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THE EFFECT OF EXCHANGE RATE ON THE NIGERIAN BALANCE OF

PAYMENTS (1970-2010)

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CERTIFICATION

This is to certify that this project work has been approved for the award of B.Sc. in the Department of Economics.

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DEDICATION

This work is dedicated to the Almighty God who has given me the opportunity to complete this program, and also seen me through my studies in the University. Also to my Dearest Parents Mr. and Mrs. Ephraim Orji for their endless support in the time spent in my studies and my research work.

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ABSTRACT

This work sets out to examine the relationship between balance of payment and exchange rate. The work is divided into five chapters; chapter 1 gives a general introduction to the subject matter, chapter two gives the general review of literature in the subject matter, chapter 3 gives or states the methodology and specifies the model used for testing. Chapter four runs the required test and provides the result as well as the interpretation and chapter five concludes the findings and recommends policy for the government based on the findings in the test.The ordinary least square regression (ols) method is used to test for R-squared test (explanatory power of the variables), T-test for the reliability, F-test for the overall significance of the exponentials and D.W test which is the econometric criterion for testing for presence of auto regressive scheme. The result shows a negative relationship between balance of payment and trade openness, also there exists a positive relationship between exchange rate and foreign direct investment. Since trade openness has a negative impact on the balance of payment it is recommended that the government should not consider it a policy for economic development.

TABLE OF CONTENT

CHAPTER ONE

INTRODUCTION

CHAPTER TWO

REVIEW OF LITERATURE AND THEORETICAL FRAME WORK

CHAPTER THREE

METHODOLOGY AND MODEL SPECIFICATION

CHAPTER FOUR

CHAPTER ONE

GENERAL INTRODUCTION

1.1   BACK GROUND OF STUDY

Right from time immemorial, a country's exchange rate and balance of payment is usually regarded as the sum of indices by which a nation's strength can be measured especially its economic strength. Paul (1996) defines balance of payments as an accounting record to all monetary transactions between a country and the rest of the world.

These transactions include payments for the country's exports and imports of goods, services and financial capital, as well as financial transfer. It summarizes the international transaction for a specific period usually one year and is prepared in single currency for the country concerned. Nzotta (2004) defines foreign exchange as the value of foreign nation's currency in terms of the home nation currency. In finance, the exchange rates (as also known as the foreign exchange rate or forex rate) between two currencies specify how much one currency is worth in terms of the other.

Devaluation is tall in a fixed exchange rate, which reduces the value of a currency in terms of other currencies. So what we are trying to do in this study is to determine how the reduction value of a currency with respect to the currency of another country affect the record of all monetary transactions between a country

and another, whether visible or invisible in a period of time. This is very important because no nation can exist on its own no matter how independent or self-sufficient it can be, it is important to have a relationship with other nations which can be characterized by goods and services going one way and foreign exchange   going the other way. When accessing the nation involved, a record of gains and losses may have been kept. As such a nation's foreign exchange and balance of payments can help slowdown, accelerate or decelerate walking growth progress and development. This will also have a positive or negative effect on the citizens since it deals mainly with economic relations.

Our nation Nigeria is currently facing serious problems regarding its foreign exchange rating (which is very low in comparison to other countries) and it's Balance of payment which is clearly in disequilibrium and in a deficit. As a result of this the government is retrogressing and the citizens clearly suffering.

 It is in a bid to discover why this is so and how this can be solved that this study as pertinent.

1.2   STATEMENT OF THE RESEARCH PROBLEM

Foreign exchange and balance of payment are the key factors of a nation's life. They are also factors to look into when comparing a country's relationship with other nations. These factors directly or indirectly affect a host of other factors

which are of severe importance in any nation. Consequently these factors can be seen as essential to the growth and development of the nation.

Currently these two factors can be said to have crippled the Nigeria economy and made life uncomfortable and unbearable for it citizens. These factors have brought the country to a level where growth and development appear to be an illusion.

Currently the nation's exchange rate has fallen so low due to unfavorable nature of the competing power of the nation's currency with foreign currencies of the world. Our economy has been trying to resolve the problem of external and internal balance, which has manifested in disequilibrium in our balance of payment and causing us a balance of payment deficit.

Much controversy had also been degenerated by the devaluation of our Naira (the national currency). Relevant literature and opinion on this issue are of the view that exchange rate policy plays an important role in maintenance of internal and external balance, on the other hands, other writers argued that devaluation is not the best policy for the less developed country because of many diverse results.

1.3   RESEACH QUESTION

This work is guided by the following research questions:

1. How does exchange rate affect the Nigerian Balance of payment?

2. How can the Nigerian Balance of payment position be improved?

1.4 OBJECTIVES OF THE STUDY

The general objective of this study is to examine the effect of exchange rate on the balance of payment of a nation with special reference to Nigeria. The specific objectives are to:

1. Evaluate the impact exchange rate on the Nigeria balance of payment.

2. Recommend ways of improving Nigerian Balance of payment positions.

1.5 RESEARCH HYPOTHESIS

Hypothesis will be tested in other to allow success of this work. The hypothesis includes;

1. There is no significant relationship between exchange rate and balance of payment (BOP) in Nigeria.

1.6 SCOPE OF STUDY

This study is limited to exchange rate and its effect on balance of payment with reference to the Nigeria economy. It covers a period of 40 years i.e from 1970 to 2010.

1.7 SIGNIFICANCE OF STUDY

The exchange rate and balance of payments of any nation are the heart and foundation of any governments' development. These are very controversial factors that are not doing well in Nigeria. Naturally, since our economy is import-dependent and as such dependent on other nations, this affects us greatly especially

since foreign involvement and foreign exchange is involved in every sector of the economy. It is the significance of this study therefore; to make known the relationship between exchange rate and balance of payments, policy implications and recommendations which will be of immense help to policy makers and balance of payments, and government especially as regard to the transaction of the exchange rate and balance of payment in Nigeria. It is also of importance to students and lecturers and the entire public who is interested in the subject matter and its utilization in whichever way.

CHAPTER TWO

REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK

The prime focus of this chapter is the review of all literature concerning the subject matter of all literature review is an account that has been published by scholars that are accredited. It reviews the critical points of current knowledge and methodological contributions to the subject matter.

2.3 LITERATURE REVIEW

Certain studies have been carried out by economists on the impact of exchange rate devaluation and the performance of the external sector.

Gafar (1980) using Jamaica as a case study tested for the effect of devaluation on the balance of payments adjustment. Using the elasticity approach based on the Marshall-Lerner's condition for exchange rate stability, he tested if devaluation is an appropriate policy tool for balance of payments adjustment. He estimated the price and income elasticity for import and exports of Jamaica including tourism. It was found that Marshall-Learners condition was satisfied in two condition estimated; first when tourism was excluded from the model and the other when tourism was included. He therefore concluded that while devaluation is a useful policy device to correct balance of payment deficits, it could possibly produce contra dictionary effects of used in isolation of other monetary and fiscal

measures. It is worthy of note that foreign exchange reserve is not inclusive in any of the two models estimated as it leads to high degree of correlation with the income variable.

Ajakaiye (1985) also using the elasticity approach analyzed the impact of alternative combinations of import structures and rise short runs after analyzing different bounds of import structures under alternative sets of price elasticity of demand for exports and imports in Nigeria, he concluded that devaluation might not work if the elasticity are such that relevant import structure does not hold. Devaluation should be accompanied by a certain form of import restructuring. But in a case were actual import structure fails within the bounds where the sum of price elasticity of demand for exports and competitive imports plus the difference between the price elasticity of demand for non-competitive imports weighted by the share of non-competitive imports in the total, exceed one; the devaluation could work but structure of import must be monitored on a continuous basis to ensure that it does not get out of hand; especially if elasticity are unstable.

In a situation where the actual import structure outside the range where both export and non-competitive imports are completely insensitive to changes in their prices; where both exports and competitive imports are insensitive to price changes; where price elasticity of demand for import is zero; where the competitive imports have zero price elasticity of demand then devaluation

accompanied by trade liberalization policies should be pursued to ensure that the eventual structure of imports falls within the desirable range.

Oluremi, (1985) in his paper titled "Devaluation and the Nigerian Economy: some observations" analyzed the likely effects of devaluation basing his model also on Marshall-Learner's condition. He concluded that the current structure of Nigeria does not support devaluation of the naira. He argued that as a policy measure to correct trade deficit, devaluation is useful only when considered strictly on the merit of the purpose and as a last resort when all other measures have failed.

Olutim et al (1986) adopted both theoretical and empirical approach to the issue of devaluation. On the theoretical grounds, they argued that be it from the perspective of relative prices (elasticity) approach, or the absorption approach, or even the monetary approach, neither offered a definitive guide as to when devaluation might be beneficial to a developing deficit country with internal adjustment problems.

2.2 THEORITICAL CONEPT OF EXCHANGE RATE

As we earlier said Nzotta (2004) defines exchange rates as the price of one currency in terms of another. Exchange rate is also the rate of transformation of one currency to another. An arbitrage in economics and finance is the practice of taking advantage of price difference between two or more markets, striking a combination of matching deals that capitalizes upon the imbalance, the profit being

the difference between the market prices. Arbitrage can also be seen as the mechanism whereby speculative purchase foreign currency in a market where its price is low and selling same in other trading centers where its price is high.

The objectives of the foreign exchange rate policies in Nigeria;

1. Stabilization of exchange rate

2. Attract foreign investment

3. Purchase economic welfare

4. Encourage export

5. Improve on balance of payment position

6. Raise the standard of living of Nigeria

7. Achieve a high level of employment

8. Ensure a favourable term of trade.

Fidelis (2009) also commented that one country's currency becomes more expensive in terms of another we say that the country's currency has appreciated on the other hand when more units of a domestic currency buys the other currency there is a case of depreciation.

Depreciation is also said to mean a lowering in value of a currency. According to Yakubu (2007) appreciation and depreciation depict a situation where the market force at demand and supply determine the exchange rates. It is often associated with a freely floating exchange rate system. The monetary

authorities may however, determine the exchange rate decree or executive flats based on their perceptions of macro-economic condition in the country.

