Effect of Foreign Direct Investment on Interest Rate Regimes in Nigeria

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Abstract

Foreign direct investment (FDI) is an important tool for the growth of any economy. FDI is low in Nigeria and this is resulting in low level of economic growth and standards of living and has hindered the promotion of economic prosperity and sustainable development in the country. However, interest rates are critical determinant of foreign direct investment. Traditionally investors will shop for low cost credit sources or lower interest rates and invest it economies that are promising higher returns. The study seeks to examine the effect of foreign direct investment on interest rate regimes in Nigeria. The descriptive research designandmultiple linear regression modelwere used in analyzing the secondary data. The secondary data were sourced from the Central Bank of Nigeria (CBN) website and Nigerian Bureau of Statistics (NBS) several publications The result shows a negative relationship between Foreign Direct Investment and Interest Rate. In conclusion policy maker are to regulate the interest rates prevailing in the country bearing in mind that they influence FDI inflows in the country.

Keywords: Foreign Direct Investment, Interest Rate, Sustainable Development

1. INTRODUCTION

Foreign direct investment (FDI) is one of the key factors in determining the economic growth of countries especially developing countries like Nigeria. It is a significant source of capital inflows on the host country's economy and the benefits include technology transfer, human capital development, expansion in international trade, and a viable business environment (OECD, 2002). However, the macroeconomic environment in the home country must be favorable to attract foreign investors and one of themain factors of the operational monetary policy regime are real interest rates offered in a given country relative to others (Mishkin & Eakins, 2000). According to the UNCTDA report of 2002, foreign directinvestment can be defined aninvestmentinvolving a long term business interest and control by a foreign investor in another country different from that of the investor. The role played by foreign direct investment in actualizing economic development in a nation cannot be under estimate. As such, across the border transaction is celebrated mostly in the developing countries as it is seen as an avenue to promote and encourage inflows of technology, skill, materials and bridge the gap between savings, exchange rate and government spending. The effect of foreign direct investment flow is very significant to the stabilization of the interest rate of a developing nation like Nigeria experiencing transition and emerging markets. The required prerequisites to attract adequate Foreign Direct Investment are classified into political, economic, legal and social factors. Higher profitability on investments, political stability, suitable investment climate, cheap labour and production cost, adequate and functional infrastructure amenities and a stable regulatory environment also help to invite and retain Foreign Direct Investment in a nation.

This study will be guided by several theories such as the product life cycle theory, internalization theory and eclectic theory that have tried to explain the relationships between foreign direct investments and interest rates. These theories' main focus is on ways that FDI may facilitate increasedgrowth in recipient countries. The theories have examinedvarious levels in whichFDI may contribute to changes in technologyusingspillover impactof knowledge together with modern capital goods. According to this study, they have argued that circumstances in the recipient countries are a contributing factor to FDI. The theories relate FDI with economical growingof a country which is influenced by macro-economic variables such as interest rates. Foreign direct investment inflows to Nigeria fluctuated from 1990 to 2008 and then started to increaseuntil 2014. This implies that multinationals and their subsidiaries have continued to increase production of goods and services in Nigeria. This is due to the fact that foreign direct investment presents a long term commitment by the foreign investor to host country. In addition foreign direct investment leveragehas significant contribution to a host country's fixed capital formation (Abala, 2014), one of the earliest scholars on interest rates defined it as the cost associated with borrowing capital for a specified period of time. Devereux and Yetman (2002), defined interest rates as the price a borrower pays for using money or capital they do not own. Interest rates are normally predetermined by the supply and demand function of capital. In addition, interest rates in any given economy are determined by the monetary policy of the country. Where there is High demand for capital the interest rates go up. On the other hand, low demand for capital will lead to lower levels of interest rates. However, the government in its monetary policy can seek to increase or reduce the interest rates with the aim of achieving set macro-economic targets. For example in times of high inflation, the government may raise the interest rate to reduce money supply.

2. LITERATURE REVIEW

2.1 Conceptual Framework

2.1.1 Concept of Foreign Direct Investment

A direct investment relationship exists between a resident enterprise in one economy (direct investor) and an enterprise (direct investment enterprise) that is resident in an economy other than that of the direct investor, when the direct investor has control (over 50% of the voting power) or influence (from 10% to 50%) over the direct investment enterprise. In other words, foreign direct investment reflects the objective of establishing a lasting interest between the direct investor and the direct investment enterprise. The direction of the investment is determined in the statistics based on the direction of the control and influence between parties.

