**THE IMPACT OF INTEREST RATE ON THE NIGERIA ECONOMIC GROWTH**

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**TITLE PAGE**

**THE IMPACT OF EXCHANGE RATE ON THE NIGERIA ECONOMIC GROWTH**

**A PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELORS OF SCIENCE (B.SC) DEGREE IN ECONOMICS**

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**APPROVAL PAGE**

This is to certify that this research project titled the impact of exchange rate on he Nigerian economic growth which was carried out by Dike Bruno Kenechukwu under the supervision of Mr. A. C. Odo, has been fully supervised and found worthy of acceptance in partial fulfillment of the award of Bachelor of Science, (B.Sc) Degree in Economics at Godfrey Okoye University Ugwuomu-Nike Enugu.

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**DEDICATION**

This research project is dedicated to the Almighty God who has given me the grace and opportunity to complete this program.

**ACKNOWLEDGEMENT**

My profound gratitude goes to God Almighty, who in his infinite mercies, blessings and grace made this work a success.

Special thanks to my supervisor Mr. Augustine C. Odo who gave me all the academic support needed to see that this project is a success.

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**ABSTRACT**

Exchange rate is the price of one currency in terms of another currency. Exchange rates this exchange rate is also used to determine the level of output growth of the country. Over the years, Nigeria has adopted various exchange rate regime ranging research work is centered on the impact of exchange rate on the Nigeria economic growth with special emphasis on the purchasing power of the average Nigeria and the level of international trade transaction. To do this, the classical linear regression model is applied and the ordinary least square econometric technique is also used to estimate the impact of exchange rate on economic growth. The variables used are GDP and non-oil export as the dependent variables, real exchange rates interest rates, inflation rate and degree of trade openness as the independent variables.

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**CHAPTER ONE**

**1.0 INTRODUCTION**

**1.1 BACKGROUND TO THE STUDY**

A country foreign exchange policy is derived from the perceives overall economic objectives to achieve and the expected direction of growth (CBN, 2003). Consequently, non conflicting sectoral policies are conceived within the ambit of the overall policy framework such that each sectoral policy reinforces each other.

A simplest definition has it that exchange rate is the price of one currency in terms of another. Thus, it measures the worth of a domestic economy in terms of another economics (Obeski, 1998).

Exchange rates regularly quoted between all major currencies mostly that of the trading partners, but frequently one important currency (that is the dollar) is used as a standard in which to express and compare all rates.

It is one of the key tools in economic management and in the stabilization and adjusts policies in developing countries. Exchange rates policies play a vital role in determine the position of a country in terms of international competition.

In autonomous markets, the exchange rate was seen to be volatile, and depreciated at will. This exerted pressure on the official foreign exchange market, and made the monetary policy target of the period to continually unrealistic due to the inflationary financing of government deficit with the deregulation of the economy; a market-based framework for the determination of exchange rate was adopted. It was envisaged that the realization of macroeconomic stability would lead to the elimination of distortions in the external sector and this enhance growths, stimulate non oil exports, increase foreign exchange inflows, moderate demand pressure in the foreign exchange market and generally improve foreign exchange to eliminate the parallel market premium capital flight and also enhance the inflow of foreign investigation (CBN: 2003).

From the forgoing it becomes clear that the concept of exchange rate policies has the impact so as to show in the one of the macroeconomic variables, it contribute to economic growth of Nigeria. It is therefore necessary that a research work be carried out to this effect so as to provide suggestion that will served as a guide towards the actualization of macroeconomic objectives that will bring about the level of targeted economic growth in Nigeria.

**1.2 STATEMENT OF THE PROBLEM**

1. Should the range be decided in advance?

**1.3 RESEARCH QUESTION**

1. What is the impact of exchange rate on Nigeria’s economic growth?

**1.4 OBJECTIVES OF THE STUDY**

The objectives of the study are to determine the impact of exchange rate on the growth of the country.

1. To estimate the impact o exchange rate on Nigeria’s economic growth

**1.5 RESEARCH HYPOTHESIS**

Based on the objectives of the study, the following hypothesis were formulated.

1. HO: exchange rate has no significant impact on Nigeria’s economic growth

**1.6 SCOPE OF THE STUDY**

This research work is designed to cover the period 1980-2010, a period of thirty one years. The general overview of the profile of Nigerians exchange rate over the years shall be discussed. The scope consist of the regulatory and

deregulatory exchange rate period that is the fixed exchange rate and the floating exchange rate period. The study is based on core macro-economic performance of Nigeria between 1980-2015.

**1.7 SIGNIFICANCE OF THE STUDY**

The significance of this study lies on the recommendations made at the end of the following:

1. Importer who make payment in foreign currencies.
2. Policy makers of the central bank of Nigeria who issues the guideline government international trade practice.
3. Bank-especially the commercial banks and merchant banks.
4. The general public who has a right contribute and be informed of the activities our banking institutions.
5. It is hoped that findings and recommendations of this study will adequately benefit the various interest groups named above.

**1.8 LIMITATIONS OF THE STUDY**

During the course of this research the researcher experience a number limitation constrains.

The researcher was faced with already known problem of gathering material from the Nigeria organization. Almost every information is classified and therefore most of the companies and banks approached were weary of releasing financial information related to the topic.

Gathering of information from public organization such as federal ministry of finance, federal of statistics and central bank of Nigeria was also difficult.

**CHAPTER TWO**

**2.0 LITERATURE REVIEW**

**2.1 DETERMINANTS OF NIGERIA’S EXCHANGE RATE**

In terms of finance, exchange rate (also known as a foreign exchange rate, forex rate, ER, Fx rate or Agio) between two currencies is that rate at which on currency will be exchanged for another. It is also regarded as the value of one country's currency in relation to another. In a commonest definition, exchange rate 'ER' is the price of a nation’s currency in terms of another currency.

An exchange rate can be quoted in two ways, direct and indirect.

1. Direct; the price of the foreign currency in terms of dollars.
2. Indirect: the price of dollars in terms of foreign currency.

**SOME OF THE MAJOR TYPES OF EXCHANGE RATE ARE AS FOLLOWS:**

1. Fixed exchange rate system.
2. Flexible exchange rate system.
3. Floating exchange rate system.
4. **Fixed exchange rate system:** This refers to a system in which exchange rate for a currency is fixed by the government.