Devaluation exists in any situation whereby the officially declared exchange rate is altered such that a unit of a country's currency can buy fewer units of foreign currency. On the other hand when the monetary authorities alter the exchange rate such that the domestic currency can buy more units of foreign currency, we say that a case of revaluation exists. Devaluation and revaluation represents official response of overvaluation and undervaluation respectively existing in a country's currency. Overvaluation is a situation is a situation where the exchange rate does not reflect the equilibrium exchange rate. In this situation the exchange rate is more expensive than other currencies. Undervaluation is the reverse of overvaluation and it should be noted that devaluation is a reduction in value of currency with respect to other currencies.

2.3.1 EXCHANGE SYSTEM AND MONETARY STANDARDS IN NIGERIA GOLD STANDARD

According Paul (1996) this system operated between 1870 till 1914. The fixed exchange rate system under gold standard was able to operate successfully before 1914 because the world economy itself was more stable.

During this stable pre-war period even fluctuating exchange rate regimes shows stability. Egware (2002) says that under the pre-gold standard determination

of exchange rate was simple. He stated as 1/30 ounces of Gold and one pond is defined as 4/30 ounces of Gold, one pound is therefore equal to 4 dollars as countries compare currencies with values of gold under gold standard.

There must exist the ability and willingness of a country to redeem its currency in gold at standard rate, the level of money supply and prices under the system depended on the volume of gold and thus inflows and outflows of gold affected the mint parities of the currency. Anyanwu (1993) says that this system was abandoned by the end of the 1930s.

However, an efficiently operating gold standard is characterized by a stable exchange rate fluctuating with narrow, clearly defined limits and an automatic balance of payments adjustment mechanism operating through price changes. These features result automatically if currencies have a specified gold content; currencies are readily convertible into and out of gold, there are no restrictions on the import and export of gold and there is no governmental intervention to counteract changes I gold stocks. Jinghan (1997) under his mint parity theory says that the rate at which the standard money of the country was convertible into gold was called the mint price of Gold. Kim(1993) notes that the God standard system worked rather well for about 35 years until the outbreak of the first World War in 1914. Then in order to finance the war, no country was willing to tie its money supply to the stock of Gold. After the war countries led by England tried to revolve

the old system but they were unsuccessful largely because it became out of hand and to return to the old value of gold which became distorted against other prices. Meanwhile in the United States in 1934 the congress enacted the gold reserve act by which the United States returned to another gold standard but this time a gold bullion standard. The price of gold was raised to 35 dollars per Ounce and the U.S. government stood ready to purchase or sell gold bullion instead of Gold coins at that price upon request from foreign governments. Gold coins and certificates were prohibited from circulation until this provision of the Act was rescinded in 1925. The gold bullion standard was incorporated into the gold dollar standard, which was the main stay at the IMF-sponsored interested monetary system during the period from 1947 to 1971. Under this system, values of the N-1 currencies were fixed to the US government treats its stock at gold as a commodity to be auctioned off from time to time at the prevailing market price as its need arises. This has been a substantial source of gold supply. In international transactions gold is rarely used as an international vehicle currency but is still used as a reserve currency by monetary authorities. This is because today no government can compel other countries to accept gold as a means of payment. According to Lranlett (1977) it is possible to sum up the advantages of gold standard. In the gold standard terms, there are three criteria:-

1. Confidence in it by the public

2. automatically of its operation

3. stability in the price level

Its merits include:

It provides stable exchange rates which are conducive to trade since they eliminate a source of price instability and foster a measure of economic stability.

It imposes fiscal orthodoxy on governments which in different circumstances resort to more expansionist measures to attend desired policy objectives.

Provided that operational rules are altered to, an efficiently operating gold standard allegedly ensures automatic balance of payments adjustments though price changes.

The demerits of the gold standard are;

The burden of balance of payments adjustment is shifted from the exchange rate to domestic economic variables of the subordination of the domestic economy to external economic forces, which is consistent with several deflation and even high unemployment in defense of overvalued exchange rates.

The emergence of a misaligned par value might encourage speculation of sufficient magnitude to cause exchange rate realignment.

Its adoption is tantamount to trying the growth of the world economy to the continued supply of what is essentially just a popular metal, since the system is dependent on adequate but not excessive supply of new gold.

The mining and processing of gold involves a real resources cost which might also be expected to rise as economic growth and accompanying rises in the demand for gold bring forth mines with progressively higher operating costs.

THE INTERWAR PERIOD OF INSTABILITY

According to Paul (1996) in the interwar period, the economic conditions throughout the whole world were chaotic. Fixed rates broke down and the governments were forces to shift to fluctuating exchange rate system. Empirical studies have shown that in the interwar period the flexible rate system showed signs, of stabilizing speculation in the country with conditions of relative macroeconomic stability and of destabilizing speculation in the countries with relatively disturbed conditions.

The fixed exchange rate or adjustable peg system

According to Bolaji (1994) this lasted from 1944 to 1971 in the mere stable and faster growing post war world economy. International monetary institutions proved more successful. The international financial order called the Breton Woods system provided a modified gold exchange standard. Under this system, the countries maintained adjustable pegs vis-a-vis the US dollar. The US took the

responsibility of exchanging gold for dollars with foreign central banks at a fixed price. A new institution, that is, the international monetary fund (IMF) was founded as a part of the Breton wood system. The adjustable peg system provided a compromise between fixed and flexible exchange rates and was aimed at achieving the twin objectives of

a. To establish international harmony and stable exchange rates associated with the gold standard

b. To allow individual countries the freedom to pursue their own macroeconomic policy. Explaining further Anyanwu (1993) said following the Breton woods conference of 1944, the Breton woods or fixed exchange rate system emerged whereby each country's exchange rate was currencies was fixed to the exchange rate of other country's currencies having a fixed parity with the US dollar. Each country was pledged to maintain its exchange rate within a narrow margin (plus/minus 2%) of the declared dollar parity. However, unlike a pure fixed rate system whereby a country have a fundamental BOP problem and could not hold its existing parity under the Breton wood system it was allowed to move to a new parity by devaluation or revaluation (hence the term adjustable peg) an arrangement where at any given time the authorities are committed to protect a given exchange rate. In other words a fixed exchange rate system does not involve exchange rates which are permanently fixed or immutable, rather it is a

system in which exchange rates are permitted to fluctuate within narrow bands centered around the par values both of which are fixed but not immutable. The par values might be adjusted in response to structural changes which result in persistent balance of payments deficits or surpluses (fundamental disequilibrium) or balance of payments imbalance which cannot be corrected at the prevailing exchange rate without recourse to exchange control or substantial income or price adjustments. Thus, as well managed fixed exchange rate system has the following features: a stable rate of exchange maintained through official intervention, within narrow clearly defined limits; long term exchange rate stability with frequent changes in official reserves, interest rates income and prices and to fundamental disequilibria through changes in par values or exchange rate enlightenments. Exchange rates are maintained on the foreign exchange market involving central banks sales of appreciating currency and purchases of a depreciating currency. Thus the adjustment mechanism consists of both financing and corrective components. **The merits of the fixed exchange rate system are;**

It imposes discipline in the fixed exchange rates are deterrent to irresponsible economic policies in any economy. This is because of any given nation wrongs a domestic policy, which is considerably out of line with that in other nations, it will

have great difficulty in maintaining its exchange rate within the narrow margin laid down.

It provides a potentially more efficient economic framework within which objectives such as the efficient capital resources allocation may more readily be attached.

It provides a measure of exchange rate stability and hence eliminates a further source of uncertainty and price instability.

It eliminates the risk and uncertainty of an adverse shift in exchange rates which tends to defer participation in international trade. Therefore the level of international trade and hence international specialization and division of labour will be greater.

It helps to insulate the economy against economic disturbance (monetary shocks) and there contribute to economic stability.

Finite official reserve and the prospect of devaluation imposed fiscal orthodoxy upon governments which may otherwise be more willing to resort to budget deficits to attain declared objectives of expenditure and;

The establishment of par values, to which the international financial community as committed, not only promotes international trade but also contributes to an economic climate which is conclusive to long-term international investment.

The demerits of the fixed exchange rate system include;

It encourages speculation and those indulging in it wins when they suspect exchange rate as under pressure and devaluation/revaluation is imminent. If they are wrong they lose nothing but if right they will gain substantially.

The inherent inflexibility of fixed rate system might prevent economies from responding sufficient rapidly to exchanging economic conditions.

In principle, exchange rates were supposed to remain stable at the designated parity with the US dollar, but to move immediately of fundamental balance of payment problems arouse. However in practice governments resisted parities at all cost since they saw it is a political defect resulting in domestic economics being subjected to excessive deflation, with attendant effects on growth and employment to stave of devaluation.

Exchange rate realignment tends to be resorted to only after all the corrective measures have failed, hence the subordination of internal to external economic objectives, which might proceed currency realignment, they subject economics to adjustment burdens which might prove both economically and socially costly.

It imposes a duty on nations to follow roughly similar economic strategies if their exchange rates are not diverging but they might be unwilling to surrender control over their domestic economic policies.

The emergence of a partially or temporally misaligned exchange rate might precipitate destabilizing capital flows of sufficient magnitude to convert a prospective into a realize currency realignment.

Protecting the exchange rate against temporary balance of payments of fluctuations requires each nation to maintain large resource of international liquidity but this involves social costs.

A system of fixed exchange rates is not necessarily self equilibrating for instance the co-existence of export bottlenecks and dependence of unstrategised imparts such as energy mighty contribute to a situation in which the adjustment process is unable to eliminate persistent payment deficits at prevailing exchange rates.

No withstanding the problem of selecting an appropriate par value the inflexibility of fixed exchange rates might worsen the distortions which result form structural changes in economic activities.

The pursuit of economically provident policies by selective nations may not be sufficient to ensure economic and exchange rate stability within these nation since fixed exchange rate repercussions of less prudent economic policies pursued by other nations operating within the system.

According to Paul (1996) the post-war experience with adjustable pegged exchange showed in exchange rate among major countries. But the system ceased

to be feasible due to the basic flow inherent in the system itself. It carried within itself the seeds of its own destruction.

The contradictable features of the adjustable peg system are;

a. Stable exchange rate

b. Autonomous national macroeconomic policies

c. Extensive international capital movements as a result of steady growth of international trade and liberalization of international transactions. The nations did not want to let go of (b) and did not like to impose controls necessary to modifying the effects of (c) and (a) let to go, conclusively the Breton wood system of fixed exchange rates collapsed in 1971 it was replaced by the system of managed floating rates.