The economic theory which expounds on how capital moves in the global economy insist that capital tends to flow to countrieswhichhave a higher return on investment as compared to countries with higher interest rates. Consequently, investment is high in countries that offer better investment returns as well as security in the form of lower interest rates and a better business environment. Capital therefore desiresto move from countries with low rate return to countries with high rate of return (Pholphirul, 2002).This study seeks to investigate whether this theoretically expected relationship betweenforeign direct investment and interest rates and holds. The conceptual model developed used portrays this expected relationship between the study variables.The factors characterized here are foreign direct investments and interest rates.The independent variable are interest rate, exchange rates, and inflation rates. Foreign direct investment is the dependent variable which the study seeks to explain and it will be measured by quarterly FDI inflows.

2.1.2 Concept of Interest Rates

Interest rate is the amount ofinterest due per period, as a proportion of the amount lent, deposited or borrowed. The total interest on an amount lent or borrowed depends on the principal sum, the interest rate, the compounding frequency, and the length of time over which it is lent, deposited or borrowed. Interest rates arevital tool of monetary policies and are taken into account when dealing with variables like foreign direct investments, inflation and unemployment. The Central Banks of countries generally tend to reduce interest rates when they wish to increase investment and consumption in the country's economy. In developing economies, interest-rate adjustments are usually made to keep inflation within a target range for the health of economic activities or cap the interest rate concurrently with economic growth to safeguard economic momentum. Keynes (1936), one of the earliest scholars on interest rates defined it as the cost associated with borrowing capital for a specified period of time. Devereux and Yetman (2002), defined interest rates as the price a borrower pays for using money or capital they do not own. Interest rates are normally predetermined by the supply and demand function of capital. In addition, interest rates in any given economy are determined by the monetary policy of the country. When there is a high demand for capital the interest rates go up. On the other hand, low demand for capital will lead to lower levels of interest rates. However, the government in its monetary policy can seek to increase or reduce the interest rates with the aim of achieving set macro-economic targets. For example in times of high inflation, the government may raise the interest rate to reduce money supply.

Ngugi (2001) opines that interest rate is a good information indicator as it forecasts future inflation as well as any anticipated change in money’s purchasing power. The interest rate is also affected by demand for loans or money by borrowers. Interest rates operate like other prices as market clearing mechanism, they ration the amount of credit available (Culbertson, 2004). Interest rates are determined in the credit markets, or the debt markets just the same way as stock prices are determined in the NSE (Kasemo, 2015).

2.1.3 Empirical Literature

Okafor (2012) studied on the value of domestic macroeconomic variables matter for foreign direct investment inflow in Nigeria. Prediction that foreign capital flows could stimulate economic growth ofnationsis the major finding of the study.The study used ordinary least square method as an estimation technique. Foreign direct investment in Nigeriais majorly determined byreal gross domestic product, interest rate, and real exchange rate as per the findings. FDI inflow is majorly determinedby domestic macroeconomic variables. The flow and benefits of foreign direct investment in Nigeriacan be achieved whenpolicy makers should strive to improvethe macroeconomic environment. Asiedu (2006) studied on the influence of natural resources and market size vis-à-vis government policy, host country's institutions and political instability in directing FDI flows to the region.The researchers used data for 22 SSA over the period 1984-2000. Countries in SSA that are endowed with natural resources or have large markets will attract more FDI. However, small countries and/or countries that lack natural resources in the region can also obtain FDI can be obtained by small countries by Improving their institutions and policy environment, because good infrastructure,an educated labour force, macroeconomic stability, openness to FDI, an efficient legal system, less corruption and political stability also promote FDI.

Piteli (2009) studied on the determent factors offoreign direct investment (FDI) by multinational corporations (MNCs) in developed economies. Using a context of an estimated equation derived from economic theory, which compares the main demand and supply-side determinants of FDIthe researcher compared between EU and non-EU countries. Application of differentproxies for demand and supply-side factors,comparison betweenEuropean and non-European developed countriesandtesting for the relative importance of total factor productivity (TFP) as a determining factor of FDIare the ways in which these research contributes to literature. The findings indicate the value of TFP as the determining factorpar excellence of FDI in developed countries.

2.3 Theoretical Framework

2.3.1 Product Life Cycle Theory

The theory explains that diffusion of technological innovations takes place at a much slower rate. As a result, differences are likely to occur in terms of the production technologies used by different countries. Vernon (1966), defines product life cycle as a process that consists of four phases of production which include innovation, growth, maturity and decline. A business entity would first come up with an idea about a product or a service. The product or idea then goes through a growth stage and finally attains maturity. It then begins to decline. The product decline is mainly caused by competition in the market place as well as inability of the business to innovate. Companies that are directly involved in foreign direct investment bring production equipment to foreign countries in order to be near the target market and ensure a sustainable market share is attained and maintained (Dunning, 1993). Vernon's evaluationof foreign direct investment solely focused on aproduct. A summary of the process shows that a product is first invented in the home country. The home country, where the foreign investor resides has advantages in terms of technology and innovation capabilities. The innovator produces the product for the local market first. At a later stage in the production cycle, the product is exported to foreign countries which lack the technology or the innovative capacity to develop similar products. Consequently, the product becomes standardized and eventually matures. At this stage of the product development, labor becomes and critical production input. Consequently, the investor has to attract value input from local materials and people in the foreign country. As a result, foreign direct investment is viewed as a critical stage in the product development life cycle (Chen, 1983)