The basic purpose of adopting this system is; to ensure stability in foreign trade and capital movements.

To achieve stability, government undertakes to buy foreign currency when the exchange rate becomes weaker and sell foreign currency when the rate of exchange gets stronger.

1. **Flexible exchange rate system:** This refers to a system in which exchange rate is determined by forces of demand and supply of different currencies in the foreign exchange market.

In this exchange rate system, the value of currency is allowed to fluctuate freely according to changes in demand and supply of foreign. There is no official (government) intervention in the foreign exchange market. Flexible exchange rate is also known a 'floating exchange rate.

Exchange rate movements is an important determinant of international transactions. Furthering, Ogunleye (2010) noted that the exchange rate in Nigeria has been principally influenced by external shocks resulting from the vagaries of world price of agricultural commodities and oil prices, both major sources of Nigeria export and foreign exchange earnings; contending that when the economy depended on agricultural exports, exchange rate volatility was less pronounced given the fact that these products were subjects to less volatility and that there were more trading partners involved in the calculation of the country’s exchange rate. This is minimally affected by the real exchange rate fluctuating by only 0.14% between 1970 and 1977. The increased dependence of the country on oil, resulted in several trade shocks from global oil price shock fluctuating the naira exchange rate by 10% between 1970 – 1985 (Ogunleye 2010). To Iyoha and Oriakhi (2002), movements in real exchange rate during this period were nominal shocks resulting from fiscal expenditure in ambitious development projects; and when the windfall ended, the government resorted to financing its expenditures through money creation. Thus expansionary monetary fiscal policy according to him, exerted upwards pressure on inflation, aggravating sharp movements in real exchange rate. From 1986, the adoption of the structural adjustment programme (SAP) became a contributory factor in shaping the dynamics of real exchange rate in Nigeria. One of the cardinal points of this policy was floating nominal exchange rate policy. As the naira was allowed to float the nominal exchange rate movement became more pronounced.

**2.1.1 FOREIGN EXCHANGE RATE, EXPORT PERFORMANCE AND ECONOMIC GROWTH**

Fluctuations, positive or negative, are not desirable to producers of export products as it has been found to increase risk and uncertainty, international transactions. Findings by the International Monetary Fund (IMF) (1984) revealed that these fluctuations include undesirable macro-economic phenomena inflations though observed positive effect of exchange rate fluctuations on export trade in European Union countries (Caballew and Carba, 1979).

Walsh and Yu (2010) viewed the effect of these fluctuations from first its impact on foreign direct investment where they noted that low exchange rate favour the importation of production, machinery and production export in periods of high foreign exchange rate. Furthering, ford and stein (1991) found a strong evidence of a weak host country increase inward model as depreciation (down change in exchange rate) make a host country less expensive.

Blongein (1997) argued that exchange rate depression in host countries tend to increase foreign direct investment inflows adding that a strong real exchange rate strengthens the incentives of foreign companies to produce at home for export instead of investing in a host country for export. Different open economies

experience different episodes of exchange rate appreciation. Exchange rate induces a contraction of the exporting manufacturing sector. Maintenance of export performance to them require the depreciation of the real exchange rate of a country’s currency, the achievable through monetary injections noting that a policy of exchange rate depreciation can successfully prevent a contraction of export output, having an allocative effect in the economy (Lama and medina, 2010).

Adubi and Okunmadewa (1999) posited that Nigeria as a developing nation is expected to gain from export conversion price increases as a result of currency devaluation findings by Obadan (1994) and Osuntogun et al (1993) on the effect of stable exchange rate on export performance showed that exchange rate affect a country’s export rate with its attendant risk affect export earnings, performance and growth positive to exporters when devaluated poor result from the floating exchange rate regimes of the 1970’s necessitated a change in foreign exchange rate management. The structural adjustment programme was introduced in 1986, with the cardinal objective of restructuring the production base of the economy with a positive bias for agricultural export production. This reform facilitated the continued devaluation of the Nigerian naira with the expected increase in domestic prices of agricultural export boasting domestic production.

To Srour (2006), diversification of countries export base is one reason given by developing nations for changing foreign exchange rates and regimes which in turn according to the world trade Organization (2010) increases local production, employment, income and economic growth concluding foreign exchange rate is a determinant of export trade and economic growth in Nigeria. Churwu (2007) and Adubi and Okunmadewa (1999).

**2.1.2 THE PURCHASING POWER PARITY THEORY**

The purchasing power parity (PPP) is one of the earliest and perhaps most popular theory of exchange rate. This posits that the exchange rate between two currencies would be equal to the relevant national price levels. It assumes the absence of trade barriers and transactions cost and existence of the purchasing power parity (PPP) (Obioma, 2000). In this version, the purchasing power parity (PPP) doctrine equates the equilibrium exchange rate of the ratio of domestic to foreign price level (Lyon, 1992).

E-Pd

PE

Where; E is the nominal exchange rate defined in terms of domestic currency per unties of foreign currency. Pd is the foreign price, PE level with perfect efficiency and absence of trade barriers transaction cost and the purchasing power parity (PPP) doctrine would be tantamount to the applications of the law of one price it all the countries produced explicitly the same tradable goods. It is important to know that the PPP is a major component of the monetary approach the PPO between the two currencies are provided by (Gustaar Cassel 1998) is the amount of the determination of equilibrium exchange rate. It is often applied as a proxy for the monetary model in exchange rate analysis (CBN, 1998).

The relevant version of PPP doctrine relates the equilibrium exchange rate to the product of the exchange rate in a base period and the ratio of the countries price indices (Argh, 1994). By definition, we have the relative purchasing power parity (PPP) as

E – Pd Ro

PE Where

Ro is the actual exchange rate at the base period (the number of units of domestic currency per unit of foreign currency). The purchasing power parity theory defines

two equilibrium exchange rate system. The first is the short run equilibrium exchange rate which is defined, in this context as the rate that would exist under a purely freely floating exchange rate system. Second is the long-run equilibrium that would yield balance of payment equilibrium over a time period in corporating and cyclical fluctuations in the balance of payment (including those that relate to business cycle at home and abroad). Deviation of prevailing exchange rate from the relative purchasing power in a currency are generally attributed to problem of arbitrage and expectations in the goods market. Some of the assumptions of PPP theory however are quite unrealistic. Efficiency level for example vary from country to country and as such, there are deferring cost functions.

