THE EFFECT OF EXCHANGE RATE ON THE INFLOW OF FOREIGN DIRECT INVESTMENT IN NIGERIA

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Abstract

This paper empirically examined the influence of foreign exchange rate on the inflow of foreign direct investment (FDI) in Nigeria. Using time series data from 1985-2024 and applying generalised method of moments (GMM) technique, we found that exchange rate has a significant and positive influence on FDI in Nigeria. We therefore recommended that further appropriate and adequate policies should be formulated and implemented with the overriding objective of strengthening the value of the naira and minimizing domestic inflation rate risks that can adversely affect the inflow of foreign direct investment in the country.

***Keywords**: Exchange rate, Foreign direct investment, Generalised method of moments.*

1.0 Introduction

Developing economies realize the need for the inflow of foreign capital to supplement inadequate domestic resources as a result of the shortfall of capital needs, relative to the capacity to save. Foreign capital is considered by many developing countries as an important element in their development strategies, compared to other avenues of foreign financing such as foreign private investment as it helps to improve technology.

Foreign direct investment is a form of lending or financial capital inflows and it generally involves the transfer of resources, including capital, technology, and management and marketing expertise. Such resources usually extend the production capabilities of the recipient country (Odozi 1995).

Attracting foreign direct investment (FDI) into Nigeria has become one of the most prominent strategies in the face of insufficient resources to finance long-term economic and social development and to reduce poverty. The underdeveloped nature of Nigeria's economy has limited the pace of economic development and this underscores the need for the inflow of foreign direct investment into the country.

For a developing country like Nigeria that is highly dependent on trade, the exchange rate, which is the price of foreign exchange according to Iyoha (1998) plays a significant role in the ability of the economy to attain its optimal productive capacity. Foreign capital generates employment in the host country when a multinational enterprise directly employs a number of host country citizens. According to Ekpo (1997), the factors influencing foreign direct investment include; inflation, exchange rate, uncertainty, government expenditures as well as institutional and political factors. Ekpo (1997) further argued that, for Nigeria, the factors affecting foreign direct investment include; return on investment in the rest of the world, domestic interest rates, rate of inflation, debt service, per capita income, ratio of world oil prices to world price of industrial countries manufactured goods, credit rating and political stability or instability.

The resource gap of low-income countries could be bridged while further build-up of debt can also be avoided in directly tackling the causes of poverty through foreign direct investment (UNCTAD 2004).

Foreign direct investment can be seen as an engine of economic growth in Africa where its need cannot be overemphasised since foreign direct investment can create employment and act as a vehicle for technology transfer, provide superior skills and management techniques, facilitate local firms' access to international markets and increase product diversity, (Ngowi 2001; Adeleke 2000).

Although expected to have a positive impact on the economy, the inflow of foreign direct investment into Nigeria has not been encouraging despite the effort of the Nigerian government in providing attractive and conducive investment climate for foreign investment. The need to pay serious and realistic attention to the link between exchange rate and foreign direct investment gap in Nigeria cannot be over emphasized because there is no definitive study to date that settles the theoretical and practical disputes of the effect of exchange rate on foreign direct investment.

Foreign direct investment is expected to have positive contributions to the economy. Notwithstanding, it has its own limiting factors to its free flow. This research work concerns itself with the extent to which foreign direct investment flow into the economy is influenced by exchange rate. This study aims at evaluating the influence of foreign exchange rate on the inflow of foreign direct investment into Nigeria during the period 1985-2024. This research effort is considered relevant given the fact that inflow of foreign direct investment could help fill huge resource gap in Nigeria. Hence, a study of the probable determinants of foreign direct investment inflow is of great benefit to Nigeria.

This research will increase awareness of the impact of exchange rate on foreign direct investment in Nigeria and would contribute to the frontier of knowledge already existing on the subject matter. It will benefit the policy makers and the society in general as the knowledge obtained from it would help improve the inflow of foreign direct investment. The suggestions offered will be useful for future design, execution and performance of the exchange rate policies in Nigeria.

This paper is divided into five sections. Following this introductory section, section II reviews relevant theoretical and empirical studies while the methodology of the study is explained in section III. The data analysis and findings of this study are presented in section IV while section V contains the concluding remarks.

2.0 Literature Review

Blonigen (1997) suggested that exchange rates can affect acquisition of FDI as this involves purchasing firm specific assets in the foreign currency that can generate returns in another currency. Using data on Japanese acquisitions in the US from 1975 to 1992, he showed that exchange rate movements matter because while domestic and foreign firms may have the same opportunities to purchase firm specific assets in the domestic market, foreign and domestic firms do not have the same opportunities to generate returns on these assets in foreign markets. Due to the unequal level of access to markets, exchange rate movements may affect the relative level of foreign firm acquisitions.

