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Foreign Trade, Foreign Exchange Earnings and Economic Growth in Nigeria

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Abstract
This study examined the effects of foreign exchange rate and foreign trade on economic growth in Nigeria. Secondary data were obtained from central bank of Nigeria statistical bulletin covering the period of 1970 to 2015. Multiple regressions were employed to analyze data on such variables Gross Domestic Product (GDP), foreign exchange rate, import, export, trade openness, and inflation rate were all found to have significant effects on the Economics Growth with the Adjusted R^2 of 0.9468% (approximately 95%). Based on the finding, it is concluded that foreign trade (proxied by import and export) have positive significant impact on economic growth in Nigeria. But exchange rate has positive significant impact on export but has negative significant effect on import. It is recommended that conscious efforts should be made by government to fine-tune the various macroeconomic variables in order to provide an enabling environment to stimulate foreign trade by engaging in more of export trade and in effect to curtail import trade which has a negative effect or strain on the economy.
Keywords: import, export, exchange rate, Nigeria, trade openness, economic growth

1. Introduction

An exchange rate can be defined as a price of one country's currency in terms of another currency. Exchange rate regime refers to the system through which this price is determined and it is one of the most important policy instruments of governments. The choice of exchange rate regime has considerable impact on trade in goods and services, capital flows, inflation, balance of payments and other macroeconomic variables. For this reason, the choice of an appropriate exchange rate regime is a principal component of economic management in maintaining growth and stability (OIC 2012). The role of foreign trade in economic development is considerable. The classical and neo-classical economists attached so much importance to foreign trade in a nation's development that they regarded it as an engine of growth. Over the past several decades, the economies of the world have become greatly connected through international trade and globalization. Foreign trade has been identified as the oldest and most important part of a country's external economic relationships. It plays a vital and central role in the development of a modern global economy. Its impact on the growth and development of countries has increased considerably over the years and has significantly contributed to the advancement of the world economy. The impact of foreign trade on a country's economy is not only limited to the quantitative gains, but also structural change in the economy and facilitating of international capital flow. Trade enhances the efficient production of goods and services through allocation of resources to countries that have comparative advantage in their production. Foreign trade has been identified as an instrument and driver of economic growth (Frankel and Romer, 1999).

2. Problems Statement

Foreign trade can been defined as trade across the frontiers that is with the rest of the world, it has been argued that, it plays a prominent role in promoting economic growth and productivity in particular, and debate have been ongoing since several decades ago. Historical validation has revealed that internationally active countries tend to be more productive than countries which only produce for the domestic market. As a result of liberalization and globalization a country's economy has become much more closely associated with external factors such as openness (Atoyebi and Edun, 2012). In foreign trade transaction among many countries with different currency, foreign exchange rate are absolutely involved. How far this exchange rate affects the foreign trade? In view of these, the effects of exchange rate on foreign trade and economic growth are the concern of this study.

3. Objective Study

The main purpose of this study is to examine the activities and effect of Nigerian foreign trade on economic growth in Nigeria. Other specific objectives of the study are as follows:

i. to examine effect of exchange rate reforms on foreign trade in Nigeria.

ii. to investigate Effects of the foreign trade on economic growth in Nigeria

iii. to determine the policy issues in selecting exchange rate regimes

4. Literature Reviews

Foreign Exchange Market/Rate in Nigeria

According to Afolabi (1998), exchange rate is the rate at which one currency will exchange for another. He added that in dependent economies such as Nigeria, "the exchange rate will be the important price in that it determines virtually all other prices. According to Nzotta (2004) exchange rate is the rate of transformation of one currency to another or the rate at which one currency is exchanged for another. He explained further that foreign exchange rate is maintained by arbitrage. Arbitrage is a mechanism whereby speculators buy in one market where the rate is low and sell in another where the price is high. The difference constitutes arbitrage income. Exchange rates may be fixed by government by fiat as was the case in Nigeria before the introduction of SAP in 1986. Exchange rates are largely determined by the operations of Demand and Supply. This is the Demand and Supply of Naira traded in the foreign exchange market (Umeora 2010). The impact of exchange rate regimes and exchange rate movements on inflation and growth has also been discussed in many empirical studies of developing countries. But the findings of these studies differ and cannot be generalized. As to inflation, there is a broad consensus about the role of monetary growth either as a main driving force behind inflation or, otherwise, as a necessary element in accommodating inflation triggered by other factors. However, the impact of nominal exchange rate flexibility on inflation is more ambiguous. All empirical researches confirm that depreciations of nominal exchange rate are correlated with temporary increases in consumer prices.

