Analysis of Foreign Investment and Identified Macroeconomic Measures in Nigeria

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Abstract
Foreign investment is made up of two components: foreign direct investment and foreign portfolio investment are classified as functions of macroeconomic indicators. This paper examines the relationship between some identified macro-economic variables on foreign investments in Nigeria. Data were sourced from the World Bank statistical base. Various empirical analyses were performed using Phillip-perron at lag 3 to test for the properties of the time series variables. Co integrations results showed that macroeconomic variables were co integrated with foreign direct investment in Nigeria. The study revealed that among the identified macroeconomic variables, GDP, Exchange Rate and Money Supply have direct impact on FI while other macroeconomic variables (Interest and Inflation rates) were negatively related to FI. Interest Rate and inflation rates are granger causes FI which indicated the exact influential factor on foreign investment in Nigeria. However, exogenous variables were found empirically not to be statistically significant to FI. Finally, short run relationship existed between exchange rate, interest rate and foreign investment. The study recommends excellent macroeconomic policy performance of national’s investments strategic plan that will enhance efficient and optimal investments holding and management while paying attention to the development of infrastructures, generation of employment and general reduction of the prevailing poverty levels in the country.

Keywords: Granger, Foreign Investment, Macroeconomic variables, OLS, Unit Root.

1. Introduction
Nigeria’s foreign investment can be traced back to the colonial era, when the colonial masters had the intention of exploiting our resources for development of their economy. Then, there was little investment by those colonial masters. With the research and discovery of oil foreign investment in Nigeria, encouraged foreign investment. With the end of oil boom in 1982, Nigeria found herself in a dilemma of economic problems. These external problems include unsustainable balance of payment deficits, a rapid escalating debt stock and debt service burden. Internally the economic problems include unsustainable fiscal deficit, rising unemployment and galloping inflation. Above all, investment has collapsed and this contributed strongly to a reduction in real output and per capital real income level. It is certain that with significant recovery of investment, particularly foreign investment a meaningful resurgence in output growth would remain elusive. Foreign investment flows are the main feature of the recent globalization of capital markets both in developing and in developed economies. Foreign investment is flow of capital from one nation to another in exchange for significant equity ownership stake in domestic companies or other domestic assets. Although foreign investment plays an important role in Sub Nigeria, it is interesting to note that for some decade little development has taken place in Nigeria. In almost
all of Nigeria there is a high degree of indebtedness, high unemployment, absolute poverty and poor economic performance. The average per capital incomes in the region is low despite the foreign investment because Nigeria often face major budgetary constrain and use foreign investment inflows (base on the previous aids disbursement and current commitments) to cover any deficits in Nigeria. Most countries in the region argue that given their current poverty levels, the repayment and servicing costs of external debt are too high and unmanageable. This scenario has prompted foreign investors and expert to revisit the earlier discussion on the effectiveness of foreign investment, taking Nigeria as a case study; the impact of foreign investment has not been so much felt. Despite being one of the first ten African countries to receive structural adjustment funding from the worlds bank, later the enhanced structural adjustment facility (ESAF) loan from the IMF and debt relief from Paris club. Nigeria has experienced major stand offis with the investors which have sometimes led to investment freezes. The disbursement of foreign investment funds has frequently been short-lived as the investors often find themselves dissatisfied with the way the government implements foreign conditionality funding also the Nigerian government has been focusing on policies that will help attract foreign investors and yet the economy is still dwindling. The Nigerian Government is putting so much effort into attracting foreign investors and yet the economy is still dwindling. Against this background, this study is focused on analyzing the direction and significance of the effect of macroeconomic variables in Nigeria.

The Nigerian Government is putting so much effort into attracting foreign investors and yet the economy is still dwindling. Against this background, this study is focused on analyzing the direction and significance of the effect of macroeconomic variables in Nigeria. The study is important because Nigeria before the year (2003) had experienced declining and fluctuating foreign investment inflows. Beside, Nigeria alone cannot provide all the funds needed to invest in various sectors of the economy, to make it one of the twenty largest economics in the world by 2020 and to meet the millennium development Goals (MDGs) in 2015, the objectives of this study therefore is to analyze those macroeconomic variables that influence foreign investment inflows in Nigeria.