THE MANAGED FLOATING SYSTEM/DIRTY FLOATING SYSTEM

According to Jinghan (1997) the system adjustable peg continued till 14th August 1971. Between 15th August 1971 and the Smithsonian agreement 18th December 1971, 48 countries including the US, Japan and a large number of European countries abandoned fixed exchange rates. The group of ten industrial countries met at the Smithsonian institution in Washington on 18-19 December 1971 and agreed to a new system of stale exchange rates with wider bands, as a first step towards realignment of major currencies, the US devalued the dollar by their mark by 14%. The Smithsonian agreements widen the margin of fluctuations

of the exchange rates to 2.25% above or below the new parities or central rates. In 1973 the bard was widened to 4.5%. Anyanwu (1993) explains this system by saying in 1971 the United States government suspended convertibility of the US dollar into gold and precipitated the collapse of the Breton woods system. It was replaced by default with a system of managed floating whereby exchange rates rise and fall with currency.

FLOATING EXCHANGE RATE SYSTEM

According to Philippon (1989) the Smithsonian agreement broke down following the US dollar devaluation of 12 February (1973). At the beginning of March 1973 India, Canada, Japan, Switzerland, the UK and several smaller countries had floating exchange rates. However the joint float of the EEC countries continued ever after March (1973) and was now called the snake in the lake as there was no band within which the EEC currencies could fluctuate relative to other currencies. According to Njoku (1997) this system of freely (clear) floating exchange rates which come into being in 1973 displays the features an exchange rate which fluctuate freely in response to changes in the demand for and supply of foreign exchanges; balance of payments adjustment mainly through exchange rate and interest rate changes, and the absence of international reserves of gold and foreign exchange, it implies greater exchange rate volatility than under a fixed rate

system in which official intervention dampens the magnitude of exchange rate fluctuations.

Therefore balance of payment adjustment must always occur within the overall balance due to absence of official reserve intervention of finance/accommodate deficits/supplies. Also the adjustment process consist of corrective and financing elements incipient disequilibrium is corrected through exchange rate changes, which change the relative prices of exports and imports and is financed through interest rate changes, which induce capital flow. Income changes will also contribute to the adjustment process.

The merits of this freely floating rate system include according to Jinghan (1997).

A system of flexible exchange is simple in its operative mechanism, the exchange rate move automatically and freely to equate supply and demand. It does not allow a deficit or surplus to build up and eliminates the problem of scarcity of surplus of any one currency. It also avoids the need to induce change in prices and income to maintain or restore equilibrium in the balance of payment.

Under a system of flexible exchange rates, automatically of the domestic economic policies is preserved. Modern governments are committed to maintain full employment and promote stability with growth. They are now required to sacrifice

these objectives of full employment and economic growth in order to remove balance of payment dis-equilibrium under a regime of flexible exchange rate.

As pointed out by Johnson the fundamental argument for flexible exchange rate is that the only allow countries autonomy with respect to their use of monetary, fiscal and other policy instrument by automatically ensuring the preservation of external equilibrium.

A system of flexible exchange rate does not require the introduction of complicated and expansive trade restrictions and exchange controls. The advocates of flexible exchange rate argue that attempts at fixing or manipulating exchange rates are especially objectionable because the control of exchange rate is often and trusted to experts who are effectively out of reach of any democratic control.

There is not a need for foreign exchange reserve where exchange rates are moving freely. A deficit country will simply allow its currency to depreciate in relation to foreign currency instead of intervening by supplying foreign exchange reserves to other country to maintain a stable exchange rate.

Under a system of flexible exchange rates, the adjustment is continual. The adjustments in the balance of payment are smoother and painless as compared with the fixed exchange rate adjustments. In fact flexible exchange rate avoid aggravation of pressures on the balance of payment under a system fixed exchange rates.

When foreign exchange moves freely there is no need to have international institutional arrangements like the IMF for borrowing and lending short term loans to remove disequilibrium in the BOP.

The system of flexible exchange rates reinforces the effectiveness of monetary policy. If a country wants to increase output it will lower interest rates. Under a regime of flexible exchange rates the lowering of exchange rates will result in an out flow of capital a rise in the spot rate for the currency which will in turn cause exports to rise and imports will fall. The increasing export will tend to raise domestic price of income or both. Thus a favorable trade balance will reinforce the expansionary effects of lower interest rate on domestic spending, thereby making monetary policy move effective. The above process will be reversed if the country wants to fight inflation by raising interest rate.

Since under a system of flexible exchange rates disequilibrium in the BOP is automatically corrected there is no need to accommodate gold movements and capital flows in and out of the country.

The demerits of a floating exchange system are according to Jinghan (1997);

It has been pointed out by critics at flexible exchange rate that market mechanism may fail to bring about an appropriate exchange rate. The equilibrium exchange rate in the foreign exchange market at a point may not give correct signals to

concerned parties in the country. This may lead to wrong decisions and misallocation of resources within the country.

Frequent variation in exchange rate creates exchange risks, breeds uncertainty and impedes international trade and capital movements. Exchange risk may be even more serious for long term capital movements. This is because under a system of flexible exchange rate, borrowers and lenders will be discouraged to enter into long term contract and the possibility of varying burden for servicing and repayment may be prohibitive.

It is difficult to define a freely flexible exchange rate. It is not possible to have an exchange rate where there is absolutely no official intervention. Government may not intervene directly in foreign exchange markets, but domestic monetary and fiscal measures do affect foreign exchange rate, further in the absence of any understanding among governments exchange rate manipulation, the system of flexible exchange rate laps into anarchy for every country which may lead to relation amongst nations and result in the war at exchange rate with disruptive effect on trade or capital movement.

Another serious issue to be considered for a flexible exchange rate system is its inflationary bias, it has been argued by critics that under a system of flexible exchange rate, a depreciation of the exchange rate leads to vicious circle of inflation.

The main case against the flexible exchange rate system is that it breaks up the world market.

Gertler (1994) says that the Jamaican agreement of January 1976 formalized the regime of floating exchange rate under the auspices of the IMF a number of factors forced the majority of member country of the IMF to float their currencies. There were large-short-term capital members and central banks failed to stop speculation in currency during the regime of adjustable pegs. The oil crises in 1973 and increase in oil price in 1974 in the industries leads to the great recession of 1974-75 in the industrial countries of the world. As a result the dollar went through a rapid decline which by late 1978 had such alarming proportions that United States government finally decided on the policy of massive intervention in order to prevent a further fall in the value of the dollar and to head of a possible financial panic. At last, the system of floating exchange rate has come to stay by 1978. By the second amendment of the IMF charter in 1978, the member countries are not expected to maintain and establish par value with gold or dollar. The fund has no control over the exchange rate adjustment policies of the member countries but is required to lay down principles for the guidance of members' exchange rate policies. It exercises international surveillance of exchange rate policies of its members.

THE EUROPEAN MONETARY SYSTEM (EMS)

The European monetary system (EMS) was formed in March 1979 out of the earlier European shake currency arrangements. It is an attempt to achieve greater European monetary stability, and thus take a further step towards the European monetary union, which will involve the coordination of monetary and fiscal policies and the adoption of a common European currency unit. Its essence is a system of a fixed but adjustable exchange rate. Its two elements are a currency basket and a grid system. It also has a divergence indicator.

2.3.2 TYPES OF EXCHANGE RATE

According to Mark (1999) in the foreign the foreign exchange market at a particular time, there exists, not one unique exchange rate but a variety of rates depending upon the credit instruments used in the transfer function. Major types of exchange rates are as follows.

SPOT RATE

Spot rate of exchange is the rate of which foreign exchange is made available on the spot. It is also known as cable rate or telegraphic transfer rate because at this rate cable or telegraphic sale and purchase of foreign exchange can be arranged immediately. Spot rate is the day to day rate of exchange. The spot rate is quoted differently for buyers and sellers. This difference is due to the transport charges,

insurance charges, dealer's commission etc. these costs are to be bond by the buyers.

FORWARD RATE

Forward rate of exchange is the rate of which the future contract for foreign currency is made. The forward exchange rate is settled now but the actual sale and purchase of foreign exchange occurs in future. The forward rate is quoted at a premium or discount over the spot rate.

LONG RATE

The long rate of exchange as the rate at which a bank purchases of sells foreign currency bills which are payable at a fixed future date. The basis of the long rate of exchange is in the interest on the delayed payment. The long rate of exchange is calculated by adding premium to the spot rate of exchange in the case of credit purchase of foreign exchange and deducting premium from the spot rate in due case of credit sales.

FLEXIBLE RATE

Flexible or floating exchange rate refers to the system in which the rate of exchange is determined by the forces of demand and supply in the foreign exchange market. It is free to fluctuate according to the changes in the demand and supply of foreign exchange.

FIXED RATE

Fixed or pegged exchange rate refers to the system in which the rate of exchange of the country is fixed or pegged in terms of gold to another currency

MULTIPLE RATE

Multiple rates refer to a system in which a country adopts more than one rate of exchange for its currency. Different exchange rates are fixed for importers, exporters and for different countries.

TWO-TIER RATE SYSTEM

Two-tier rate system is a form of multiple rate system in which a country maintains two rates, a higher rate for commercial transactions and a lower rate for capital transactions.

CURRENCIES SWAPS

According to Kim (1993) a currency swap transaction is a special case of repurchase agreements, by which, one party sells a given amount of foreign exchange at a given exchange rate with a promise to buy back the foreign exchange at a predetermined rate at a higher date. In swap transactions, the amount of sales of a foreign currency always equals the amount of repurchase. However in terms of the home currency units, the amount of payment and the amount of receipt

will usually be different. This difference per unit of foreign currency is term the swap rate. We may also consider a swap as a combination transaction. If the powers for both transactions are the same, we call the two combined transactions a pure swap. If the parity from which the purchases are made is not the same person to whom the sale was male, the combined transactions are termed an engineered swap.

FOREIGN EXCHANGE FUTURES

Ivan (1995) defines these as a standardized form of a forward contract. Therefore by such a futures contract one party is committed to buy and the other party to sell a standardized amount of a particular foreign currency. Each currency size is fixed according to traded currencies.