To align international comparisons on the assumption of some technological efficiency in all countries could be deceptive. Again the choice of the base year for the relative purchasing power parity (PPP) is often arbitrary. Finally, PPP is often presented as if causality runs from price level to exchange rate. Actual experiences are often more complicated when monetary/fiscal policies move, both causality could be quite exogenous or bi-directional (Argy and Frenkele, 1998).

**2.1.3 THEORETICAL ISSUES**

There is consensus in the literature on the impact of exchange rate stability neither on economic growth nor on the mechanism through which oil price fluctuations affect growth from the macro-economic perspective, theoretically, flexible exchange rate allow an easier adjustment in response to asymmetric country specific real shocks. (Schnabel, 2007). The macro-economic effect if low exchange rate volatility under the fixed exchange rate system are associated with low transactions costs for international trade and capital flow thereby contributing to higher growth. Indirectly, fixed exchange rate enhances international price transparency as consumers can compare prices indifferent countries more easily. If exchange rate volatility is eliminated international arbitrage enhances efficiency, productivity and welfare. Earlier, Mundell (1973a, 1993b) opined that monetary and exchange rate policies are the chief source of uncertainty and volatility in small open economics and economic growth is enhanced when exchange rate fluctuations are smoothed.

The transmissions mechanism according to Scbnabel (2008) through which oil prices affects real economic activity include both supply and demand channels. The supply side effects are related to the fact that crude oil is a basic input to

production, and an increase in oil price leads to rise in production cost that induces firms to lower output, the demand side effect is derived from the fact that oil prices changes affect both consumption and investment decisions. Consumption is adversely affected because increase in oil price affects disposable income and the domestic price of tradable good. Investment is adversely affected because such increase in oil price also affects firms’ input prices and thereby increasing their costs.

**2.1.4 THE TRADITIONAL FLOW MODEL**

The traditional flow model, views exchange rate as the product of the interaction between the demand for and supply of foreign exchange (Augutus,

2003). In this model, the exchange rate (sin equilibrium when supply equals demands demand for foreign exchange, (Olisadebe, 1991). The exchange rate adjusts to balance the demand by the domestic resident for foreign exchange. The demand for foreign exchange depends on domestic resident’s demand for domestic goods and assets. On the assumption that the foreign demand for domestic goods is determined essentially by domestic income, the relative income plays a major roe in determined exchange rate under the flow model. Since assets demand can be

said to demand on difference between domestic and foreign, interest rate differentials is other major determinants of the exchange rate in this frame work.

Under the traditional flow model that is the balance of payments model, the exchange rate is assumed to equilibrate the flow supply of and the flow demand f or foreign currency. The balance of payment deficits (surplus) in current amount is offset by surplus in (deficits) in the capacity account. The major limitations of the traditional model or the portfolio balance model include the overshooting of the exchange rate target sand the fact that substitutability between money and financial asset may not be automation, this lead or led to the development of the monetary approach.

**2.1.5 THE ELASTICITY APPROACH**

This approach merely restricts to trade invisible goods. According to this approach, the success of devaluation in improving the balance of trade and through it, the balance of payment depends upon the demand elasticity of imports and exports developing country (Dewett, 1982). In other words an improvement in the balance of trade will depend upon whether the demand for import and export is elastic devaluation makes which makes import of the devaluating country costlier

than before and in case her demand for import is elastic, ad higher amount will be spent by the foreigners thereby affecting adversely the balance of payment of the devaluing country. However, if her demand for exports as a result of devaluation in her balance of payments, will purchase more, likewise, if her demand for imports is elastic, then the imports of the country will be significantly reduced by developing country.

However, some rules are needed to related the required degree of elastics for the success of devaluation in improving balance of trade. In this context, we have what is called “marshal learner conditions”. According to these conditions, devaluation will improve the balance of trade of a country of the sum of the elasticity of demand for assuming both elasticity are infinite.

Let Exd, Emd = price elasticity of demand for exports, and imports

respectively. Exs, Ems = price elasticity of supply for exports and imports respectively. Then according to learner’s condition, devaluation will increase a country’s balance of trade, Exd, EmdD1, given infinite Exs, Ems. I should be emphasized that the marshal learners condition related only to demand for commodity exports and imports. The response of capital should be taken into consideration before it can be determined whether devaluation will improve the

balance of payment or not. This is because, if sufficient amounts of autonomous capital flows into the devaluing country, it would be possible to have the sum of elasticity of demand less than one and yet devaluation may lead to improvement in the balance of payment of the devaluing country. This is reduced as a result of devaluation, the with the sum of elasticity greater than one, would aggravate the deficit. This would occur if capital was discouraged by devaluation and investors fear further devaluation. Moreover, if the trading partners retaliate, devaluation will not make any impact on the import and export of the devaluing county, even though her demand for imports and exports may be elastic.

**2.1.6 THE MONETARY APPROACH**

The monetary approach is predicted on the importance of money. It identifies exchange rate as a function of relative shift in money shift in money stock, inflation rate as a proxy and domestic output between an economy and a trading partner economy. It is important to know that the purchasing power parity (PP) is a major component of the monetary approach. The monetary approach is a recent development in the theory of exchange rate determination. It view as the exchange rate as being the relative price of two assets (natural monies) is determined

primarily by the relative supplies of demand and for those movies, the equilibrium exchange rate is attained when the existing stocks of the two monies are willingly held (Gbosi, 2003).

It is therefore argued that a theory of exchange rate deterioration should be stated contently in terms of the supplies and demand for those monies. In this model, exchange rate adjusts to allocate the total stocks of foreign exchange in question in the asset market. This new theory of exchange rate determination according to (Guarter and Hottman, 1985), can be presented in one or two terms the monetary approach or the asset market approach of exchange rate determination. These approaches emphasizes on the roles of money and assets in determining the exchange rate, when it is flexible. The asset market approach or monetary approach, attributes variation in exchange rare essentially to income and expected rates of return as well as the other factors that influence the supplies of demand for the various nation monies over the relative supplies of money and the fact that the demand for money is viewed to depend on the level of real income and the interest. The monetary approach postulated that the exchange rate is determined primarily by two key factors, namely, relation several versions of the monetary approach to exchange rate determination. The early flexible price

monetary model which is based on the assumptions of continuous purchasing power parity (PPP) and the existence of stable money demand functions for the domestic and foreign economics. The strictly price monetary model is an extension of the flexible price model except that, it allows for accommodation of short term deviation from the PPP. In other words, the strictly price monetary theory takes the fact that there may be deviations from PPP in the short-run and in the long-run, the deviation will tend to disappear.