The central bank use monetary policy to achieve the goals of macroeconomic management. Consequently, monetary policy is employed as a tool to control or influence monetary aggregates such as interest rates, money supply and bank credit, including the exchange rate, with a view to achieving set policy targets such as tackling unemployment, inflation, economic growth, etc. In this regard therefore, monetary policy plays an important role towards achieving the ultimate economic objectives of sustainable growth, full employment, price stability and a healthy balance of payments. In the pursuit of these goals, the central bank sets intermediate objectives for monetary policy. These are goals which relate to using interest rates, growth in money supply and the exchange rate to achieve the ultimate goals of monetary management. In other words, the intermediate goals are regarded as channels through which monetary policy is transmitted to the macro economy with the aim of impacting on the ultimate objectives (Ohuche 2011).

The exchange Rate is one of the intermediate policy variables through which monetary policy is transmitted to the larger economy through its impact on the value of domestic currency, domestic inflation (the pass-through effect), the external sector, macroeconomic credibility, capital flows, and financial stability. Thus, changes in the exchange rate might induce changes in the relative prices of goods and services, and the level of spending by individuals and firms, especially if significant levels of their wealth are held in foreign currencies. An appreciation in the value of the exchange rate rise makes imported goods and services relatively cheap, while depreciation makes exports become cheaper to foreign buyers, thereby inducing higher competition in export markets at home. On the other hand, with depreciation, imports become more expensive and so less competitive against goods produced by domestic producers. Changes in the exchange rate therefore, have implications for individual spending and investments behavior of firms, all of which can affect aggregate demand (an important determinant of economic growth, price stability and full employment in the macro economy). However, there is a growing debate among monetary economists; whether in the current medium-term orientation of monetary policy, the exchange rate is still significant as a relevant transmission channel for monetary policy.

Before the establishment of the enactment of Exchange control Act of 1962, foreign exchange was earned by private sector operators. These were held in their balances overseas by commercial banks which then acted as agents for local exporters. These were mainly foreigners doing business in Nigeria (Umeora 2010). During this period, Agricultural exports contributed the bulk of foreign exchange receipts. By then the currency, Nigerian pound, was tied to the British pound with ease of convertibility. But this caused delays in the development of active exchange market. However with the establishment of the Central Bank of Nigeria there was centralization of foreign exchange authorities in the CBN. There then became the need to develop a local foreign exchange market. Following sharp increase in the price of crude oil in the 1970s, the foreign exchange market experienced a boom. According to him, the boom resulted in excessive importation of all kinds of goods from all corners of the globe. Most of the goods were imported through a very liberal system of Inward Bills for Collection (IBC). The system involved importing through Acceptance Bills that were paid after the goods have been imported and sold. The bills soon resulted in huge sums of payments for imports made in local currency that accumulated in the Central Bank but not remitted abroad because of shortages of foreign exchange. By 1981 crisis over these unremitted bills developed necessitating the need to control the nation's foreign exchange. It was not until 1982 that comprehensive exchange controls were introduced. The increasing demand for foreign exchange with falling supply encouraged the development of flourishing parallel market popularly called "Black Market" which has flourished up to today. Since 1987 controls were not enough, Structural Adjustment Programme (SAP) was introduced in 1986. The second Tier Foreign market (SFEM) was introduced to find realistic exchange rate for the Naira by employing the market forces. To enlarge the scope of Foreign Exchange Market, Bureaux-de-change were introduced in 1989 for dealing in privately sourced foreign exchange. Foreign Exchange Market (FEM) which pegged the exchange rate and adopted dual exchange rates system – N22 per $1 for government transactions and market determined rate for all other transactions. In 1995 Autonomous Foreign Exchange Market (AFEM) was introduced for sale of foreign currencies to end users by the CBN through authorized dealers at market-based exchange rates. In 1999, there was the introduction of Inter-Bank Foreign Exchange Market (IFEM). There followed in 2006 the Dutch Auction System (DAS). It is pertinent to note that since 1986 foreign exchange has been determined by operations of market forces of demand and supply (Umeora 2010).