In addition to the size of the contract, some important standardized futures include the delivery date. Since the delivery date is constant some pre entering a future contract today and against tomorrow for instance, is in fact entering contracts having different maturity unlike the forward exchange market, forward exchange market futures are traded through an organized exchange furthermore, unlike the case forward a gain or less from a futures contract is posted daily as if the settlement were to take place daily. This practice is known as marked to the market daily. This is important to protect the exchange clearing house which acts

as the ultimate guarantor of due contract performance for administrative convenience. A minimum and maximum rate fluctuation is set.

CURRENCIES OPTIONS

Kim (1993) says that a currency option is a contract that gives the option holder the right to buy or sell a specified amount of a particular foreign currency at a contractual price within a specific period (American option) on a specific date (European option) a call option gives the right to buy, where as a put option gives the right to sell. Just like currency futures, currency option traded on exchanges of standardized contracts. An option contract involves a buyer, a seller their respective broker who bring them together and the exchange were the options are traded; the buyer pays the fee (known as premium to seller or writer).

2.3.3 FACTORS AFFECTING RATES OF EXCHANGE

Jinghan (1997) and Paul (1996) agreed that factors that cause changes in demand and supply in the foreign exchange market are responsible for changes in exchange rates.

Jinghan (1997) says that it is changes in the relative price levels that cause changes in the exchange rate.

When the import are more than exports the demand for foreign currency increases and the rate of exchange of the foreign currency will increase until that of the domestic currency will fall of the exports are more than the import the demand for

the foreign exchange will decrease and the rate of exchange for domestic currency will increase while that of the foreign currency will fall. He says that short term of long –term capital movement also influence the exchange rate. Capital flows tend to appreciate the value of currency of the capital importing country and depreciates the currency value of the capital exporting country. The exchange rate will move in favour of the capital importing country and against the capital exporting country. The demand for the currency of the capital –importing country will rise and its demand curve will shift upward to the right and the exchange rate will be determined at a higher level, given the supply curve of foreign exchange. According to him stock exchange operation in foreign securities, debentures, stock and shares etc exert significance influence on the exchange rate. If the stock exchange help in the sale of securities debentures, shares etc to foreigners the demand for domestic currency will rise on the part of the foreigners and the exchange rate also tends to rise. The opposite will be the case to the foreigners purchasing securities, debentures, shares etc though the domestic stock exchanges. According to him structural changes is another important factor that influences the exchange rate of a country. Structural changes are those changes, which bring changes in the consumer demand for commodities. They include technological changed etc which also affect the cost structure along with the demand for products. Such structural changes tend to increase the demand for domestic

products. It implies increase in exports, greater demand for domestic currency, appreciation of its value and rise the exchange rate.

Paul (1996) says that capital flow from one country to another brings changes in the rate of exchange. Banking operation affects the exchange rate. This is courtesy of the fact that banks are the dealers in foreign exchange. Banking operations that accept exchange for the purchase of bank drafts, letters of credit, arbitrage, dealing in bills of exchange etc. Changes in the bank rate also influence the exchange rate. If the bank rate rises relative to other countries, there will be inflow of foreign capital with a view to earning higher interest. As a result, the supply of foreign currency increases and the rate of exchange move against the foreign currency and in favour of home currency. On the other hand when the bank rate is reduced there will be an outflow of foreign capital. This reduces the supply of foreign currency and the exchange rate move in favour of the foreign currency and against the home currency.

If the speculators expect the value of the currency they begin to buy the currency in order to sell it in future to earn profit. By doing so they tend to increase the demand for the currency and raise its value. On the other hand if they expect or anticipate a fall in the future value of the currency they will sell their holdings in that currency as a result of this the exchange rate of that currency will fall lower.

When the government of a country gives protection to the domestic industries it tends to discourage imports from other countries. As a consequence the demand for foreign currency will decrease and the rate of exchange will move in favour of the home currency and against the foreign currency.

If a country gets loan from some foreign countries, the supply of foreign currency will increase. As a result of the rate of exchange will move in favour of home currency and against the foreign currency. But at the time of payment of loan or granting loan to the foreign country the supply of foreign currency will fall and the rate of exchange moves against the home currency and in favour of the foreign currency.

The policy of exchange control also brings about changes in the rates of exchange. Generally various measures of exchange control involve restrictions in import which leads to a fall in the demand for foreign currency. As a result the rate of exchange moves in favour of the home currency and against the foreign currency. These entail direct government administratively intervention in the foreign exchange market in order to determine administratively the uses and availability of foreign exchange for all or specific transaction. This may be done through the use of import licenses and the exercise of controls on capital transactions while requiring residents of the country to surrender all exchange control authority and obtain the approved of same to move foreign exchange payment. Such controls

may be used to correct balance of payments deficits to prevent capital flight, facilitate national planning, to generate increased government revenue and in protect domestic industries.

He says that changes in the internal value of money also reflect themselves or the similar changes in the external values. During inflation, the internal value (or the purchasing power) of home currency falls and they will be out flow of foreign capital from the country to avoid financial losses. As a result the demand for foreign currency will fall on the contrary during deflation, the internal value (or the purchasing power) of the home currency rises and here will be inflow of foreign capital to realize financial gains from the relative appreciation of the value of foreign currency and a change in the exchange rates in favour of home currency and against foreign currency.

According to him if the country is on the gold standard then the exchange rate will move within the limits set by upper and lower gold points. On the contrary in a country with inconvertible paper money system, there is no limit to the fluctuations in the rate of exchange.

The condition of peace and security in the country attracts foreign capitals. This supply of foreign currency in the country and the rate of exchange moves against the foreign currency and in favour of the home country.

2.3.4 INSTRUMENTS OF FOREIGN PAYMENT

A number of method or instruments are used to facilitate foreign payments some of them discussed below;

Bills of exchange:

The bill of exchange is a commonly used instrument in international payments. It is an order from the drawer (creditor) to the drawer (debtor) to pay the specified sum of money on demand or on some specified future date.

Bank draft

This is an order of a bank to its branch of some other banks to pay the bearer the specified amount. The debtor (importer in foreign transaction gets a bank draft from the bank and sends into his creditors (exporter) who on turn collects the specified amount from the bank in his own country.

Letter of credit

A letter of credit is an assurance from the writer of letter (a commercial bank) to a creditor on behalf of the debtor that the creditor will receive payment. The letter of credit provides an assurance to the exporter, that the bill will be paid by the bank. Thus the insurance of better of credit gives double assurance of payments because the exporter can now rely on the standing and integrity of the bank rather than on the standing and integrity of the importer alone.

Cable transfers

A cable transfer is a telegraphic order sent by a bank to its correspondent bank abroad to pay the specified amount to a certain person from its deposit account. Other instruments are travelers' cheque, personal cheques, international money orders, home currency, gold etc.

2.3.5 FOREIGN EXCHANGE MARKET

A foreign exchange market is a market in which foreign exchange transactions take place. It is a vehicle that makes possible the exchange of different national currencies. According the kindle bergher (1981) foreign exchange market is a place where foreign moneys are bought and sold. The foreign exchange market is merely a part of the money market in the financial centers.

There are two types of foreign exchange market:

(a) The retail market and (b) the interbank market.

(A) RETAIL MARKET

In the retail foreign exchange market, the individuals and firm who require foreign currency can bring it and those who have acquired foreign currency can sell it. The commercial bank dealing in foreign exchange serves their customers by purchasing foreign exchange from some and selling foreign exchange to orders. Thus each bank acts as a clearing house where purchase of exchange can be offset by rates of foreign exchange.

(B)   INTERBANK MARKET

Interbank foreign exchange market serves to smoother the excessive purchases or sales made by individual banks. At times the quantity of foreign exchange supplied exceeds the quantity demanded or vice versa.

DEALERS IN FOREIGN EXCHANGE

They include;

1. The bank

2. Broker acceptance houses

3. Central bank and treasury authorities.

Functions of foreign exchange market

i. **Transfer function:** The basic function of the foreign exchange market is to transfer purchasing power within currencies as well as facilitate the conversion of currencies.

ii. **Credit function:** Another function of foreign exchange market is to provide credit both national to promote trade.

iii. **Hedging function:** in a situation of exchange risks the foreign exchange market performs the hedging function. Hedging is the act of equating on access and liabilities in foreign currency to avoid the risk resulting from future changes in currency.

2.3.6 THEORIES OF RATE OF EXCHANGE

(1) MONETARY MODEL:

According to Nzotta (2004) this model assures that changes in the money supply affect the exchange rate one way or the order. The model tries to explain the changes in exchange rates in terms of changes in the demand for and supply of money between two currencies (Olisadebe 1991) conceptually an increase in real income given a fixed nominal money supply, leads to a fall in prices, thus making the exchange rate to appreciate.

Conversely an increase in money demand leads to increase in prices, which eventually lead to exchange rate depreciation. The monetary model draws heavily on the traditional quantity theory of money. The model according to Fisher expresses the relationship between the stock of money and the several price levels. There is the assumption that the evolution of actual velocity of circulation of money depends on the rate of inflation, real out put growth and monetary expansion. Obaseki (1990) agrees with the above and further stated that the rate of output growth was assumed to impinge on the evolution of actual velocity and ultimately on the rate of inflation. As the rate of inflation moves up there are changes in the exchange. The model adopts in simplistic view of the dynamics or exchange rate determination. Generally, differences in the interest rate and yields which affects the determination of exchange rates.

(2) THE MINT PAR PARITY THEORY

The mint parity theory explains the determination of exchange rate between the two gold standard countries. In a country on gold standard the currency is either made of gold or its value is expressed in terms of gold. According to the mint parity theory the exchange rate under solid standard is equivalent to the gold content of one currency relative to one another. This exchange rate is also known as mint rate. Jinghan (1997) explains it further by saying under the system; the currency in use was made of gold or was convertible into gold at a fixed rate.

The value of the currency unit was defined in terms of certain weight of gold, the central bank of the country was always ready to buy and sell gold at the specified price. The rate at which the standard money of the industry was convertible into gold was called the mint price of gold. The mint parity or mint par of exchange was the comparison of these values with each one. But the actual rate of exchange could vary above and below the mint parity by the cost of shipping gold between the two countries. A country is said to be on the gold standard if;

(a) The standard monetary unit is defined in terms of gold i.e. either it is made of gold of given pirating and weight of it is convertible into gold as fixed rates.

(b)   The government buys and sells by unlimited quantities at officially fixed price.

(c)   There are no restrictions in the export and import of gold.