The strictly-price monetary theory takes interest rate differentials as capture by exchange rate deviation. Price exchange is an automatic and in response to changes, inflation, therefore depresses the exchange rate unlike the balance of payment model were the effect of Y on exchange rate is payment model where the effect of Y on exchange rate is positive. It is negative in the strictly price monetary theory.

**2.1.7 THE PORTFOLIO BALANCE MODEL**

The portfolio balance model views exchange rate as the result of the substitution between money-and financial assets (Gbosi 2003). In the monetary approach, there is no room for current movement to play a role in the determined exchange rate. Thus, the monetary approach cannot explain the observed tendency

of the currency of a country, with a current account supplies (deficit) to depreciate. This apparent shortcomings of the monetary approach was said to be related to its narrow view of an exchange rates as the relevant prices of movies in addressing this shortcomings, the portfolio balance approach posits that an exchange rate is determined at least in short-run by the supply and demand in the markets for a wide range of financial assets.

The model assumes that individuals allocate their wealth (w) which is fixed at a point in time, among alternative assets. Domestic money (m) domestically, issued bonds (b) and foreign bonds denominated in foreign currency (f) in a simple one country model. Theories of economic growth provide the empirical frame work for this study. The classical theory of economic growth assumed the existence of a perfectly competitive economy where invisible hands allocate resources efficiently. Though Adam Smith, recognized the start of the development process when argued that division of labour increases productivity which raised relatively output, the classicist regard capital accumulation as a key of economic development. The Harrods – defect in that on the other hand, it constitutes a demand for output and on the other hand, it increases the total productivity capital of the economy. The mechanism through which economic development is

accomplished is net investment. Both Harrods as well as Domar assumes fixed capital output that is, a rigid relationship between capital stock and output (Domar

1957).

The neoclassical growth theory on the other hand stresses efficiency in the allocation of resources and largely ignores social and political factors in economic growth. In spite of growth in national output, relative deprivation, poverty and imbalance among sector continued to increase. The structural change theories of which Aurthr Lewis, two sector surplus labour theory is a well known representative, addressed these structural distortions. The expected growth of output and employment in the modern sector may not be realized. This is so when capital stock embodying labour savings, technical progress is sued in the modern sector in such a situation that the expected transfer of the assumed surplus labour from the traditional to the modern sector has often failed to nationalize structural change theory, therefore, emphasize the degradation of the economy to facilitate greater understanding of the development process. Capital formation has been emphasized as it rates to the production of capital goods, like machines, plants and equipment. To measure economic growth, economist use data on gross Domestic Product (GDP) which measures the total income of everyone in the economy. The

real GDP per person also observe large differences in the standard of living among countries (Mankiw and Gregory, 1994).

The Solow growth model shows how growth in the labour force and advances in technology interact and how they affect output. The first step in building the model, we examine how the supply and demand for goods determine the accumulation of capital. To dot thus, we hold the labour force and technology fixed, later, we relax these assumptions fixed by introducing changes in technology. The Solow growth model enables us to describe the production distribution and allocation of the economy’s output data print in time. Moreso, the Solow growth model shows how savings, population growth and technological process affect the growth of output over the time. The simply of goods in the Solow growth model is based on the low familiar production function Y = f (k,L). Output depends on the capital stock and the labour force. The Solow growth model, assumes that production function has constant returns to scale.

However, the new endogenous growth model propounded that technological changes is endogenous to growth because it is responsible for the signal as price and profits in the economic system. The endogenous growth theorist introduced the concept of human capital as a factor for growth. These new growth theorists

include Mankiw, Romar and Weil, Arrow, Villanueve Rebelos A. K. model. The increasing returns theorist opposed the one classical growth theory that are subject to decreasing returns and said that the investment in some new area product, power source or production technology proceeds through time that each new increment of investment is more productive than the previous increment. The source of these increasing returns can be seen through cost and idea. Investment in the early stages of development may create new skills and attitudes in the work force whose cost may be lower than the previous investment at the initial stage. Also each investor may find investment because of the infrastructure that has been created by those who came before.

Finally, the new growth do not predict convergence and hence, countries with abundant physical and human capital will grow permanently faster that countries with small capital in contrast to the Solow model, the new growth model predicts divergence as implied in (Romer, 1996) and (A.O. Jenur, 2008).

2.**2 EMPIRICAL LITERATURE**

Empirical evidences have shown strong effect of short-run and long-run adverse effect of exchange rate swings on economic growth performance through

the trade channel. The nature of the effect however, runs in either position or negative direction. According to IMF (1994), and European commission (1990), empirical evidence in favor of a systematic positive (or negative) effect of exchange rate stability on trade (and thereby growth) in small open economics has remained mixed. Gravity models have been used as framework to quantify the impact of exchange rate stability on trade and growth. Schnabel (2003) found evidence that exchange rates ability is associated with more growth in the EMU periphery. The evidence, according to him, is strong for emerging Europe which has moved from an environment of high macro-economic instability to macro- economic stability during the observation period. Other empirical studies examine the role of capital market in ensuring exchange stability and economic growth.

The study undertook an investigation, aimed at finding any relationship before regional trade agreement (RTA) and growth. He focused on whether openness size of the population and the gross domestic product (GDP) affected growth of countries that have entered into RTA. The results shows that economy’s with open economics grow faster. He also provided evidence that he level of development in neighboring open economics have some spillover effect. By contrast, the lead level of development in open economics has no little on

domestic growth. Similar studies were done by Langhamer and Hienmenz (1990). Their empirical work found out that regional agreement made up of developing nations has had no significant contribution to trade expansion.