2.3.2 Internalization Theory

This theory was advanced by Casson and Buckley in 1976. Further development of the theory was by Hennart (1982) and benefits from addition works by Casson (1983).
The theory explains the growth of multinational corporations and their motivations. It demonstrates that multinational corporations organize their internal activities to achieve specific advantage and exploit them to enhance its competitiveness. According to Hymer (1976), FDI will occur only when the exploitation of firm specific advantage supersede the relative cost of investing abroad. In summary, he implies that FDI occur in imperfect markets and it's

simply a strategy decision at firm level rather than a financial decision of the capital market.Casson and Buckley(1976) argue that an FDI is only attractive if the ownership, Location and Internalization (OLI) conditions are met. First, the multinational must have an ownership advantage compared to the local firm's ownership. This may be in form of the multinational's specific organizational or technological knowledge. The government policies' likely on the benefits of investing in a certain host country is also vital. In some cases the host government may pose regulations concerning the nature of foreign ownership. Such restrictions in effect reduce FDI inward inflowswhich will be accompanied by technology. Secondly, it must be advantageous for the multinational companies as well as other investors to produce in the host country if they can benefit from some comparative locational advantage. Finally, it should be suitable to execute the activities within the host countries, as opposedas opposed to leasing or buying them from other firm.

2.3.3 Eccletic Paradigm Theory

Dunning (1993) came up with this theory which is in itself amix of three different but correlated theories. These theories are Ownership, Location and Internalization (OLI) which are used to describe how the factors therein contribute to changes in foreign direct investments. Ownership related advantages are thoseprovided by intangibleassets. This assets must however be considered as exclusive possessions held and owned by the company and are transferable to other firms at prices that would lead to reduction of costs to the company, or would lead to the company registering high rates of return. In his arguments, Dunning (2005) argues that when all other factors are held constant, a company with a higher level of competitive advantages, in comparison with its competitors, has a higher chance in increasing its overall production and hence increasing its global presence. Location benefits, as explained by Denisia (2010) are used to compare the different economies, as per their strengths and opportunity. Internalization establishes a need for the firm to be able to have an established business in each of the economies that the company sells its products or services. The firm must derive ways through which it can benefit further through foreign production as compared to the meager fees that are earned in international trade activities such as exporting and franchising. Dunning (2005) states that a corporation is more likely to get higher returns if, it engages in foreign production as opposed to the extension of its production rights to other countries. The eclectic paradigm is therefore in support of the establishment of production markets by a corporation through exploitation. The eclectic paradigm is therefore in support of the establishment of production markets by a corporation through exploitation of its competitive advantages and the selection of suitable locations. In doing this, the corporation is not only engaging in foreign direct investment but also gaining much more from their competitors.

3. METHODOLOGY

The study employed a descriptive design and a multiple linear regression model was used to analyze the relationship between the variables.Data used for the study was the FDI remittances into Nigeria, Central Bank of Nigeria (CBN) lending , average exchange rate (Naira/USD) , average inflation rate and economic for the period between January 2007 and December 2016. The study usedsecondary data from Nigerian Bureau of Statistics (NBS) publications and CBN website. Using thecollected data,a regression analysis was used to establish the extent of the relationship between foreign direct investments and interest rate.

The study appliedthe following regression model:

$Y= \beta0+ \beta1X1+ \beta2X2+ \beta3X3+\beta4X4+\varepsilon$.

Where: Y = Foreign direct investments as measured by FDI inflows.

$\beta0$=y intercept of the regression equation.
$\beta1$, $\beta2$and $\beta3$,=are the slope of the regression
X1= Average Interest rates as measured by CBN lending rate
X2=AverageExchange rate between USD and Naira
X3= Economic growth as measured by natural GDP
X4= Average Inflation rateas measured by of CPI
ε =error term

4. RESULT AND DISCUSSION

The analysis of the collected data from CBN and NBS to establish the effect of foreign direct investments on interest rates regime in Nigeria. Using descriptive statistics, correlation analysis and regression analysis, the results of the study were presentedin form of tables for easy interpretation.