The mint parity theory states that under gold standard the exchanges rate tends to stay close to the ratio of gold values or the mint parity or par. In other words, the rate of exchange between the gold standard countries is determined by the gold equivalents of the concerned currencies. According to S.E. Thomas, the mint par is an expression of the ratio between the statutory bullion equivalents of the standard of monetary unit of two countries on the same metallic standard. Thus when the currencies of different countries are defined in gold the exchange rate between such currencies is automatically determined on a weight to weight basis of the gold content of their currencies after making allowance for the parity of such gold content of these currencies.

Gold points: Mint rat is a long run phenomenon. In the long run, the forces of demand and supply of foreign exchange tend to be I equilibrium and the exchange rate has the tendency to become equal to the ratio of gold values of the mint parity. In reality the demand and supply forces experience changes and as a result, the market rate of exchange may differ from the long-run mint parity equilibrium. This variation in the exchange rate is within the well defined limits called gold points. This gold point refers to the limits within which the market rate of exchange

between two countries on gold standard fluctuates from the mint standard equilibrium level. The upper gold point indicates the upper limit and the lower gold point indicates the lower limit. The gold are determined by the cost shipping gold (such as transportation, packing, insurance changes from one country to another).

Thus the upper gold point is determined by adding the cost of shipping gold to the mint parity of exchange and the lower gold point is obtained by deducting the cost of shipping gold from the mint parity of exchange. The upper gold point is also called gold export point because it refers to the critical rate of exchange above which gold will be export anted. Similarly the lower gold point is called gold import point because it indicates the critical rate of exchange below which gold will be imported. Under the gold standard the exchange rate between two currencies cannot vary above the upper gold point and below the lower gold point. It will remain within these limit, as such we can talk of a fixed exchange rate.

In modern times the method of determining exchange rates in terms of gold contents mint parity has become absolute for the following reasons;

None of countries of the world is a gold standard, Free buying and selling of gold at the international level is not allowed by the government, Most of the countries are on proper standard or flat currency standard, The oppression of gold standard depends on flexible internal process. But the modern governments pursue

independent domestic prices and employment policies without considering exchange rate.

Under such condition it is not possible to fix the value of various currencies in terms of gold content or mint parity and determine the gold points to which fluctuation in the rate of exchange are confined

2.3.7 EXCHANGE RATE POLICY IN NIGERIA

Objectives of exchange rate policy in Nigeria

The objectives of exchange rate policy are generally the same as those of economic policy, viz; increase in output and it optimal distribution. This may be termed the ultimate objectives. The proximate objectives defines those that can be more directly influenced by exchange rate policy including the achievement of internal and external balance as well as increasing the efficiency of resources allocation external balance does not imply that the current account must be balanced at every turn. In fact, it may be desirable and feasible to deliberately unbalance the account and allow capital inflow. So, the attainment of external balance implies the achievement of a sustainable current account deficit, that is, a current account deficit financed in the short-to-medium term by a realistic inflow of capital. The qualification is necessary since it is neither desirable nor feasible to run current account deficit in the longer term.

Internal balance implies the achievement of high level of employment consistent with tolerable rate of inflation. Here the trade-off between inflation and the level of employment should be carefully evaluated since a consistent high pressure on demand may increase employment but at a cost of higher rate of inflation. Efficiency of resource allocation implies that resources move to areas where their impact on real output will be greatest, implication in efficient resource allocation in the need to realign relative prices so as to remove distortions which inhibit growth.

In Nigeria, the specific objectives of exchange rate policy include;

i.   The achievement of Bop viable in the medium

ii.   Reduction of dependence on imports and oil exports

iii. Diversification of the export base

iv.   Elimination of payment arrears

v.   Encouraging local production of inputs.

vi.   Correction of over-valuation of naira exchange rate through the achievement of a realistic rate; and reducing or eliminating the parallel market premium thereby improving resource allocation and enlarging the scope of legitimate foreign exchange transactions.

Measures to ensure a viable and stable naira exchange rate

Available data indicate that the over-valuation of the naira exchange rate which characterized the erstwhile rigid exchange rate regime has been largely eliminated. The over-valuation of the naira exchange rate measured against ppp equilibrium was about 200% in the pre SAP period and was eliminated bty 1987, (Nwachukwu 1993). Also, the parallel premium which was over 300% in 1985 has been drastically reduced. However, in recent months, the naira exchange rate ahs tended to veer from the equilibrium. As noted earlier, the real exchange rate as a function of many variables notable, the relative inflation and interest rates between Nigeria and her trading partners as well as the incidence of speculation, among others. Consequently, stability of the variables themselves should be as stable as possible.

Thus, the viability and stability of the exchange rate in the future requires a consideration the future stability of those variables that influence the rate. However, to ensure that the factor that determines the rate achieve their desired objectives, it is necessary that the factors themselves should move freely to reflect changes in economic fundamentals. It is therefore necessary to assume that economic policy will continue to be formulated within the framework of the liberalized and deregulated economic environment, where economic agents are free to respond to free market originals. It should however, be noted that it might be expedient as a matter of deliberate policy to allow the exchange rate to diverge

from equilibrium in this regard, the exchange rate of a currency could remain under-valued if policy is to encourage exports, given the right conditions. Some newly industrialized countries of Asia pursued this line of policy to encourage their manufacturing sectors to produce exports.

The assertion here is that, since the naira exchange rate is still unstable. There is need to intensity actions to push it towards equilibrium. The future stability of the naira exchange rate will depend on efforts to reduce the pressure on the general level of prices reduce the huge fiscal deficit, harmonize fiscal and monetary policy and reduce the excess demand for foreign exchange.

2.4 SUMMARY OF LITERATURE REVIEW

It is not suitable for a country which follows a fixed exchange rate system. It makes international trade risk and thus reduces the volume of trade. The term of trade go against the country whose currency depreciates because the foreign goods had become costlier than the local goods and the country has to export more to pay for the same value of imports. Experience of certain countries has indicated that exchange depreciation generates inflationary pressure by increasing the domestic price level and money income.

The success of the method of exchange depreciation depends upon the co-operation of other countries. If other countries also start depreciating their exchange rates, then this method will not benefit any country.

2.5 THEORETICAL FRAME WORK

Theories put forward have in one way or the other stressed the effect of exchange rate devaluation on the balance of payment and resulting strain placed on the economy and trade as well as its resultant effect on economic/national development and growth, international trade as well as money and the welfare of the citizenry. The theoretical framework of this is the balance of payments or modern theory.

2.5.1 BALANCE OF PAYMENT OR MODERN THEORY

The balance of payments theory is the modern and most satisfying theory of determination of the exchange rate. It is also called the demand and supply theory of exchange rate. According to this theory, the rate of exchange in the foreign market is determined by the balance of payments in the sense of demand and supply of foreign exchange in the market. Here balance of payment is used in the sense of market balance, if the demand of a country's currency falls at a given rate of exchange; we can speak of a deficit and its balance of payments. Similarly, if the demand for a country's currency rises at a given rate of exchange, we can speak of surplus in its balance of payments. A deficit balance of payment leads to a fall or depreciation in the external value of the country's currency. A surplus balance of payment leads to an increase or appreciation in the external value of the country's currency.

According to Eusworth (1999), "If market forces are allowed to work unimpeded, the demand and supply of foreign exchange establish a rate of exchange that automatically clears the markets so that no actual or export payments deficit or surplus can appear". In the words of Walter, if the exchange rate is permitted to respond fully to changing supply and demand conditions, the status at the balance of payments of country tends to determine the value of its currency relative to the currencies of other nations.

There is a close relation between the balance of payments and the demand and supply of foreign exchange. Balance of payment is a record of international payment made due to various international transactions, such as, imports, exports, investment and other (commercial, financial and speculative transactions. The balance of payment includes all payments made by foreigners to nationals as well as payments made by nationals to foreigners. The incoming payments are credit while the outgoing payments are debits. The credit in balance of payment of the exports items constituted the supply of foreign exchange; the supply of foreign exchange is made by the exporting country. On the other hand, the debits in the balance of payments or the import items constitute demand for foreign exchange; the demand for foreign exchange arises from the importing country.

Any deficit or surplus in the balance of payments causes changes in the demand and supply of foreign exchange and this leads to fluctuations in the

exchange rate. When there is deficit in the balance of payments, the debit (or the demand for foreign exchange) will exceed the credits (or the demand for foreign exchange). As a result, the rate of exchange will rise (or the exchange value of domestic currency in terms of foreign exchange), exceeding debits (or the demand for foreign exchange), which in turn, will lead to a fall in the rate of exchange (or a rise in the external value of domestic currency).

According to Otaki (2005) balance of payments is a systematic record of all economic transactions, visible as well as invisible in a period between one country and the rest of the world. It shows the relationship between one country's total payments to all other countries and its total receipts from them. Bop, thus is a statement of payments and receipts and international transactions. Payments and receipts on international account are of three kinds;

(a) The visible balance of trade (b) The invisible items and (c) Capital transfers.

Kindle Berger defines balance of payments as "a systematic record of all economic transactions between the residents of the reporting country and the residents of foreign countries during a given period of "time" in the words of Benhan, "Balance of payments of country is record of the monetary transactions over a period with the rest of the world". Benjamin (2007) describes it as a statistical record of the character and dimension of the country's economic relationship with the rest of the world.

2.5.2 FEATURES OF BALANCE OF PAYMENT

The balance of payment account of a country's constricted on the principle of double-entry book-keeping. Such transaction is entered on the debit and credit side of the balance sheet, but balance of payments accounting differs from business accounting in one respect. In business accounting debits are show on the left side and credit on the right side of the balance sheet. But in balance payment accounting to the practice is to show credits on the left side and debits on the right side of the balance sheet. When a payment is received from a foreign country it is a credit transaction. The principal items show on the credit side are exporters of goods and services, unrequited (or transfer receipt in the form of gift etc from foreigners borrowing from abroad, investments by foreigners in the country, and official sale of reserve assets including gold to foreign countries and international agencies). The principal item on the debit side include imports of goods and services, transfer payment to foreigners lending to foreign countries, investments by resident to foreign countries and international agencies. These credit and debit items are shown vertically in the balance of payment account of a country according to the principle of debit entry book-keeping. Horizontally they are divided into three categories: the current account, the capital account and the official settlement account or the official reserve assets account. Anyanwu (1993) says the transactions include buying, selling, borrowing and lending, investment

and disinvestment, income from investment and the repatriation of profit and difference in addition to gifts and grants. All transactions which entail inflow of payments are taken as credit plus entries while debit or minus entries are those transaction which generate an outflow of payment according to Barwa (2004) Bop has the following features;

It is a systematic record of all economic transactions between one country and the rest of the world. It includes all visible as well as invisible transactions and makes in a period of time generally it is an annual statement. It adopts a double entry book-keeping system. It has two sides, credit side and debit side. Receipts are recorded on the credit side and payments, on the debit side.