Relationship between Foreign Trade and foreign Exchange

Foreign exchange market is designed to facilitate the operation of the international money system. It is the mechanism, by which one is able to transfer purchasing power, provided credit for international trade transaction, and provides a means of avoiding the risk of exchange re-volatility. It was argued that transfer of purchasing power is necessary because international trade and capital transactions usually involves parties resident in countries with different national currencies, that each party eventually would like to hold its own currency, although the trade could be involve in any continent currency'. For instance, a Nigerian, an exporter might sell palm oil to an American firm in the Nigeria naira on the U. S. Dollars. The exact currency to be used is to be agreed upon by both parties beforehand. Whether Naira or Dollars were to be used the important thing is that one of the parties would need to transfer purchasing power to or from his own national currency. If dollars were to be used, the American importer would need to transfer purchasing power from Dollars to Naira to effect payment; it is the responsibility of the foreign exchange market to carry out these forms of purchasing power transfer transaction. On the other hand, export development strategy is an industrialization and trade strategy, which encourages production for exports. However, it does not necessarily imply a bias in favor of exports. It is a policy that is neutral in its bias between production for export and that for domestic consumption. Export implies a regime in which incentive for export and import substitution activities are equalized. It permits a country to establish an economic of efficient size and to maintain long production runs.

Exports development enables a country to realize the benefits of international specialization according to comparative advantage. It provides a stimulus to efficiency as a result of exposure of foreign exchange competition technology and a prospect of worldwide market for product. Export development contributes more import substitution to the objectives of greater employment of surplus labor and improvement in income distribution.

Moreover, no discussion on export financing can be completed without a word being said about foreign exchange, it is so important to any international transaction. And involving in export one could lose money unnecessarily if one did not safeguard himself against volatility in foreign exchange rate (the price of currency) vary mainly as a result of volatility in demand for a particular currency. Many factors contribute to the volatility; among them include inflation, interest rate, political events and economic indicators. Foreign exchange rates are important in the foreign exchange market as spot or forward. Spot rate is a rate of exchange at which foreign currency is bought or sold for delivery in use for day - to - day dealing in currencies. The forward rate is a re quoted now for the purchase or sale of a stated amount of foreign currency at a specified time in the future, no matter how the spot rate might change in the intervening period. Banks arrive or adding a discount to the spot depending on interest rate in the economy concerned. Bank offering forward foreign exchange contracts use forward rates.

Policy Issues in Selecting Exchange Rate Regimes

OIC (2012) stated that except in floating and hard pegged regimes, active management of the exchange rate is required. The government and monetary authorities try to control the exchange rate to maintain a competitive national economy. By providing an additional strong policy tool, active management can help developing countries to correct misalignment and to influence the balance of payments, trade flows, investment, and production. However, this is not the only issue in selecting exchange rate regimes. Credibility of monetary authorities, volatility and misalignment of the exchange rates and vulnerability of the regime to crisis and shocks are among the major concerns in selecting an exchange rate regime (OIC 2012).

Credibility: Credibility comes at the cost of flexibility. Fixed exchange rate regime provides more credibility with almost no flexibility, because loose monetary policy would lead to an exhaustion of reserves and collapse of the fixed exchange rate regime. Flexible exchange rate, on the other hand, provide maximum discretion for monetary policy, but restraints need to be put on authorities to ensure that discretion is not misused and policies remain consistent and sustainable. Otherwise, the degree of discipline and credibility would decrease with a rise of flexibility.

Volatility: High short term volatility comes with the flexible regimes. High capital mobility eases the adjustments in international portfolio allocations, paving the way for large volatility in developing countries with shallow financial markets. High volatility in turn increases uncertainty, transaction costs and inflation and thereby discourages trade and investment. Moving from flexible to fixed regimes leads to reductions in the degree of volatility. The hard peg regimes with strong and credible institutional arrangements warrant nominal exchange rate stability. Going one step further and introducing common currency would eliminate transaction costs and promote trade and investment between participating countries. The intermediate regimes, on the other hand, can establish a proper balance between exchange rate stability and flexibility.