Despite the empirical interest in foreign investment flow, very little work has been done on jointly analyzing the two components of foreign direct investment (FDI) and foreign portfolio investment (FPI) with the macroeconomic variables in a rigorous theoretical framework in Nigeria. It is against this background that this study analyzes the relationship between portfolio and direct investment and therein differences under the factor impact on the economic growth. It looked first at the benefits of each type of foreign investment, how those benefits differ and how they are complementary. It also look at the different policy needs and approaches to the two types of foreign investment direction and influence of those macroeconomic variables on foreign investment. Based on the foregoing, the specific objective of the paper is to empirically evaluate and identify the macroeconomic variables that determine the performance of investment flows in Nigeria, to establish long run relationship between macroeconomic variable and FPI, FDI and FI, to measure the impact of macroeconomic variables between the periods of study.

This study covers a period of thirty one years, ranging from 1980-2010. The data for the study were extracted from the World Bank statistics online data base, and it is limited to GDP, EXR, INTR, INF and MSP as the explanatory (independent variable) while the foreign investment is explained (dependent variable). The study employed time series data and the justification for using it is because the study is only for Nigeria data and is collected over a period of interval of time which is annual time series data.

2. Review of Related Literature

According to Ezirim (2005) Foreign Investment was the decision to commit monetary resources to projects or securities abroad with anticipation of future profits and or income. According to Anyanwale (2007) and Ezirim (2005) foreign investment is made up of two components, foreign direct investment (FDI) and
foreign portfolio investment (FPI), FDI constitutes foreign equity ownership and control of reproductively facility. It is commitment of forms to specific projects by a foreign national. Why FPI involves the commitment of funds to domestic securities by a foreign national or the purchase of foreign securities by a resident. FDI is often to as a means of boosting the economy. This is because FDI disseminates advanced technological and managerial practices through the host country and thereby exhibits greater positive externalities compared with foreign portfolio investment which may not involve positive transfers, just being a change in ownership. In addition available data in Lipsey (1999) suggest that FDI flows tend to be more stable compared to FPI. This is because of the liquidity of foreign portfolio investment and the short time horizon associated with such investments. Also, FDI inflows can be less affected by change in national exchange rated as compared to foreign portfolio investment. However a balanced combination of the two, take in to consideration the unique characteristics of the recipient economy will bring about the required effects on the economy. The benefits of foreign portfolio investment (FPI) include transfer of technology, higher productivity, higher incomes, more revenues for government through taxes, enhancement of balance of payment ability, employment generation, diversification of the industrial base and expansion, modernization and development of related industries. According to Feldstein (2000), first, international flows of capital reduce the risk faced by owners of capital by allowing them to diversify their lending and investment. Second, the global integration of capital market can contribute to the spread of best practices in corporate governance, accounting rules and legal traditions. Third, the global mobility of capital limits the ability of government to pursue bad policies. Four, foreign investment through FDI allows for the transfer of technology-particularly in the form of new varieties of capital inputs-that cannot be achieved through financial investment or trade in goods and services and can also promote competition in the domestic input market. Five, recipient of FDI often gain employee training in the course of operating the new businesses, which contributes to human development in the host country. Lastly, profits generated by foreign investment contribute to corporate tax revenues in the host country. However, the argument against foreign investment is that it may cause capital flight which, it may lead to net capital outflow and thus create balance of payment difficulties, it also creates income distribution problem when it competes with home investment. Foreign investment may also actually be capital intensive, which may not fit in the factor proportion of the recipient country. Since the 1980’s, flow of investment have increased dramatically the world over. Despite the increased flow of investment to developing countries in particular, Sub-sahara Africa (SSA) countries are still characterized by low per-capital income, high unemployment rates and low and falling growth rates of GDP, problems which foreign private investment are theoretically suppose to solve. Nigeria, being one of the top three countries consistently received FDI in the last decade (Anyanwale, 2007) is not exempted from this category.