When receipt is equal to payment the balance of payment is in equilibrium when receipt recorded on the red of side and payments on the debt side in the accenting sense total credits in the balance of payment statement always balance each other.

USES OF BALANCE OF PAYMENT ACCOUNT

1. To inform governmental authority of the international position of the country.

2. To aid governmental alternative in reaching decision on monetary and fiscal policies on the one had and trade and payment question in the other.

3. They are used to measure the resources flow between one country and another.

4. information on payment and receipts in foreign exchange, constituting a foreign exchange budget, help to assure monetary authorities that the country could

go on buying foreign gods and meeting payment in foreign currency when they become due.

5. To measure the influence of foreign transaction on national income.

2.5.3 DISTINGUISHING BETWEEN BALANCE OF PAYMENT AND BALANCE OF TRADE

According to Caballero (1999), Balance of trade refers to the export and import of visible items material goods. It is the difference between the value visible exports and import. Visible items those items which are recorded in the customs returns: for example, materials goods exported and imported. If the value of visible import is greater than that of visible exports the balance of trades is equilibrium balance of trade as also known as merchandise account exports and imports. Balance of payment the other hands, is a more comprehensive concept because it covers (a) visible item (b) balance of trade or merchandise account and (c) invisible items invisible items are items which are not recorded in customs return, for example, services, (such as transportation banking, insurance etc) capital, purchase and sales of goods etc. Jinghan (1997) expatiating future says that the balance of payment of country as a systematic record of its receipt and payment in international transaction in a given year. Each transaction as entered on the credit and debit side of the balance sheet. The principle items on the credit side are,

1. Visible exports which relate to the goods extorted for which the country receive payments.

2. Invisible exports which refers to the services rendered by the country to other countries. Such services consist of banking insurance, shipping and other services rendered the form of technical know how etc. money spent by tourist and student visiting the country for travel and education.

3. Transfer receipt in the form of gift received from foreign.

4. Borrowing from abroad divestment by foreign in the country

5. The official sales of reserve assets including gold foreign countries and international institutions.

THE PRINCIPLE ITEMS ON THE DEBT SIDE ARE:

i. Visible import relating to goods imported for which the country made payment to foreign countries.

ii. Invisible imports in the form of payment made by the home currently for service rendered by foreign countries. This is as earlier mentioned under invisible exports

iii. Transfer payment to foreign in from of gifts etc.

iv. Loans to foreign countries, investment by residents of foreign countries and debt repayments of foreign countries.

v. Official purchase of reserve assets of gold from foreign countries and international institutions.

Mathematically, Bop is;

Y=C+I+G+(X-M) which includes all transaction which gives rise to or exhaust national income give rise to or ex-incase

Y= national income

C=consumption expenditure

I= investment of expenditure

G=government expenditure

X= export of goods and services

M= imports of goods and services

The expression (X-M) denotes the balance of trade. If the difference between x and m is zero the balance to trade balances if x is greater than m, the balance of trade. One the other hand of x is less than m, due balance of trade is in deficit or is unfavorable according to Paul (1996) balance of payment is a broader term than balance of trade.

2.5.4 COMPONENTS OF BALANCE OF PAYMENT

Hayashi (1982) say that the components of balance of payment are current account, capital account and official settlements account.

1. CURRENT ACCOUNT

The current account of a country consists of all transaction relating to trade in goods and services and unilateral (or unrequited) transfers. Transactions include travels and transportation, income and payment of foreign investments etc.

Transfer payment late to gifts, foreign aid, pension, private remittance charitable etc. received from foreign individuals and governments to foreigners. The current account records all transaction in goods and services. i.e. it portrays the flow of goods and services in the from of exports and imports for a country during a given year. Merchandise of good exports and imports are visible since they consist of tangible things which can be seeing. Recoding of only this portion of balance of payments is termed visible balance of trade. Exports and import of services are invisible since they are intangible, which cannot be seen. The visible balance plus the invisible balance is called the balance of trade on current account.

In Nigeria the current account include requited transfers (Private and official) or unilaterally transfer and therefore which there no corresponding payment. Accordingly to the international monetary fund (I.M.F), the current account of the balance of payment includes the following items.

1. Merchandise (exports constitute the credit side and import in the debit side).

2. Travels expenditure by foreigners in our country form credit item and expenditure from our citizens aboard forms debts item)

3. Transportation (use of domestic transport by foreign is a credit item and use of foreign transport by domestic traders is a debit item).

4. Insurance (Insurance policies sold to foreigners are credit item and insurance policy purchased by domestic users from foreigners are debit items)

5. Investment income (income received a capital invested abroad is the credit item and income fail on capital borrowed from abroad the debit item).

6. Government transactions: This refers to the expenditure incurred by a government for the up-keep of its organization abroad, example Embassies commission. Such amount received by government from abroad constitute the credit item and payment made on the foreign government from the debit item

7. Donation and gift etc received by a country from aboard are credit items and sent to the foreign countries are the debt item in the account Donations and gift are undiluted transfers or unrequited payment because nothing is given return for item.

2.5.5 DISEQUILIBRIUM IN BALANCE OF PAYMENT

Normally the balance of payments of accounting should be in equilibrium i.e the import and exports of goods and service should be equal. But in reality it is not so. Disequilibrium generally arises in the balance of payment account. Balance of payment may be unfavorable when there are excess of debits over credits (deficit balance). It may be favorable when there is excess of credit over debit (surplus

balance). The phenomenon of disequilibrium is particularly related to the current account of balance of the payment statements, the capital account is used to settle the imbalance in the current account through changes in the financial flow of funds.

There are three ways of measuring the deficit or surplus in the balance of payment. First, there is the basic balance which includes the current account balance second there is the net liquidity balance which include the basic balance and the short term private non-liquid capital balance allocation of SOR, and errors and commission, tend here is the official settlement balance which includes the total net liquid balance and short term private liquid balance short-term private liquid capital balance. Each balance would give a different figure of deficit.

CAUSES OF DISEQUILIBRIUM IN THE BALANCE OF PAYMENT

According to Usman (2009) there are many factors that may bring a deficit or surplus in its balance of payments. But for the cause of this study, I will mention but a few:

There may be temporary disequilibria caused by random variation on trade, seasonal fluctuation, the effects of weather on agricultural production etc. Deficit of surpluses arising from such temporary causes are expected to correct them

within a short period. Also there are chronic or fundamental disequilibria. They may arise due to fundamental charges in the economic condition of the country. They may be due to changes in consumer tasks within the country or abroad hereby affecting the country's import or exports.Technology changes in the method of production of product in the domestic industries on in the industries of other countries may affect the country ability to compete in the home or foreign market. This may be due to change in cons and prices and the quality of product following technological improvements.

Another cause is the changes in the country's National Income (NI), if the NI of a country increases, it will lead to an increase and import hereby creating a deficit in its balance of payment other thing remaining the same.

A country's balance of payment also depends on us a stage of economic development. If a country is developing it will have a deficit in its balance of payments because it imports raw materials machinery, capital equipment and services associated with the development process and exports primary product. The country has to pay more for costing imports and gets less for cheap export this leads to disequilibrium in it balance of payment.

Borrowing and lending of other countries also result in disequilibrium in the balance of payment. But since a possibility is remote because these countries usually import large quantities of goods, raw materials capital goods, etc. and

export pricing products, such borrowing simply helps in promoting balance of payment deficit.

The following are also various causes of disequilibrium in the balance of payment (Bop). The main reason for adverse Bop in the developing country the huge investment in development schemes in these countries. The propensity to import of the developing countries increases for that at capital for industrialization. The export on the other hand might not increase because these countries are traditionally primary products countries. More over the volume of export may fall because the newly created domestic industrial may need them.

Changes in price-cost structure of export industries affect the volume of export and crated disequilibrium in the price to higher wages, cost of raw materials, etc reduces exports and makes. The balance of payment is unfavorable.

Changes in the rate of exchange, is another cause of disequilibrium in the balance of payment. An increase in the external value of money makes import leaper and exports dearer.

There has been a considerable decline on the export demand for the primary goods of the under developed countries as a result of the large production of domestic goods like food stuff, raw materials and substitutes in the rich country. However, the deficit in the balance of payments due to the fall in export demand is more persistent in the under developed countries than in the advanced countries

TYPES OF DISEQUILIBRIUM

The main types of disequilibrium in the balance of payments are as given below,

1. Cyclical disequilibrium; arises due to business cycles. It is caused

a. By cyclical pattern of income

b. Different income elasticity.

c. Different price elasticity.

These factors bring change in the terms of trade as well as growth of trade which in turn leads to a deficit or a surplus in the balance of payments. When prices rise in prosperity, a country with elastic demand for imports will experience a decline the value of imports thus leading to a surplus in the BOP. Conversely as prices decline in depression, more elastic demand will increase import and cause a deficit in the Bop. These tendencies may airwave be offset by the effects of income changes high income during prosperity increases import and low income during depression reduces import.

a. **Secular disequilibrium or long** –term disequilibrium in balance of payment s occurs because of long scales and deep rooted changes in the economy as it moves from one stage of growth to another. In initial stage of economic developing, domestic investment exceeds savings and import exceeds exports. Disequilibrium occurs due to lack of fund to finance the import surplus. They comes a stage when domestic savings tend to exceed domestic investment and

export exceeds import. Disequilibrium arises because the surplus savings exceeds investment opportunities abroad. At a still later stage, domestic saving tends to equal domestic investment and long term capital movement on balance become zero.