Vulnerability to crisis and shocks: Although the main argument in favour of pegged regimes is their ability to induce discipline and make the monetary policy more credible, it is the soft pegged regimes that are most vulnerable to currency crisis. Another argument for fixed exchange rate regimes is that they preclude speculative bubbles. At the end, the choice of the regime must depend on the characteristics of the country in question. If the country is subject to many external disturbances, it is more likely to want to float its currency. On the other hand, exposure to many internal disturbances is likely to lead countries to prefer pegged regimes.

Macroeconomic policies: The exchange rate regime is one of the many macroeconomic policy instruments available to governments in maintaining external and internal balances. Monetary and fiscal policies should comply with the choice of exchange rate regime. Pegged regimes, for example, require full commitment of monetary policy when there is substantial openness to international capital markets. Under some circumstances, capital controls can be a useful instrument to tame speculative flows, protect against excessive movements in the exchange rates and reduce the vulnerability of soft pegs to currency crisis.

The Impossible Trinity: The theory of the impossible trinity demonstrates that a country cannot pursue three goals related to exchange rate regime simultaneously. These are fixed exchange rates, monetary autonomy and free capital flows and only two of the three goals are attainable. Countries then should decide which one to give up. A country in a monetary union gives up monetary while a country strongly integrated in the global capital markets is likely to give up fixed exchange rate.

All these factors should be taken into consideration while making decision on the appropriate type of exchange rate regime. In addition to these factors, other country specific factors may considerable affect the decision-making process. Each country needs to assess what kind of factors should be taken into account.

5. Data Collection

The source of data for this study was from Central Bank of Nigeria (CBN) Statistical Bulletin from 1971- 2015, covering a total number of 45 years. This study employs annual data on the import, export, interest rate, inflation and economic growth (proxied by Gross domestic products) for Nigeria over the period 1970 to 2015. Data were obtained from the CBN Statistical Bulletin.

6. Analysis Data Techniques

Regression analysis technique was used to measure the relationship between a dependent variable and independent variables. Regression models in the following variables:

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$Y = f\,(X1,\ X2,\ X3,\ X4\ \mu)$
The independent variable $X1 - X4$
The dependent variable Y
A regression model relates Y to a function of X and μ
Error term is denoted as μ.

$$exch = a_0 + a_1 frdt + a_2\, trdpen + a_3 impt + a_4 exptr + \mu \qquad 1$$

$$GDP = a_0 + a_1 frdt + a_2\, etdbt + a_3\, trdpen + a_4 impt + a_5 exptr + \mu \qquad 2$$

GDP – *Gross Domestic Product*
exch – *Exchange rate*
frdt – *foreign direct investment*
trdpen – *trade open*
impt – *import trade*
exptr – *export trade*
etdbt – external debt

7. Results and Discussion

Table 1: Effect of exchange rate reforms on foreign trade in Nigeria

Dependent variable	Independent variables	Coefficient	Standard Error	T	P>|t	[95%Conf. interval]
exch	*frdt*	.6289647	-0.97	0.037	0.018	-1.256959 .4410266
	trdpen	-.4079662	.4193812	0.048	0.034	-6.461658 10.50967
	impt	-.1958814	.3057109	-0.64	0.026	-.8147607 .422998
	exptr	.4731611	.2887609	1.64	0.010	-.1114047 1.057727
	constant	-7.20896	.7264021	-9.92	0.000	-8.679484 -5.738436
R-squared = 0.9468	Adj R-squared = 0.9412		**Prob> F = 0.0000**	F(4, 38) = 169.12		Root MSE = .55044

Source: Researcher computation using STATA Version 10

The table above shows effect of exchange rate reforms on foreign trade in Nigeria. 1% increase in Foreign Direct Investment (***frdt***) brings about 0.63%increases in exchange rate (EXCH) in the longrun. An increase in the ***frdt*** has a positive impact on EXCH. This also suggests a positive relationship between ***frdt*** and EXCH. The result is significant. The relationship between trade openness (TRDPEN) and exchange rate (EXCH) is negative. This indicates that 1% increase in TRDPEN reduces EXCH by 0.41%. Also there is a negative relationship between EXCH and (IMPT) that is 1% increase in IMPT reduces EXCH by 0.20 %. The relationship between EXCH and Export(***EXPTR***) is positive. This indicates that 1% increase in ***EXPTR*** increases EXCH by 0.47%.