Adequate and sound prudential supervision is necessary for a healthy financial system. Financial institutions face a myriad of risks: from credit risk to exchange rate risk, from liquidity risk to exposure concentration risk, from various risks stemming from the institutions internal operations to risks inherent in the payment system. Supervisors need to have a sound understanding of all these type of risk and how they can be managed. They also need to understand the environment in which the banks operate, and the various ways these risks can be transmitted. Adequate capital is a necessary element of prudential regulation, providing a safeguard against losses and a cushion in the face of institutional or systematic problems. Financial institutions should also limit their exposure to individual or associated counterparties, to related parties, to market risks, to short-term debt or mismatches in liquidity. The IMF and World Bank have developed effective banking supervision frameworks through financial sector surveillance and assessment, carried out, at least in part, through the financial sector Assessment Programme and through Reports on Observance of Standards and codes. Although supervisors need to be able to verify that a financial institution’s exposure is balanced and capital is
adequate, the extent of specificity in the regulations should be a function of the overall soundness and structure of the financial system. Regulation and regulators will be most effective when they create incentives for sound behavior and when their application and practices are able to evolve with the needs of the market. Supervisors need to be aware of the risks and cost of excessive prudential regulation. The costs will be seen in the time and resources required to comply with the regulations, which should be balanced against the need for regulation, but they will also be seen in the effect on innovation and evolution in the markets, which can bring benefits to both the financial market and the broader domestic economy. Excessive regulation and supervision can put the onus for effective management of financial institutions on the supervisory authorities, rather than the directors and managers of the institutions. This will reduce the effectiveness of management and of market disciplines, potentially the most practical and efficient "regulators". The right balance is essential.

Market discipline can provide the greatest incentives for effective risk management. Therefore, it is important not to subvert it by excessive regulation, but there are other factors to watch to ensure that market discipline is effective. Market discipline depends on clear signals from the market. Government guarantees of financial institutions, or implicit government support, can keep the market from signaling a growing problem, as can government ownership. Financial safety nets and market failure response arrangements need to be able to effectively resolve market distress situations, without creating unnecessary moral hazard. If financial safety nets and market failure responses are not appropriately designed, they can take away, or at least reduce, the financial institutions incentive to manage it’s risks adequately, the first and best line of defense against risks. Competition in the financial sector will also strengthen market disciplines, and a financial sector open to foreign investment, which can bring with it new and different outlooks and approaches to these problems, will help attain the benefits of competition. A sound financial system is best sustained when the broader legal, political and economic environment is also marked by sound policies that boost the portfolio and direct investment in Nigeria today.

2.1 Theoretical Framework

The theory of investment, regardless of the type of investment, evolved through Adam Smith and real Karl Max. Therefore to keep the topic manageable, this framework focuses on some major aspects of theory of investment often emphasized by some theorist of investment. With respect to the investment decision, expected increase in operating profit has to be traded off against the cost of foreign investment (FI). Once someone in the firm proposes the idea of becoming active in some foreign country, the top management team must decide in favour or against such investment.

One of the theoretical foundation of investment is the Irving Fisher modern theory of investment generally begin from Fisherian capital theory which explains investment in terms of optical decision-making overtime- income should be equal to consumption plus I = Y = C+I.