2. **Structural disequilibrium** in the balance of payment occurs when structural changes in some sectors of the economy after the demand and supply forces influencing exports and import. According to kindleberger, structural disequilibrium may be of two types:-

a. Structural disequilibrium at the goods level, this occurs when a change in demand or supply of exports or imports others a previously existing equilibrium or when income is earned or spent abroad, in bath cases without the required parallel changes elsewhere in the economy.

b. Structural disequilibrium at the factor level results from factors which fail to reflect accurately factor endowments i.e when factors prices, out of the with factors endowment, distort the structure of production from the allocation of resources which appropriate factor prices, would have indicated. Structural disequilibrium is caused by changes in technology, task and attitude towards foreign investment, political disturbance, strikes lock outs, etc. which affect the supply of export also cause structural disequilibrium.

3. **Fundamental disequilibrium** has been originally used by the IMF, to indicate a persistent and long-term disequilibrium in a country's balance of payments. Fundamental disequilibrium is generally caused by dynamic factors and particularly leads to chronic deficit in the balance. The main causes of fundamental disequilibrium are

a. Excessive or internal demand for foreign goods.

b. Excessive or inadequate competitive strength in the world market.

c. Excessive capital movement.

2.5.6 METHODS OF CORRECTING OR ADJUSTING DISEQUILIBRIUM

When there as a deficit or surplus in the balance of payments of a country adjustment is brought about automatically through price and income changes or by adopting certain policy measures like devaluation and direct controls. Persistent disequilibrium in the balance of payments particularly the deficit balance is undesirable because it:

a. Weakness the country's economic position at the international level. And

b. Affects the progress of the economy adversely. It might be cured by taking appropriate measure. There are money methods to correct disequilibrium in the balance of payments. Important among them are discussed below.

DEPRECIATION

This is a method of correcting disequilibrium in the balance of payment. Depreciation means fall in the rate of one currency (home currency). A currency will depreciate when its supply in the foreign exchange market is large in relation to its demand. In other words a currency is said to be depreciated it its value falls in terms of foreign currencies i.e if more domestic currency is required buy a width of foreign currency. The effect of depreciation is to make imports dearer and export cheaper to encourage exports and discourage imports while

The reverse happens in the case of appreciation under flexible exchange rates the disequilibrium in the balance of payment is automatically solved by the forces of demand and supply for foreign exchange.

An exchanges rate is the price of a currency which as determined like any other by demand and supply. According to so Dersten (1994) the exchanges rate vary with varying supply and demand condition but it is always possible to fund an equilibrium exchange rate which clears the foreign exchange market and creates external equilibrium. This is good with reduction in imports. Consequently the balance of payment deficit is eliminating. Thus by increasing export and decreasing imports, devaluation in terms of payments the success of the method of devaluation depends upon the following conditions

1. The elasticity of demand for the country's exports should be greater than unity.

2. The elasticity of demand for the countries imports should be greater than unity.

3. The export of the country should be non-traditional and be increasingly demanded from other countries.

4. The domestic price should not rise and remain stable after devaluation. Other countries should not retaliate by regarding to corresponding devaluation such a retaliating measure will off set each others again.

Devaluation also suffers from certain defects,

1. Devaluation is a clear reflection on the country's economic weakness.

2. It reduces the confidence of the people in other country's currency and this may tend to speculative out flow of capital

3. It encourages inflationary tendency in the home country.

4. It increases the burden of foreign debt.

EXCHANGE CONTROL

According to Paul (1996) this is the most widely used method for correcting disequilibrium in the balance of payments. Exchange controls refer to the control over the use of foreign exchange by the control bank. Under this method all the exporters are directed by the central bank it surrenders their foreign exchange earnings.

Foreign exchange is licensed among the licensed importers, only essential importers are permitted.

2.5.7 THE EFFECT OF EXCHANGE RATE ON THE BALANCE OF PAYMENT

This was already discussed fully and explained throughout his study. But as put by Anyanwu (1993) it is a deliberate measure of shifting the exercise rate against the have currency. The reason for devaluation is that the increase in import prices would reduce import bill while the exports will increase value because of a fall in their prices and a greater increase in export volume. In other words imports become less attractive because they become more expensive in the terms of the domestic currency. It is a know measure of correcting disequilibrium in a deficit balance of payments. They are different approaches adopted in discussing devaluation two of such approaches are the elastics approach and the absorption approach.

CHAPTER THREE

RESEARCH METHODOLOGY

1.33.0 METHODOLOGY

The ordinary least square (ols) method will be used for the regression analysis. This estimate is used based on GAUS-MARKOUS Theory which states that the Ols is the best linear unbiased estimate (BLUE) with the following assumption of the error term u.

i.   U is a random real variable that is the value, which it may assume in any period, depends on chance, it may be positive negative.

ii.   The mean value of u in any period is zero.

iii.   The variance of u has a normal distribution.

iv.   The variance of u is constant in each period.

This assumption about the behavior of "u" may be summarized as u=u $(0,0^2)$ (koutsoyaniss)(1997:109).

1.43.1 MODEL SPECIFICATION

Model specification is showing the mathematical and economic relationship that exist between the dependent and independent variables (koutsoyaniss 1997:122) stressed the importance of expressing the relationship under study an mathematical form. In the study, exchange rate, openness and foreign direct investment is used as the independent variable (exogenous) while balance of payment is used as the

dependent variable (endogenous). To measure the effect of exchange rate devaluation on the Nigerian balance of payments, Bop=+ (EXR, OPN, FDI).

The model specified is as follows

$Bop = b_0 + b_1 EXR + b_2 OPN + b_3 FDI + Ut$

Where BOP=Balance of payment (dependent variable)

EXR=Exchange rate

OPN=openness of the economy

FDI =foreign direct investment

U =stochastic error term

b_0.......b_3=regression coefficients of the parameter estimate.

3.53.2 ESTIMATION TECHNIQUES AND METHOD OF DATA ANALYSIS

In our model, the (OLs) ordinary least square is used to estimate the coefficient of the parameter used in specifying the relationship between the dependent variable and independent variable. The adjusted R^2, t-values, D.W-and F ratio will be used to evaluate the statistical reliability of the results estimated.

3.2.1 STATISTICAL TEST (FIRST ORDER TEST)

The computed R^2 will be used to judge the explanatory power of the regression. It measures the goodness of fit of the regression line. The formula for R^2 is

$R^2 = bi\ Eyxi + b_2\ EyX_2 + \ldots\ldots\ldots + b_n\ EyX_n / Ey^2$

where bi, b_2 ....b_n are estimated coefficients

$X_1, X_2 -- X_n$ are the explanatory variables

Y is the dependent variable

The adjusted R^2 is used to form the additional explanatory variable in the function, which increases the value of the numerator of the expression for R^2, while the denominator remains the same. The correction is done by taking into account the degree of freedom, which clearly decreases as new regressors are introduced in the function. The expression for the adjusted coefficient is

Adjusted $R^2 = 1-(1-R^2)$ n-i/n-K, where the f test is used for judging the overall significance of the model estimates. It provides the impact of independent variable on the dependent variable. The regression might not have influence on the dependent variable in conjunction with other regressions. We shall make use of 5% level of significance and (L-i)(n-k) degree of freedom where Vi=k-I,

V_2 =n-k

K= number of parameters

N=number of samples

R^2 =multiple correction.

The t-test is used for judging the statistical reliability of the estimates of the regression coefficient. It is most appropriate when the sample size is below 30. It provides a measure of the degree of consideration we may attribute to the estimate. The student "t" test is given as,

T= bi/s(bi) where

Bi=parameters estimate

S(bi)= standard error of estimate.

The decision rule is that if t>t we reject the null hypothesis (t = calculate "t", t is tabulated "t"), that is to say the estimates are not significant.

The F-test is used for judging the overall significance of the model estimates. It provides the impact of the independent variable on the dependent variable. The regression might not have influence on the dependent variable in conjunction with other regressions. We shall make use of 5 percent level of significance and (k-1)(n-k) degree of freedom where vi=k-1, vii=n-k

3.2.2 ECONOMIC A PRIORI TEST

This evaluation will show if the coefficient conforms to the standard economic theory expectation. We find out if the relationship of the dependent and independent variable meet the a priori expectation of signs (i.e. positive or negative relationship).

VARIABLE	EXPECTED SIGNS
Bop	this is the dependent variable So it has no sign
EXR	Positive (+)
OPN	positive (+)
FDI	Positive (+)

3.2.3 ECONOMETRIC TEST (SECOND ORDER TEST) (DURBIN WALSON)

These are set by the theory of econometric and at investigating if the assumption of econometrics method employed the satisfied not in a particular case. This is statistic square regression. However this test is appropriate for the first order auto regressive scheme, the null hypothesis is tested against the alternative hypothesis to test the null hypothesis we use

$D=(et-1)^2/e^2$ where

Et =present errors and

Et-1=previous errors.

The value of Durban walson statistics lies between zero and four. The decision rule is D=2, we accept that there is no auto correction among the independent variable entered in the regression.

However, O<D<2, there is some degree of positive auto correlation which is stronger, the closer D is to O, if 2<D<4 there is the degree of negative auto correlation which is stronger, the higher the values of D.

1.53.3 SOURCE OF DATA REQUIRED AND DATA REQUIRED

1.6   Annual the series data on the variables under study spanned from a period of 40 years. Some of this time series data is extracted from the central bank of Nigeria (CBN) statistical bulletin. Variable used in this research work

include the dependent variable (balance of payments (Bop). The independent variable (exchange rate, openness of economy and foreign direct investment)

The openness of the economy which is given by trade export +import divided by the GDP

OPN=X+M

$\overline{\text{GDP}}$

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULT.

4.1   Presentation and Interpretation of Result:

Dependent variable: Balance of Payment.

Method: Ordinary Least Square.

Period of study: 1970 – 2010

Included Observations: 41

Variable	Coefficient	Standard error	t-statistics	t-prob.	{95% Confidence	Interval}
Constant	-75937.57	410094.3	-0.19	0.854	-906867.6	754992.5
OPN	-1132719	136695.9	-8.29	0.000	-1409691	-855746.9
EXR	26879.45	14021.28	1.92	0.063	-1530.359	55289.27
FDI	52.35952	10.15667	5.16	0.000	31.78014	72.93889

$R\grave{y}$ = 0.6858   F{3,   37} = 26.92   Prob > F = 0.0145

DW = 1.278306   Root MSE = 14.947 for 4 variables and 41 observations.