Given the coefficient of determination (R^2) to the tune of 0.9468% (approximately 95%) supported by high value of adjusted R^2 which stood at .9412 (94%), it connotes that the independence variables incorporated into this model have been able to determine the variation of Exchange Rate (EXCH) to the tune 95%. F probability statistics also confirmed the significance of this model. All the variables are statistically significant. The coefficient of multiple determinations (R^2) of 0.9468% (approximately 95%) variation in the observed behaviour in the dependent variable is jointly explained by the independent variables. The remaining 0.054 or 5 % is captured by the stochastic or error term. Thus the high R^2 indicates that the model is a good fit. The F-statistics 169.12 indicates that it is statistically significant .Therefore, the results indicate that the coefficient of EXCH is statistically significant and the constant is statistically significant.

Table 2: The Effects of the foreign trade on economic growth in Nigeria

Dependent variable	Independent variables	Coefficient	Standard Error	T	P>|t	[95%Conf. interval]
GDP	*frdt*	-.0248519	.0516941	-0.48	0.034	-.1295942 .0798904
	etdbt	.0214219	.0108038	1.98	0.015	-.0004686 .0433124
	trdpen	.843556	.0761163	11.08	0.000	.6893297 .9977824
	impt	.4009462	.0534735	7.50	0.000	.2925985 .5092939
	exptr	.5765094	.0497083	11.60	0.000	.4757909 .677228
	constant	1.096744	.130287	8.42	0.018	.8327569 1.36073
R-squared = 0.9990	Adj R-squared = 0.9989		**Prob> F = 0.0000**	F(5, 37) = 1241.17		Root MSE = 70998

Table 2 above shows the effects of the trade openness on Nigerian economic growth in the long run.1% increase in foreign direct investment (***frdt***) brings about 0.2% reduction in GDP. An increase in the ***frdt*** has a negative impact on output in the longrun. This also suggests a negative relationship between ***frdt*** and economic growth in Nigeria in the longrun. The result is significant at 0.48. The relationship between GDP and External Debt(***etdbt***) is positive. This indicates that 1% increase in ***etdbt*** increases GDP by 0.21%. Also, 1% increase in degree of openness(***trdpen***) increases GDP by 8.4%, suggesting that there is positive relationship between GDP and ***trdpen***. Also there is a positive relationship between GDP and import (IMPT) that is 1% increase in IMPT increases GDP by 4.0%. The relationship between GDP and Export (***exptr***) is also positive. This indicates that 1% increase in***EXPTR*** increases GDP by 5.7%.

Given the coefficient of determination (R^2) to tune of 0.9990% (approximately 99%) supported by high value of adjusted R^2 significant at 0.9989 (99%), it connotes the independence variables incorporated into this model have been able to determine variation of gross domestic product (GDP) to 99%. The F and probability statistics also confirmed the significance of this model. All the variables are statistically significant. The coefficient of multiple determinations (R^2) of 0.9990 or 99 percent variation in the observed behaviour in the dependent variable is jointly explained by the independent variables. The remaining 0.10 or 10 % is captured by the stochastic or error term. Thus the high R^2 indicates that the model is a good fit. The probability of F =0.0000 indicates that it is statistically significant. Therefore, the results indicate that the coefficient of GDP is statistically significant and the constant is statistically significant.

8. Summary and Conclusion

The study analyses to examine the activities and effect of Nigerian foreign trade on economic growth in Nigeria for the period of 1970 -2015. Based on the finding, the result shows that import and export have positive significant effect on economic growth in Nigeria. Conversely, foreign direct investment impacted negatively on economic growth in Nigeria. In conclusion, of foreign trade has positive significant impact on economic growth in Nigeria as supported by Obadan (1989) which concluded that Export, import, degree of openness, foreign direct investment and external debt acts as an engine of growth in Nigeria. Also, exchange rate has positive significant impact on export but has negative significant effect on import.

9. Policy Recommendation

Based on the findings made in the course of this study, the following recommendations are hereby suggested.

i It is necessary that conscious efforts should be made by government to fine-tune the various macroeconomic variables in order to provide an enabling environment to stimulate foreign trade by engaging in more of export trade and in effect to curtail import trade which has a negative effect or strain on the economy.

ii Nigerian economy has been depending on crude oil exportation, government should encourage export diversification. That is non-oil sector exports should be encouraged and concentration on oil sector export should be minimized. But today, this strange dependency has really dampened the growth of the economy as the country is open to every international shock associated with the oil market.

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