The researcher carried out diagnostic tests on the collected data. Cameron & Trivedi's IM-test was used to test for heteroscedasticity. The null hypothesis statedthat there is no heteroscedasticity. Results in Table 4.1 show that the p-value (p=0.3629)is greater than the critical value of 0.05. Therefore, we fail to reject the null hypothesis a and conclude that the variance is homogenous

Descriptive statistics givesa presentation of the mean, maximum and minimum values of variables applied together with their standard deviations in this study.Table 4.2 belowshows the descriptive statistics for the variables applied in the study. An analysis of all the variables was obtained using SPSS software for the period of ten years (2007 to 2016). FDI inflows had a mean of 6.45with a standarddeviation of 0.597. Interest raterecorded a mean of 8.010335with a standard

Table 4.1: Cameron & Trivedi's decomposition of IM-test

Source	Chi2	DF	P
Heteroskediaticit y	18.42	17	0.3629

Table 4.2

	₦	MIN	MAX	MIN	STD DEVIATION
FDI Inflow	40	6	8	6.45	.597
Interest Rate	40	2.1233	19.5200	8.0103	3.1288
Economic growth	40	5.7803	6.0219	5.8936	0.76128
Exchange rate	40	63	104	81.17	10.002
Inflation Rate	40	2.7136	19.187	8.200	4.5644002

Pearson correlation was employed to analyze the level of association between FDI inflows and the independent variables for this study (interest rates, economic growth, foreign exchange rates and inflation rates).From correlation analysis, the study showed the existence of a weak positive and insignificant correlation between FDI inflows intothe country and interest ratesand (p=.011, p>.945). This goes to show that thelevel of interest ratesin a country hasnosignificant association withFDI inflows intothe country.The relationship between economic growth and FDI inflows was found to be weak and positive (p=.495, p>0.001). This implies that movement in economic growth is positively correlated to FDI inflows and in a significant manner. The study also showed that there exist a strongpositive correlation between exchange rates and FDI inflows (p=.519, p>.001). This shows that exchange rates have a strongpositive association with FDI inflows and the association is significant. Although theindependent variables had an association to each other, the association was not strong to cause Multicollinearity as all the r values were less than 0.70. This implies that there was no Multicollinearity among the independent variables and therefore they can be used as determinants of FDI inflows intothe country in regression analysis.

4.1 Discussion of findings

The study sought to determine the effect of foreign direct investment on interest rate regimes in Nigeria. The independent variable was interest rates as measured by CBN lending rateon a quarterly basis. The control variables were economic growth as measured by quarterly GDP, exchange rates as measured by quarterly exchange rate between Naira and USD and inflation rates as measured by quarterly CPI. FDI inflows were the dependent variable which the study sought to explain and it was measured by quarterly FDI inflows in Nigeria. The effect of each of the independent variables on the dependent variable was analyzed in terms of strength and direction.The Pearson correlation coefficients between the variables revealed existence ofa weak positive and insignificant correlation between foreign direct investment and interest rate in the country. The relationship between economic growth and FDI inflows was found to be weak and positive. The study also showed that there exist a strong positive correlation between exchange rates and FDI inflows. The results also revealed a weak negative and insignificant correlation between inflation rates and FDI inflows in the country. The study adopted a descriptive research design which assisted in the establishment of the relationship between foreign direct investments andinterest rates in Nigeria. The overall findings and conclusion of the study was that interest rates have a positive correlation with FDI but not significant at all in determining the level of FDI.

5. CONCLUSION AND RECOMMENDATION

The study sought to investigate the effect of foreign direct investment on interest rate regimes in Nigeria. The study used quarterly data covering a period of ten years from January 2007 to December 2016.From the results of correlation analysis, a weak positive and insignificant correlation between foreign direct investment and interest rate was observed. However, a relationship between economic growth and FDI inflows was found to be weak and positive. The study also showed that there exist a strong positive correlation between exchange rates and FDI inflows. The results also revealed a weak negative and insignificant correlation between inflation rates and FDI inflows in the country. Inaddition, economic growth and exchange rates were found to have asignificant relationship with FDI inflows, while interest rates and inflation rates had an insignificant association with FDI inflows in Nigeria. From the study findings, the study concludes that FDI inflows in Nigeria have a negative relationship with interest rates. The study therefore concludes that higher interest rateslead to reducedFDI inflows in the country even though not to a significant extent. Exchange rates were also found to be positively related to FDI inflows in the country and therefore an increase in exchange rates leads to an increase in FDI. The study found that inflation rate and economic growth had a negative correlation with FDI inflows in the country and we can therefore conclude that higher inflationrates and economic growth tend to discourage foreign direct. This study therefore recommends that policy makersshould pay attention to the prevailing interest rates as they can negatively affect foreign direct investment (FDI) inflows into the country.

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