Mathematically, the theoretical expression that is underpinning the model is presented as:

\[ Y = f(X_1 - X_0) \]

And the Y represented as the dependent variable, foreign investment (FI), X_1 represents the independent variables. It is functionally expressed as:

\[ FI = a_0 + \sum_{t=1}^{n} a_t X_t + \mu \]

The HARROD – DOMAR and Rostow investment development model is the theories of economic development which that propounded what should be done, and investment of funds in capital and services goods has always been advocated by them. According to tutor 2u (2004), the Harrod-Domar model developed in the 1930s suggests that savings provide the funds, which are borrowed for investment purposes, the model believes that the economy’s rate of growth depends on the level of savings and savings ratio; also the productivity of investment i.e. the economy’s capital output ratio. The theory suggests that savings provide the funds which are
borrowed for investment purposes. Therefore he argued that the level of savings productivity of investment should be equal to money given economy which refers to Gross Domestic Product (GDP). GDP takes into account all the production inside a country, independent of who, domestic or foreign, owns the production site.

\[ F_I = \alpha_0 + \alpha_1 GDP + \mu \] \hspace{1cm} \text{equ 3}

The exchange rate implication in investment is another factor that relates to both the income and the target markets. Although surprisingly little theoretical work has been done on exchange rate effects. Goldsbrough (1979) shows that in end outbound, investment depends significantly on relative exchange rate adjusted unit labour cost differences. Studies by Goldstein, I. and Razin, A (2006): among others, confirm Goldbrough’s findings.

\[ F_I = \alpha_0 + \alpha_1 GDP + \alpha_2 EXR + \mu \] \hspace{1cm} \text{equ 4}

2.2 The Keynesian Theory of Investment

The Keynesian theory of investment places emphasis on the importance of interest rates in investment decisions. According to him, changes in interest rates should have an effect on the level of planned investment undertaken by private sector businesses in the economy. He advocated that a fall in interest rate relative to the potential yield and as result planned capital investment projects on the margin may become worthwhile. He said that a firm will only invest if the discounted yield exceeds the cost of the project. This relationship between interest rate and investment could be represented as:

\[ F_I = \alpha_0 + \alpha_1 GDP + \alpha_2 EXR + \alpha_3 ITR + \mu \] \hspace{1cm} \text{equ 5}

Inflation in an economy can be the result of an increase in aggregate demand that is unaccompanied by an increase in an aggregate supply. This is known as demand-pull inflation. A rise in any component of aggregate demand can bring about demand-pull inflation. One reason for a sudden, unanticipated rise in aggregate demand can be an unanticipated rise in the supply of money. Inflation can also result from a decrease in aggregate supply that occurs when businesses find that production inputs have risen in price. Such occurs when labour costs and the price of raw materials such as crude oil have risen. Decreases in productivity (the ratio of GDP to inputs) can also have a negative impact on aggregate supply and therefore, cause a rise in prices. The type of inflation is known as cost-push inflation.

\[ F_I = \alpha_0 + \alpha_1 GDP + \alpha_2 EXR + \alpha_3 ITR + \alpha_4 INF + \mu \] \hspace{1cm} \text{equ 6}

One of Keynes’s fundamental contributions was to develop conditions under which “money” broadly conceived which is a general approach evidenced in the theory of investment.

\[ F_I = \alpha_0 + \alpha_1 GDP + \alpha_2 EXR + \alpha_3 ITR + \alpha_4 INF + \alpha_5 MSP + \mu \] \hspace{1cm} \text{equ 7}

3.0 Methodology

3.1 Model Specification

This is a brief description of the estimation method used in the study

Model:

\[ F_I = f(GDP, EXR, INTR, INF, MSP) \]

Where;

\( F_I = \) Foreign Investment (FDI and FPI)

\( GDP = \) Gross Domestic Product

\( EXR = \) Exchange Rate

\( INTR = \) Interest Rate

\( INF = \) Inflation Rate

\( MSP = \) Money Supply

The model can be expressed in estimation form as follows:
$FI = \alpha_0 + \alpha_1 GDP + \alpha_2 EXR + \alpha_3 INTR + \alpha_4 INF + \alpha_5 MSP + \mu$

1

Where $\alpha_0 = \text{Constant (Intercept), } \alpha_1 = \text{Coefficient GDP, } \alpha_2 = \text{Coefficient EXR, } \alpha_3 = \text{Coefficient INTR, } \alpha_4 = \text{Coefficient INF, } \alpha_5 = \text{Coefficient MSP, } \mu = \text{Error term.}$