Arron and Sala-Martins (1995), estimated the impact of trade protection on growth. Using tariff on capital goods and intermediate goods as a measure to protect their result indicated negative impact between trade, liberalization and growth countries with low results according to them grow faster than those with high tariffs. This confirms the earlier theoretical literature in favour of trade liberalization the forgoing literatures examined has known all positive relationship between trade and growth. In the words of Onah (2002), trade liberalization policy in Nigeria, was accompanied in 1987 budget and the result has been encouraging. In his own view, the rate of inflation has been reasonably controlled though not reduced thoroughly. In spite of their effort to reduce prices, the local industries are collapsing because of inadequate demand for their products.

However, Boardiary and Trenderick (1987), using static applied general equilibrium (first generation) found that removal of tariffs in Canada would cause welfare to decline by about trade deterioration, resulting from an import tariff reduction as implied by national product differentiation. Assumption has led

Broom (1987) to conclude rather criterically that unilateral trade liberalization is E (>o) and (<o) minus (-) the income elasticity of demand for export and imports respectively.

Moreley (1992), analyzed the effect of real exchange rates on output for twenty-eight (28) devaluation experiences in developing countries using a regression framework. It was explicitly concluded that the exchange rate devaluation is a major factor for the upsurge of inflation. Kamin (1996) showed that the level of the real exchange rate was a primary determinant of the rate of inflation in Mexico during the 1980’s and 1990’s. (anetic and Green (1991), Falokun (1994), reached similar conclusions for some selected African countries including Nigeria.

Dell Africa (1999), examined the effect of exchange rate fluctuation on the bilateral trade of European Union members plus Switzerland over the period of

1975-1994, using several definitions of volatility. In the basic OLS regression, exchange rate fluctuation had a small but significant negative impact on trade; reducing volatility to zero in 1994 would have increased trade by an amount ranging from 10 to 13%, depending on the measures of fluctuation used. Usually both fixed and random effects, the impact of fluctuation was still negative and

significant but smaller in magnitude. The author found that elimination of exchange rate fluctuation would have increased trade by about 36 in 1994.

Mauna and Reza (2001), studies the effect of trade liberalization, real exchange rate and trade diversification on selected north American countries like Morocco, Algeria and Tunisia. By decomposing changes in real exchange rate into fundamental and monetary determinations, and by using both standard statistical measures of exchange rate fluctuation and the measures of exchange rate risk developed by puree and Steiner (1989). They reached the conclusion that exchange rate depreciation has a positive effect on the quantity of manufactured exports while exchange rate misalignment, volatility has a negative effect. According to them, the motivating result is that all manufacturing sub-sectors are responsive to exchange rate changes but the degree of responsiveness differs across sectors.

In their study, Broda and Romatis (2003) they found that real exchange rate volatility depresses trade in differentiated goods. The study used bilateral trade made where the OLS (ordinary least square) and GMM (Generalized method of moment) methods were sued after taken into account the direction of causality, they ascertained that a 10% increase in volatility depresses differentiated product trade by 0.7%, while a 10% increase in trade reduces exchange rate volatility by

0.3%. The OLS estimated results showed that the effect or volatility on trade is reduced by 70%. They justified the result by arguing that much of the correlation between trade and change to the effect that trade has a depressing fluctuation. Their study further revealed that a 10% increase in the intensity of bilateral trading relationship reduces the volatility of the associated exchange rate by 0.3%. Moving to the studies of exchange rate volatility on trade in less developed countries (LCD’s) Carter (1981), who used a log-level model specification to examine Brazilian exports, used annual data for 1965-1979 to arrive at the conclusion that a significant reduction in exchange rate uncertainty in Bazillion’s economy during the crawling era was adopted in 1963.

Philips (1986), Granger and Newboold (1974) found that export and exchange rate risks are related, however, they criticized the use of a log-level model when the data is non stationary.

Osuntogen et al (1993), in their analysis of strategic issues in promoting Nigeria’s non-oil exports, determined the effects of exchange rate uncertainty on Nigeria’s non export performance as a side analysis. This is the pioneering effort in Nigeria to determine the effect of exchange rate risk on export. However, their model did not take into consideration the cross price effect. Exchange rate acts as

shock absorber if rigidly fixed, the shock of inflation and deflation from abroad are transmitted to internal economy system. But variations in the exchange rate can wind off the invasion of the inflationary and deflation any forces. If demand and supply could work excellently in economic sense, it would be better to allow exchange rate to be freely determined by both demand and supply.

In conclusion, most of the econometric analysis indicated that devolutions (either increases in the level of real exchange rate or in the rate of depreciation) were associated with a reduction in output and increase in inflation.

Nigeria is regarded as the largest oil producing nation in Africa and the tenth largest in the world in terms of oil reserves with a production level of close to 2 million barrels per day, though this level has been seriously affected due to crises in the oil production region. Nigeria benefited handsomely from likes in the oil, since the beginning of second world war. The balance of payment portion of the country remains highly favorable with over 20 month of imports, which translates tower 55 billion of reserves. Exchange rate was moderately stable between 2000 and 2008, while GDP growth averaged 5.01% within the same period.

However, oil consumption in the country heavily relies on the import of refined petroleum and products since the collapse of local refineries in the late

1980’s. Thus over 90% of the country domestic requirements of oil are sourced from imports. The near collapse of the power generation and distribution industry in the country further accentuates the acute shortage of energy. The burden on the government to unwisely and between 1999 and 2000, the federal government of Nigeria has reduced its subsiding approximately 9 times. This seriously affects production, consumption and instruments in the country between 1986 and 2007, while figures 23 and 4, all in the appendix, represent the trends in the various in natural log.

**2.3 LIMITATIONS OF THE PREVIOUS STUDIES**

The impact of unstable exchange rate and devaluation on the economy have been a matter of concern to many scholars, researchers and business entrepreneurs. Another major problem is the issue of appropriate definition of the concept of equilibrium. This portion of this project reviews the studies of different people on aspects of exchange rare devaluation and lack of appropriate definition of the concept of equilibrium in the measurement and analysis of the real exchange rate. Egon (1963), examined the effects of exchange rate on price level balance of

payment and economic interaction. He rightly pointed out how these economic variables are affected by variations in exchange rate of the currency.