From the above, the interpretation of the result as regard the coefficient of

various regressors is stated as follows:

The value of the intercept which is -75937.57 shows that the Nigerian economy will experience a 75937.57 decrease when all other variables are held constant.

The estimate coefficients which are -1132719 {OPN} shows that a unit change in OPN will cause a 1132719 units decrease in BOP, 26879.45 {EXR} shows that a unit change in EXR will cause a 26879.45 units increase in BOP and 52.35952 {FDI} shows that a unit change in FDI will cause a 52.35952 units increase in BOP.

4.2   Economic Apriori Criteria:

The test is aimed at determining whether the signs and sizes of the results are in line with what economic theory postulates. Thus, economic theory tells us that the coefficients are positively related to the dependent variable, if an increase in any of the explanatory variables leads to a decrease in the dependent variable.

Therefore, the variable under consideration and their parameter exhibition of apriori signs have been summarized in the table below.

Variables	Expected signs	Estimate	Remark
OPN	+	$\beta < 0$	Does not conform
EXR	+	$\beta > 0$	Conforms
FDI	+	$\beta > 0$	Conforms

From the above table, it is observed that all except OPN actually conforms to the economic theories.

A positive relationship which exists between EXR, FDI and BOP indicates that an increase in EXR and FDI will result in a positive change in Balance of Payment. This conforms to the priori criteria because an increased or high EXR and FDI over the years will increase Inflation in the economy.

4.3   Statistical Criteria {First order test}

4.3.1.   Coefficient of Determination {R^2}:

The R^2 {R-Squared} which measures the overall goodness of fit of the entire regression, shows the value as 0.6858 = 68.58% approximately 69%.

This indicates that the independent variables accounts for about 69% of the variation in the dependent variable.

4.3.2. The Student's t-test:

The test is carried out, to check for the individual significance of the variables. Statistically, the t-statistics of the variables under consideration is interpreted based on the following statement of hypothesis.

H_0:   The individual parameters are not significant.

H_1:   The individual parameters are significant.

Decision Rule:

If t-calculated > t-tabulated, we reject the null hypothesis $\{H_0\}$ and accept the alternative hypothesis $\{H_1\}$, and if otherwise, we select the null hypothesis $\{H_0\}$ and reject the alternative hypothesis $\{H_1\}$.

Level of significance = α at 5% = $\frac{0.05}{2}$

$$= 0.025$$

Degree of freedom: n-k

Where n: sample size.

K: Number of parameter.

The t-test is summarized in the table below:

Variables {t-value}	t-tab	Remark
OPN {-8.29}	± 1.960	Significant
EXR {1.92}	± 1.960	not significant
FDI {5.16}	± 1.960	Significant

The t-statistics is used to test for individual significance of the estimated parameters $\{\beta_1, \beta_2, \text{ and } \beta_3\}$. From the table above, we can deduce that OPN {-8.29} and FDI {5.16} are greater than 1.960 {going by absolute values} which represents the t-tabulated implying that OPN and FDI are statistically Significant. On the other hand, the intercept {-0.19} and EXR {1.92} are less than the t-tabulated {1.960} signifying that the intercept and EXR are statistically insignificant.

4.3.3   F-Statistics:

The F-statistics is used to test for simultaneous significance of all the estimated parameters.

The hypothesis is stated;

H_0: $\beta_1 = \beta_2 = \beta_3$

H_1: $\beta_1 \neq \beta_2 \neq \beta_3$

Level of significance: α at 5%

Degree of freedom: $\frac{k-1}{n-k}$

Decision Rule:

If the f-calculated is greater than the f-tabulated {f-cal > f-tab} reject the null hypothesis {H_0} that the overall estimate is not significant and conclude that the overall estimate is statistically significant.

From the result, f-calculated {26.92} is greater that the f-tabulated {2.84}, that is, f-cal > f-tab. Hence, we reject the null hypothesis {H_0} that

the overall estimate has a good fit which implies that our independent variables are simultaneously significant.

4.4 Econometrics Criteria.

4.4.1. Test for Autocorrelation:

One of the underlying assumptions of the ordinary least regression is that the succession values of the random variables are temporarily independent. In the context of the series analysis, this means that an error $\{U_t\}$ is not correlated with one or more of previous errors $\{U_{t-1}\}$. The problem is usually detected with Durbin-Watson {DW} statistics.

The durbin-watson's test compares the empirical d* and du in d-u tables to their transforms $\{4-d_L\}$ and $\{4-d_U\}$.

Decision Rule:

1) If d* < D_L, then we reject the null hypothesis of no correlation and accept that there is positive autocorrelation of first order.

2) If d* > $\{4-d_L\}$, we reject the null hypothesis and accept that there is negative autocorrelation of the first order.

3) If $d_U < d^* < \{4-d_U\}$, we accept the null hypothesis of no autocorrelation.

4) If $d_L < d^* < d_U$ or if $\{4-d_U\} < \{4-d_L\}$, that test is inconclusive.

Where: d_L = Lower limit

D_U = Upper limit

D^* = Durbin Watson.

From our regression result, we have;

$D^* = 1.278306$

$D_L = 1.391$

$D_U = 1.600$

$4-d_L = 2.609$

$4-d_U = 2.4$

Conclusion:

Since $d^*\{1.278306\} < D_L\{1.391\}$ then we reject the null hypothesis of no correlation and accept that there is positive autocorrelation of first order.

4.4.2. Normality Test for Residual:

The Jarque-Bera test for normality is an asymptotic, or large-sample, test. It is also based on the ordinary least square residuals. This test first computes the skewness and kurtosis measures of the ordinary least square residuals and uses the chi-square distribution {Gujarati, 2004}.

The hypothesis is:

H_0 : $X_1 = 0$ normally distributed.

H_1 : $X_1 \neq 0$ not normally distributed.

At 5% significance level with 2 degree of freedom.

$$JB = n\{(\tfrac{s^2}{6}) + \frac{(k-3)^2}{24}\} = 6.96$$

While critical JB > $\{X^2_{\{2\}}df\} = 5.99147$

Conclusion:

Since 6.96 > 5.99147 at 5% level of significance, we reject the null hypothesis and conclude that the error term does not follow a normal distribution.

4.4.3.   Test for Heteroscedasticity:

Heteroscedasticity has never been a reason to throw out an otherwise good model, but it should not be ignored either {Mankiw Na, 1990}.

This test is carried out using White's general heteroscedasticity test {with cross terms}. The test asymptotically follows a chi-square distribution with degree of freedom equal to the number of regressors {excluding the constant term}. The auxiliary model can be stated thus:

$Ut = \beta_0 + \beta_1 OPN + \beta_2 EXR + \beta_3 FDI + \beta_4 OPN2 + \beta_5 EXR2 + \beta_6 FDI2 + \beta_7 OPN*EXR + \beta_8 FDI*OPN + \beta_9 EXR*FDI + Vi.$

Where Vi = pure white noise error.

This model is run and an auxiliary R^2 form, it is obtained.

The hypothesis to the test is stated thus;

H_0: $\beta_i = 0$ {Homoscedasticity} (i=1., 2,..,9)

H_1: $\beta_i \neq 0$ {Heteroscedasticity}.(i=1,2,…,9)

Note: the sample size {n} multiplies by the R^2 obtained from the auxiliary regression asymptotically follows the chi-square distribution with degree of freedom equal to the number of regressors {excluding constant term} in the auxiliary regression.

Decision Rule:

Reject the null hypothesis if $X^2_{cal} > X^2$ at 5% level of significance. If otherwise, accept the null hypothesis. From the obtained results, $X^2_{cal} = 25.49 > X^2 \ 0.05 \ \{1\} = 3.84$ we therefore accept the alternative hypothesis of heteroscedasticity showing that the error terms do not have a constant variance and reject the null hypothesis showing that the error terms have a constant variance.

4.4.4   Test for Multicollinearity

The term Multicollinearity is due to Ragnar Frisch. Originally it meant the existence of a "perfect" or exact, linear relationship among some or all explanatory variables of a regression model. The tests were carried out

using correlation matrix. According to Barry and Feldman {1985} criteria;

"Multicollinearity is not a problem if no correlation exceeds 0.80".

	OPN	EXR	FDI	REMARK
OPN	1.000			-
EXR	0.8583	1.000		M
FDI	0.9607	0.9057	1.000	M, M

Where M = Presence of multicollinearity

Nm = No multicollinearity.

From the above table, we can conclude that multicollinearity exists all

the explanatory variables; that is, between EXR and OPN; between FDI and

OPN; and between FDI and EXR.

CHAPTER FIVE

SUMMARY OF FINDINGS, POLICY RECOMMENDATION AND CONCLUSION

5.1 SUMMARY OF FINDINGS

This research provides answers to the nature of the relationship between balance of payment and foreign exchange rate using Nigerian data.

In order to gain a better understanding of this relationship, some theoretical aspect of the topic were evaluated. This was through an in depth analysis of the theory of exchange rate and balance of payments. We also formulated a balance of payment model in order to know if there exists a statistical relationship between the two variables, using ordinary least square technique we estimated the model. From the result obtained, we discovered that there exist a positive and a statistically insignificant relationship between foreign exchange rate and balance of payment. The result further shows a negative and statistically significant relationship between openness of the economy and balance of payment, while they exist a positive and statistically significant relationship between foreign direct investment and balance of payment.

5.2 RECOMMENDATION

The important issue that must be addressed by any particular government is how effective exchange rate policy will be in improving the standard of living of its citizens. It is our view from the statistics available that

i.   Nigeria should have a restriction on openness because it affects the Bop negatively. They should not be too open to import especially to advanced countries. The restriction can be done by import tariffs, quotas, etc.

ii.   One of the factors that attract Foreign Direct Investment is stable economy. If the economy is not stable, investors will be scared of investing. So the government should make sure that the economy is politically and socially stable. It creates a positive environment for investment to thrive and this improves balance of payment.

iii.   As such other policies which will aid in developing the Nigerian economy should be pursued, such policies which will aim at the diversification of the country's economic base would make the Nigerian economy more independent, such that it will encourage growth of domestic industries, businesses and investment. This will lead to the appreciation of the Nigeria foreign exchange rate in comparison to other countries.

5.3 CONCLUSION

Having seen that exchange rate is statistically insignificant but has a positive effect on balance of payments, we therefore accept the hypothesis that there is no significant relationship between exchange rate and balance of payments (BOP) in Nigeria.

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