3.2 Model Transform

The model can be effectively measures the FI only on log transformation. This is because the variables do not fit linearly (on a straight line) when plotted against endogenous variables (FI). To evaluate the empirical relationship the exogenous and endogenous variables, we took the natural log form of the variables using the function

$$Y_i = \frac{1}{\log(X_i)}$$

where i is the value of variables under study. The transformation model can be expressed in Log form:

$$\ln F I = \alpha_0 + \alpha_1 \ln F P I + \alpha_2 \ln G D P + \alpha_3 \ln E X R + \alpha_4 \ln I N T R + \alpha_5 \ln I N F + \alpha_6 \ln M S P + \mu$$

2

Where $\ln F I = \frac{1}{\log (F I)}$, $\ln F P I = \frac{1}{\log (F P I)}$, $\ln G D P = \frac{1}{\log (G D P)}$, $\ln E X R = \frac{1}{\log (E X R)}$, $\ln I N T R = \frac{1}{\log (I N T R)}$, $\ln I N F = \frac{1}{\log (I N F)}$, and $\ln M S P = \frac{1}{\log (M S P)}$

4.2 Empirical Analysis and Discussion of Results of Model 12

Table 1: Summary of Result of Unit Root Test using Phillips-Perron Test (PPtest) for FI

<table>
<thead>
<tr>
<th>Variables</th>
<th>PP Test</th>
<th>5%</th>
<th>Decision</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(LNFI) I(0)</td>
<td>-22.2375</td>
<td>-2.9627*</td>
<td>No Unit Root</td>
<td>It is Stationary</td>
</tr>
<tr>
<td>D(LNGDP) I(0)</td>
<td>-6.5359</td>
<td>-2.9378*</td>
<td>No Unit Root</td>
<td>It is Stationary</td>
</tr>
<tr>
<td>D(LNEXR) I(0)</td>
<td>-3.4838</td>
<td>-2.9627*</td>
<td>No Unit Root</td>
<td>It is Stationary</td>
</tr>
<tr>
<td>D(LNINTR) I(0)</td>
<td>-3.9321</td>
<td>-2.9627*</td>
<td>No Unit Root</td>
<td>It is Stationary</td>
</tr>
<tr>
<td>D(LNINF) I(0)</td>
<td>-3.4833</td>
<td>-2.9627*</td>
<td>No Unit Root</td>
<td>It is Stationary</td>
</tr>
<tr>
<td>D(LNMSP) I(0)</td>
<td>-4.7894</td>
<td>-2.9627*</td>
<td>No Unit Root</td>
<td>It is Stationary</td>
</tr>
</tbody>
</table>

*significant at 5% level, PP test > Critical value, then the variable is stationary

Table 1 shows that there is no unit root among the time series when subjected to PP test at various level and order difference in the time series. Gross Domestic product (LNGDP), Foreign Portfólio Investment (LNFI), Interest Rate (LNINTR), Exchange Rate (LNEXR), Inflation (LNINF) and Money Supply (LNMSM) have no unit root at level I(0) as the calculated PP test values are greater than the critical value at 5% irrespective of sign difference at iteration lag 3. In addition, there is no unit in the series of Foreign Investment (LNFI) at level I(0) since the PP-test statistic is greater than the critical value at 5% at lag 3. This confirms that all the time series variables are stationary. The result further informs OLS application for model estimation and Granger Causality is adopted to investigate the impact of macroeconomic variables on FI.