Aluko (1988) in his own view on the appreciation and depreciation of he naira since 1970 with regards to its effect on balance of payments and external reserve of the Nigeria, concluded depreciation of the naira which he said was overvalued was necessary for the implementation of SAP. He did not, however consider the developing nature of the Nigerian economy. And as a developing country or economy, Nigeria mainly producers primary product and imports machinery and some (major) raw materials for its industries. He did not consider the attendant high cost of imports with depreciation, devaluation would impose on such imports which would in turn, lead to high inflation rate. Kanyo (1988) in his work on inflation blames competitive price linking on free floating exchange market. This, he said is necessary due to the developing nature of the Nigerian economy.

Eze (1988), in his appraised of foreign exchange rate fluctuation on the Nigerian economy recommended that the central bank of Nigeria should stabilize the value of naira exchange at efficiently approved rate to the public. The action of the black market in which foreign exchange is sourced faster than at the banks. He

however suggested what the government should influence in the foreign exchange rate positive economy reforms that will reduce the adverse effects on unstable foreign exchange rate on the Nigeria economy.

The big push strategy the proponent of the big push strategy are of the view that the economics of developing countries like Nigeria cannot only be described as being stagnant but also lack the enthusiasm and courage to take the great leaper to the exponents of this theory, the less developed countries needs to get out of its underdevelopment and the only way is to out of its is to use a huge amount of resources in order to start the process of development. The less developed economics need to use more than half of the national income of the economy for all out investment. According to the proponent of this strategy, the idea of bit progress or step by step is not possible to help development countries to achieve their goal of self sustaining growth. The advocate of the strategy stress that as a car needs a big push therefore, will come from is it public sector on private sector.

The contribution of these authors is still in order to study the economic implication of exchange rate instability and how a less developed countries can achieve economic growth.

**CHAPTER THREE**

**3.0 RESEARCH METHODOLOGY**

The methodology is the background against which the reader evaluates the findings and conclusions (Osuala: 1992). The choice of the appropriate technique to be used in a research work depends on the research problem as well as the objectives of the study (Koutsoyiannis: 1997). Econometric method of regression analysis was employed in this study.

**3.1 MODEL SPECIFICATION**

We shall employ the single equation technique of econometric simulation for this study. The model specification involves the determinant of the dependent and independent variables were included in the model the priori expectation of the signs and sizes of the parameters of the functions, the functional form of the model, the mathematical form of the equation.

The model that will be adopted is the classical least regression model that will be used (OLS). The choice of this method is predicted on the basic features of OLS (BLUE).

**MODEL 1**

The model will be used to capture these objectives. Objective 1: The econometric model is stated as;

GDP = b0 + b1 ER + b2 INT + b3 DOP + ei

Where: ER = exchange rate

INT = Interest rate

DOP = Degree of trade openness = GDP = Gross domestic product

Ei = The stochastic error term.

EXP+ IMP GDP

ER = is the exchange rate, INT = interest rate, DOP = degree of trade openness which are the independent variables causing variations on the dependent variables.

GDP = Gross domestic product is the dependent variable,

BO is the intercept parameter and B1, B2, B3, are coefficient of the variables. Ei =

stochastic error term.

**3.2 METHOD OF DATA ANALYSIS**

The result of this work shall be evaluated in three ways namely economic, statistical and econometry criteria.

**3.3.1 ECONOMIC CRITERIA**

The economic criteria test shall be conducted to enable us examine the magnitude and size of the parameter estimate. This evaluation is guided by economic theory to ascertain if the parameter estimate conforms to expectation.

The variable for real interest rate represents the user cost of capital. There exists a negative relationship between interest rate and investment on economic growth. The variables for political risk are expected to exhibit a positive impact on free flow of export. This is informed by the fact that trade will move freely into areas of the economy with stable political system. The variable for trade openness which represents the measure of trade in the economy, is measured as trade to output ratio. Countries with high trade potentials will attract inflow of capital into the country. So there exist a positive relationship between trade openness and economic growth. exchange rate is expected to be positive because depreciation of the currency which is increase in exchange rate boost export and this brings about economic growth.

|  |  |
| --- | --- |
| Variables | Expected Signs |
| Exchange rate (ER) | Positive (+) |
| Interest rate (INT) | Negative (-) |
| Degree of trade openness (DOP) | Positive (+) |

**3.3.2 STATISTICAL TEST (first – order)**

Under the statistical test (first –order), we will test for the goodness of fit, the individual significance of each regression using the f- test and finally, significance of the regression model using the f-test.

(a) Goodness of fit test: We shall make of the coefficient of multiple determination R2 to find how well the sample regression line fits the data. R2 measure how the variations in the explanatory variable effect the dependent variable.

(b) Student t-test: It is used for testing the significance. We shall make use of 5% level of significance with n-k degree of freedom and where necessary, the probability value will be used as a rule of thumb. Where a = 0.05 (n-k), n = number of observation (sample size), k = total number of estimated parameter.

(c) The f-test: This will be used for testing the overall significance of the regression model. In order words, it will be used for testing joint impact of the independent variables on the dependent variable. The regression might not have influence on the dependent variable except in conjunction with other regression. We shall make use of 5% level of significance with (k-1) (n-k) degree of freedom where vi = k-1, v2 = n-k

**3.3.3 ECONOMETRIC (Second­­-order test)**

Econometric test will be used for empirical verification of the model. This will range from test including autocorrelation normality, heteroscedasticity and multicollinearity test.

(1) Autocorrelation: The classical linear regression model assumes that autocorrelation does not exist among the disturbance terms. In order to find out where the error terms are correlated in the regression, we will use the Brush – Godfrey serial correlation test. Brush-Godfrey test is the test for detecting autocorrelation. It allows for autoregressive (AR) and moving average (MA) error structure. It was jointly developed by Breusch Godfrey (Gujarati, 2004).

(2) Normality test: This test will be conducted to find out if the error term was normally distributed with zero mean and constant variance ie it ei N (0,52). This is one of the assumptions of the classical linear regression model. The Jargue Bera test will be used to test for normality in the time series variables used. This test will be conducted by augmenting the equation by adding legged values of the dependent variables.

(3) Heteroscedasticity test: Heteroscedasticity occurs when the variance of the error term additional of the chosen values of the explanatory variables is not constant. In order to capture heterscedasticity and specification bias, the cross-product term will be introduced among auxiliary regressions.

