly spell out economic policies that should not be altered irrespective of the government on sit; hence, the government and policy makers should ensure stability and continuity of economic policies in the economy.
- (iv) Tight monetary policy should continue to be pursued and fiscal policy should be in consonance with the monetary and exchange rate policies, so as not to create countervailing effects.

Conclusion

The research work has reviewed the performance of the external sector under regulation and deregulation of exchange rate for the period 1975-2005. This study was necessitated by the need to see how exchange rate policy during regulated and deregulated regime affects the performance of the external sector. And to choose the best regime that affected the external sector most.

The regression result showed that, the external sector performed better under deregulation than regulation regime.

In the Pre-SAP era (regulated regime), the 1962 Exchange Control Act, was the basic framework for foreign exchange management in Nigeria. The Act made provisions for measures designed to increase foreign exchange resources, reduce the disbursement of foreign exchange and preserve the nations' foreign reserves. "The policies applied during this period derived mainly from income-absorption approach of BOP" (Obaseki, 1991).

During this period, exchange controls were not tightened consistently. They were tightened during periods of crises and loosened during periods of relative peace.

The exchange rate was administered during this period and as such, it was not an active policy instrument, 'flic administration of the exchange rate backed by and a massive outflow of foreign exchange.

Therefore, this is evident in our regression result under regulation, the model was not statistically significant, there is presence of autocorrelation, and the effect of exchange rate on balance of payment was high when compared with deregulation. Also, there was increase in the economy's external reserve and debt service effect on BOP was positive during the period.

While under deregulation regime, the model is statistically significant, there is no autocorrelation and the effect of exchange rate on balance of payment is minimal compared to regulated period. All the explanatory variables signs conformed to economic theory.

Also, during this period, the objectives of SAP include the achievement of balance of payments and fiscal viability and sustained economic growth. To achieve the objective of balance of payment and fiscal viability, a market determined exchange rate mechanism was developed with the commencement of foreign

exchange auctioning through the foreign exchange market in September, 1986. Complementary monetary and fiscal policies were also applied to enable the naira attain a realistic level. Essentially, exchange controls were dismantled and the exchange rate became flexible. According to Obaseki (1991), “the policies adopted during this period to manage foreign exchange resources were drawn mainly from the income-absorption and monetary approaches of BOP”.

The main achievements of the markets determined system are: The elimination of payments arrears since transactions are done on current payment basis, (the widening of the non-oil export base, increased local sourcing of raw materials and improvement in the balance of payment and capacity utilization.

However, the system has not succeeded in improving significantly non-oil receipts and the economy is yet to be diversified away from over-dependence on crude oil exports.

Finally, among all the explanatory variables (exchange rate, external reserve, external debt, debt service) in the model, exchange rate affected the BOP greater than other variables, because foreign exchange is a means of settling international transactions and is earned and disbursed in the course of undertaking international transactions, therefore, there is a close link between exchange rate and balance of payments which records transaction between the residents of one economy and the rest of the world.

The study therefore, concludes that, the models developed provide a good understanding of external sector performance in Nigeria.

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