Table 2 OLS Estimate Result
Dependent Variable: LNFI
Method: Least Squares
Sample: 1980 2010
Included observations: 31

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNGDP</td>
<td>0.003232</td>
<td>0.005874</td>
<td>0.550178</td>
<td>0.5871</td>
</tr>
<tr>
<td>LNEXR</td>
<td>0.000706</td>
<td>0.001857</td>
<td>0.380098</td>
<td>0.7071</td>
</tr>
<tr>
<td>LNINTR</td>
<td>-0.000666</td>
<td>0.001857</td>
<td>-0.358662</td>
<td>0.7229</td>
</tr>
<tr>
<td>LNINF</td>
<td>-0.026460</td>
<td>0.035981</td>
<td>-0.735389</td>
<td>0.4689</td>
</tr>
<tr>
<td>LNMSP</td>
<td>0.021534</td>
<td>0.021491</td>
<td>1.001960</td>
<td>0.3260</td>
</tr>
<tr>
<td>C</td>
<td>0.106803</td>
<td>0.034147</td>
<td>3.127747</td>
<td>0.0044</td>
</tr>
</tbody>
</table>

R-squared 0.058243
Adjusted R-squared -0.130108
S.E. of regression 0.042939
Sum squared resid 0.046094
Log likelihood 56.93447
Durbin-Watson stat 1.017258

*significant at 5% level, t-ratio <0.05, it is statistically significant.

Source: E-Views 4.0 Result Output

4.3.1 Discussion of OLS Result of FI

Econometric result of the model adopted is presented in table 11. The OLS model of Foreign Investment (LNFI) reveals that the LNINTR and LNINF are inversely related to FI. However, direct relationship is found among LNGDP, LNMSP and LNINF with LNFI. Estimate of LNGDP is 0.0032. This implies that there is direct relationship between the independent variable, Gross Domestic Product (GDP), and the dependent variable, Foreign Investment (LNFI) which means that unit change in GDP will bring about 0.003 unit increase in Foreign Investment (LNFI).

The estimated value of exchange rate is 0.0007. This shows a direct relationship between Exchange Rate (LNEXR) and Foreign Investment (LNFI). That is, a relative change in Exchange Rate (LNEXR) results in about 0.0007 unit increase in Foreign Investment (LNFI). The estimate of interest rate is -0.0006. This implies non correspondent relationship exists between Interest Rate (LNINTR) and foreign Investment (LNFI). This simply shows that relative change in Interest Rate (LNINTR) will account for 0.001 decrease in foreign Investment (LNFI).

The estimate of inflation rate is -0.0265 suggests negative relationship between the Inflation (LNINF) and Foreign Investment (LNFI). Therefore implies that a unit change in Inflation will result in 0.03 decrease in Foreign Investment (LNFI). The estimate of $\beta_6$ is 0.0215 suggests direct relationship between money supply (LNMSP) and Foreign Investment (LNFI). Therefore unit change in money supply (LNMSP) brings about 0.022 increase in Foreign Investment (LNFI).

Investigating the overall significance of the model, the value of F-statistics is 0.3092 and the probability associated with it is (0.9027) which is greater than 0.05 at 5% critical level. This means that there is no statistical significance between FI and Macroeconomic variables. R-square is 0.058, implying that the coefficient of determination ($R^2$) is statistically significant at 5.8% which adudge the model as weakly fitted. The adjusted
R-square indicates that about -13% variation in the endogenous variable is negatively explained which confirms the extent of the weak nature of the model.

To test for the significance of the individual parameter, if the probability value of t-ratio for coefficient of the regression parameters ($\beta_i$) is less than the 0.05, we accept $H_1$ and conclude that they are statistically significant to the Endogenous variable (LNFI) otherwise is not significant. Based on these arguments, LNGDP, LNEXR, LNINGR, LNINF, and LNMSP are not statistically significant to the Foreign Investment (LNFI). Generally, the empirical results show that some of the identified macroeconomic variables are not statistically significant to the Investment (LNFI).