(4) Multicollineaerity test: This test is used to detect linear relationship among the variables. This is a situation where the explanatory variables are highly interconnected when they are highly correlated, it becomes difficult to separate the effect of each of them on the dependent variable.

**3.4 NATURE AND SOURCE OF DATA**

The data used for this study are annual. Time series from 1980-2015, they are sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2015)

**CHAPTER FOUR**

**4.0 PRESENTATION AND ANALYSIS OF RESULTS**

**4.1 PRESENTATION OF RESULTS**

Two models were estimated in this research work based on the topic the researcher is discussing. The models were estimated using the ordinary least square (OLD) method. The result of the models are presented below as thus:

**Model I**

**Table 4.1.1 Result presentation** Dependent variable: GDP METHOD: Least square Sample: 1980-2015

Included observation 31

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | T. Statistics | Prob |
| Constant | 12.082283 | 0.320608 | 37.68720 | 0.0000 |
| ER | 1.193588 | 0.051041 | 23.38486 | 0.0000 |
| INT | -0.077045 | 0.015944 | -4.832137 | 0.0000 |
| DOP | 0.159790 | 0.174463 | 0.915901 | 0.3678 |

R-squared = 0.959414

F- statistics = 23.51945 (3,27)

Durbin – Watson stat. = 0.313026 (0.0000) Number of observations = 31

Number of variables = 4

**4.2 RESULT INTERPRETATION**

**4.2.1 ANALYSIS OF RESULTS BASED ON ECONOMIC CRITERIA Model I**

The above result in terms of coefficients of the regression can be interpreted as follows:

The intercept is 12.08283. This shows that if all the explanatory variables are held constant, GDP will be 12.08283 ceterus paribus.

**Exchange Rate (ER)**

The coefficient is 1.193583. This indicates a positive relationship between real exchange rate and GDP, showing that a unit increase in exchange rate (ER) will increase GDP by 1.19588.

**Interest Rate (INT)**

Interest rate has a negative coefficient of -0.077045. This indicates that interest rate has a negative relationship with GDP, showing that a unit increase in interest rate (INT) will reduce GDP by 0.077045.

**Degree of Trade Openness (DOP)**

The coefficient is 0.159790. This shows that the degree of trade openness has a positive relationship with GDP, showing that a unit increase in the degree of trade openness (DOP) will increase GDP by 0.159790.

**4.2.1.2 ANALYSIS BASED ON THE A PRIORI CRITERIA**

This test is carried out to ascertain if the parameter estimates conform with what economic theory postulates in terms of sign and magnitude. The test is summarized below:

**Table 4.2.1.2 Model I**

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Expected sign | Obtained sign | Conclusion |
| ER | Positive (+) | Positive (+) | Conforms |
| INT | Negative (-) | Negative (-) | Conforms |
| DOP | Positive (+) | Positive (-) | Conforms |

**4.2.2 ANALYSIS BASED ON STATISTICAL CRITERIA**

4.2.2.1 THE COEFFICIENT OF MULTIPLE DETERMINATION (R2)

In our model, mode I has R2 of 0.959414, which implied that about 95% of the variation in real GDP is explained by the independent variable (real exchange rate, interest rate and degree of trade openness).

**4.2.2.2 The T-test statistics**

The T-test is used to determine the significance of the individual parameter estimates and to achieve this, we have to compare the calculated t-value in the regression result with the t-tabulated at n-k degree of freedom, at 5% significance level.

**Test Hypothesis**

H0: B1 = 0 (The parameters are statistically insignificant) H1: B1 ≠ 0 (The parameters are statistically significant). **Decision Rule**

Reject Ho if t-cal > t-tab

Accept Ho if otherwise

From our data n = 31 and k = 4

Therefore d.f = n-k =31-4 = 27

Critical t-tabulated at 0.05 significance level is equal to 2.052

**MODEL I**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | T-calculated | T-tabulated | Decision rule | Conclusion |
| ER | 23.38486 | 2.052 | Reject Ho | Significant |
| INT | -4.832139 | 2.052 | Reject Ho | Significant |
| DOP | 0.915901 | 2.052 | Accept Ho | Significant |

**4.2.2.3 The F-statistics Test**

The test is carried out to determine if the independent variables in the model are simultaneously significant or not. It has k-l degree of freedom in the numerator and n-k degree of freedom in the denominator. Hence, the analysis shall be carried out under the hypothesis below:

Ho: X1 = X2 = X3 = 0 (The model is insignificant) H1: X1 ≠ X2 ≠ X3 ≠ 0 (The model is significant)

Using the correlation Matrix

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | GDP | ER | INF | EXPT | DOP | INT |
| GDP | 1.0000 | 0.837062 | -0308417 | 0.991147 | 0.185848 | -0.003738 |
| ER | 0.837062 | 1.00000 | -0342273 | 0.837436 | 0.232210 | 0.167966 |
| INF | -0.308417 | -0342273 | 1.00000 | -0.303448 | 0.170291 | 0.430320 |
| EXPT | 0.991147 | 0.837436 | -0303448 | 1.0000 | 0.216589 | -0.012541 |
| DOP | 0.185848 | 0.2322210 | 0.170291 | 0.216589 | 1.00000 | 0.307901 |
| INT | -0.003738 | 0.167966 | 0.430320 | -0.012541 | 0.307901 | 1.0000 |

**Decision Rule**

From the rule of thomb, if correlation coefficient is greater than 0.8, we conclude that there is multicollinearity but if the correlation coefficient is less than 0.8, there is no multicollinearity

Conclusion: Multicollinearity only exist between

ER and GDP EXPT and GDP EXPT and ER

**Decision Rule**

Reject Ho if f-cal > f-tab otherwise accept Ho. V1 = K-1 = 4-1 = 3 (numerator)

V2 = n-k = 31-4 = 27 (denominator)

**MODEL I** below analysis the result

|  |  |  |
| --- | --- | --- |
| F-calculated | T-tabulated | Decision rule |
| 212.7502 | 2.9604 | Reject Ho |

From the result, since f-cal > f-tab (i.e. 212.7502 > 2.9604), we therefore reject the

null hypothesis Ho and accept the alternative hypothesis H1 and conclude that at

5% level of significance the overall regression is statistically significant.