Table 3 Granger Causality Test
Pairwise Granger Causality Tests
Sample: 1980 2010
Lags: 2

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Obs</th>
<th>F-Statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNGDP does not Granger Cause LNFI</td>
<td>29</td>
<td>1.45038</td>
<td>0.25431</td>
</tr>
<tr>
<td>LNFI does not Granger Cause LNGDP</td>
<td>0.71800</td>
<td>0.49791</td>
<td></td>
</tr>
<tr>
<td>LNEXR does not Granger Cause LNFI</td>
<td>29</td>
<td>4.26522</td>
<td>0.02600</td>
</tr>
<tr>
<td>LNFI does not Granger Cause LNEXR</td>
<td>1.60452</td>
<td>0.22181</td>
<td></td>
</tr>
<tr>
<td>LNINGR does not Granger Cause LNFI</td>
<td>29</td>
<td>3.03281</td>
<td>0.01495</td>
</tr>
<tr>
<td>LNFI does not Granger Cause LNINGR</td>
<td>2.62024</td>
<td>0.09348</td>
<td></td>
</tr>
<tr>
<td>LNINF does not Granger Cause LNFI</td>
<td>29</td>
<td>0.34310</td>
<td>0.71299</td>
</tr>
<tr>
<td>LNFI does not Granger Cause LNINF</td>
<td>1.48503</td>
<td>0.24658</td>
<td></td>
</tr>
<tr>
<td>LNMSP does not Granger Cause LNFI</td>
<td>29</td>
<td>1.39968</td>
<td>0.26610</td>
</tr>
<tr>
<td>LNFI does not Granger Cause LNMSP</td>
<td>0.55581</td>
<td>0.58082</td>
<td></td>
</tr>
<tr>
<td>LNMSP does not Granger Cause LNINGR</td>
<td>29</td>
<td>56.8545</td>
<td>7.9E-10</td>
</tr>
<tr>
<td>LNINGR does not Granger Cause LNMSP</td>
<td>0.13714</td>
<td>0.87252</td>
<td></td>
</tr>
<tr>
<td>LNMSP does not Granger Cause LNINF</td>
<td>29</td>
<td>0.77931</td>
<td>0.46999</td>
</tr>
<tr>
<td>LNINF does not Granger Cause LNMSP</td>
<td>0.34766</td>
<td>0.70984</td>
<td></td>
</tr>
</tbody>
</table>

Source: E-Views 4.0 Result Output
From the granger causality table 12, (LNGDP) does not Granger cause Foreign Investment (LNFI) and foreign portfolio investment (LNFI) does not Granger cause (LNGDP). More so, the granger results reveal that LNEXR and LNINGR does Granger cause (LNFPi) but LNFI does not granger cause LNEXR and LNINGR. However, LNINF and LNMSP does not Granger cause Foreign Investment (LNFI) vice versa. These empirical results show that exchange and interest rates exact influential impact on foreign investment (LNFI). Hence, there is uni-directional relationship between macroeconomic variables (interest and exchange rates) and foreign portfolio investment (LNFPi). These signify short run relationship existing among interest rate, exchange rate and foreign investment (LNFPi).
Table 4 Stability Test

Ramsey RESET Test:

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>12.62542</td>
<td>0.231450</td>
</tr>
<tr>
<td>Log likelihood ratio</td>
<td>26.54401</td>
<td>0.000317</td>
</tr>
</tbody>
</table>

Source: E-Views 4.0 Result Output

In the table above, we investigate the functional form of model estimate using stability approach called Ramsey Reset test. The probability of the F-statistics (0.2315) is greater than the critical value of 0.05 at 5% level. This result shows that the model is structurally unstable and not in functional form as the null hypothesis is accepted in favour of the null hypothesis that the model is not structurally stable.

6. Conclusion

It has been established foreign Investments in Nigeria are for varieties of reasons is necessary for the economic growth of any nation. Empirical results show that exchange and interest rates exact influential impact on foreign investment (LNFI) Investments are held as buffer stock absorbers for insurance of the economy against external shocks in exchange and inflation rates management among others. Thus, the role of Foreign Investments in Nigeria cannot be over emphasized. Nigerian government required an excellent macroeconomic policy performance of national’s investments strategic plan that will ensure and enhance efficient and optimal investments holdings and management while paying significant attention to the development of infrastructures for generation of employment and general reduction of the prevailing poverty level in Nigeria.

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