**(2nd order Test)**

**4.2.1.1 TEST FOR AUTO CORRELATION**

This test is aimed at ascertaining if autocorrelation occurred in the model. To achieve this, we assume that the values of the random variables are temporarily independent by employing the technique of Durbin-Watson (d) statistics

**Decision Rule**

|  |  |  |
| --- | --- | --- |
| Null Hypothesis (Ho) | Decision | If |
| No positive autocorrelation | Reject | 0 < d < du |
| No positive autocorrelation | No decision | DL ≤ d ≤ du |
| No negative autocorrelation | Reject | 4 – dL < d ≤ 4 |
| No negative autocorrelation | No decision | 4 – du ≤ d ≤ 4-dL |
| No autocorrelation (positive or negative) | Do not reject | Du < d < 4 ≤ dL |

Where dL = lower unit du = upper unit

d = Durbin Watson calculated

From the Durbin Watson table.

**Model I model II** dL = 1.160 dL = 1.160 du = 1.735 du = 1.735

d\*= 1.108538 d\*= 1.49057

**Decision rule**

**Model I:** 0< d < dL

0 < 1.108538 < 1.160

**Conclusion**

The Durbin Watson shows that there is no positive autocorrelation in the two models. Therefore, we reject the null hypothesis for both model.

**4.2.3.2 NORMALITY TEST**

This test is carried out to test if the error term follows normal distribution. It is done using the Jarque-Bera statistic which follows chi-square distribution with 2 degrees of freedom at 5% level of significance.

Test Hypothesis

Ho: ei = 0 (The error term is normally distributed)

H1: ei ≠ 0 (The error term is not normally distributed).

a = 5% (0.05 significant level)

**Decision Rule**

Reject Ho if X2 cal > X2 tab otherwise accept Ho

From the result, obtained from Jarque-Bera test of normality, (JB) = 0.289133. That is X2 cal = 0.239133

X2 tab = 5.99147

Conclusion:

We accept and conclude that the error term is normally distributed since

X2 cal < X2 tab i.e. (0.289133 < 5.99147).

**4.2.3.3 HETEROSCEDASTICITY TEST**

This test is carried out to test if the error term has a constant variance. The test follows chi-square distribution with degrees of freedom equal to the number of regression in the auxiliary heteroscedasticity regression, excluding the error term.

**Test Hypothesis**

Ho: Homoscedasticity (The variance is constant)

H1: Heteroscedasticity (the variance is not constant)

**Decision rule**

Reject Ho if X2 cal > X2 tab otherwise accept Ho.

From the heteroscedasticity test result X2 cal = 450.7.76 and X2 tab = 16.919

From the result, X2 tab > X2 – tab (i.e. 16.919 > 4.500776) therefore reject the null hypothesis of homoscedasticity and accept the alternative hypothesis of heteroscedasticity showing that error term have a constant variance.

**4.2.3.4 MULTI-COLLINEARITY TEST**

Multicollinearity means the existence of a perfect linear relationship among the explanatory variable of a regression model.

**4.3 EVALUATION OF RESEARCH HYPOTHESIS**

The research hypothesis was stated in chapter one as

Ho: Exchange rate has no significant impact on Nigeria’s economic growth

H1: Exchange rate has a significant impact on Nigerian’s economic growth.

**CONCLUSION**

From the result and the analysis so far, we see that exchange rate has a positive significant impact on GDP and EXPT. The t-test showed that the impact of exchange rate is significant on both models and the f-test also showed that the model is significant on both models is explaining the variations in GDP and non- oil export. We therefore reject Ho and conclude that exchange rate has a significant impact on Nigeria’s economic growth.

**CHAPTER FIVE**

**5.0 SUMMARY OF FINDINGS, CONCLUSION AND POLICY RECOMMENDATION**

**5.1 SUMMARY OF FINDINGS**

This research work is meant to emphasize on the issue of exchange rate and its impact on international trade, purchasing power of average Nigerian and output growth level of Nigeria. This study investigated empirically on two models. The first model investigated empirically, the impact of variables such as exchange rate (ER), real interest rate (INT) and degree of trade openness (DOP) on the GDP on the economy.

1. Exchange rate has a positive impact on GDP both on short run and long run.
2. The interest rate has a negative impact on GDP both on short run and long run.
3. Degree of trade openness has a positive impact on GDP
4. Exchange rate is positive relationship to output growth

**5.2. CONCLUSION**

Having conducted this research in the study of exchange rate stability on economic growth, thus there is needed to maintain a stable exchange rate. Using time, series data from 1980-2015, I estimated the effect of exchange rate on export performance in Nigeria, our result showed that export trade performance are influenced by exchange rate stability. The study showed that Nigeria exchange rate

stability has a positive and significant effect on export and GDP, which is, if exports are sufficiently risk averse, and increase in exchange rate raises the marginal utility of export revenue and therefore induces them to increase exports. A stable exchange rate will curtail inflation, increase export, maintain a favourable balance of trade, and help to solve the problem of deficits and increase the external reserve of the economy.

**5.3 POLICY RECOMMENDATIONS**

Sequel to the findings of this study, I specifically made the following policy recommendations to the maintenance of stable exchange rate. To control exchange rate, these policies have to be adopted.

1. The government should create incentive such as loan subsidy etc, to small scale industries, thereby encouraging them to process on domestic goods into processed goods that will help boast our export.

2. The government should encourage the export promotion strategies in order to maintain a surplus balance of trade.

3. An effective policy should be made based on the fiscal and monetary policies which should be aimed at achieving a realistic exchange rate for naira.

4. An appropriate environment and infrastructural facilities should be provided so that foreign investors will be attracted to invest in Nigeria. This will provide employment opportunities, increase the level of income and the standard of living of the people.

5. Strict foreign exchange control polices should be adopted in order to help in determination of appropriate exchange rate value. This will go a long way to strengthen the naira.

6. In the case of imports, tariffs can be placed to be very high on imported goods, thereby discouraging imports.

7. Exchange rate liberalization is also critical in facilitating trade in any economy, we therefore advice the policy makers to ensure that exchange rate should be determined by the forces of demand and supply.

8. Interest rate should be at minimum, in order for the purchasing power of an average Nigeria to increase.

9. Finally, the government should influence the foreign exchange rate, by positive economic reforms that will reduce the adverse effect of unstable exchange rate on the Nigerian economy with respect to trade flow and export.

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