Froot and Stein (1991) asserted that foreign direct investment may be influenced by the level of exchange rate because depreciation of the currency of the host country against the home country will increase the relative wealth of foreign investors and therefore increase the attractiveness of the host country for the inflow of foreign direct investment since investors are able to acquire assets in the host country at a relatively cheap costs.

A different direction of argument for the relationship between exchange rate and FDI was however introduced by Campa (1993) who in his model noted that the decision of the firm to either invest abroad or not depends on the projections and expectations of future profitability. Consequent upon this, the higher the exchange rate level (measured in units of foreign currency per host currency) and the more it is rising, the higher will be expectations of future profits from entering a foreign market. Therefore, Campa's model predicts that an appreciation of the host currency will increase foreign direct investment into the host country, ceteris paribus, which is contrary to the prediction of Froot and Stein (1991).

Froot and Stein (1991) countered this argument by Campa (1993) with the claim that when capital markets are subject to information imperfections, exchange rate movements do influence foreign investment.

Unsustainable budget deficits and inflationary pressures have been generated in Africa through irresponsible fiscal and monetary policies according to Omankhanlen (2011). This has increased production costs locally, generated the instability of exchange rate and made the region too risky as a location for foreign direct investment. Macroeconomic volatility in Nigeria manifests in different forms ranging from volatility in real growth rates, price inflation, investment per capita and government revenues per capita to fluctuations in terms of trade and real exchange rate. Medupin (2002) stated that at independence in 1960, private foreign investment in Nigeria accounted for 70% of the total industrial investment and over 90% of investment in such basic industries as chemical production, and vehicle assembly plants and no less than 90% of other manufacturing sub-sectors.

According to Adegbite and Ayadi (2010) foreign direct investment helps to fill the domestic revenue-generation gap in a developing economy, given that most developing countries' governments do not seem to be able to generate sufficient revenue to meet their expenditure needs. Given that there are a finite number of potential direct investments; countries with a high degree of currency risk will lose out on FDI to countries with more stable currencies (Foad, 2005).

3.0 Methodology

This study focuses on the influence of exchange rate on the inflow of foreign direct investment in Nigeria. It uses the generalised method of moments (GMM) estimation technique where interest rate and political stability are not included in the model but are included in the instrument list because they are endogenously determined explanatory variables. A total of thirty nine (39) time series observations over a period of 1985-2024wereanalyzed in this study.

3.1: Specification of the Model

The influence of exchange rate on the inflow of foreign direct investment in Nigeria was examined. Therefore, the implicit form of the model is specified as:

$$logFDI_t = \beta_{0t} + \beta_1 logEXCR_t + \beta_2 logGDP_t + \beta_3 logINF_t + \mu_t \quad (1)$$

In order to satisfy the order of condition for identification which requires the same number of instruments and coefficients, the list of instruments is:

β_0;$logINT_{t-1}$; $logINF_{t-1}$; $logGDP_{t-1}$; $logFDI_{t-1}$; POL_{t-1}

Where;

FDI = Foreign direct investment

EXCR= Exchange rate

GDP = Gross domestic product

INT = Domestic interest rate

INF = Inflation rate

POL = Political stability

3.2 A-Priori Expectations

We expect "a-priori" that β_1, and β_2 which represents the coefficients of exchange rate and gross domestic product respectively, will be positive while β_3 which is the coefficient of inflation is expected to be negative, indicating that all the parameters are expected to have a positive impact on foreign direct investment except inflation rate which is expected to have a negative impact.

3.2.1 The Variables

FOREIGN DIRECT INVESTMENT (FDI) – Is the movement of capital across national frontiers in a manner that grants the investor control over the acquired asset. There is a growing consensus that an increase in cumulative foreign direct investment would complement domestic savings to meet investment needs in a particular less developed country.

EXCHANGE RATE (EXCR) – Exchange rate is important to inflow of foreign direct investment. An over-valued exchange rate or highly distorted foreign exchange rate will discourage exports and negatively affect foreign direct investment. Exchange rates are expected to affect FDI inflows because they affect a firm's cash flow, expected profitability and the attractiveness of domestic assets to foreign investors (Erdal and Tatoglu, 2002; Maniam, 1998).

GROSS DOMESTIC PRODUCT(GDP) - A rapidly growing economy provides better opportunities for making profits than the ones growing slowly or not all (Lim, 1983) and an impressive rate of economic growth will be taken as a favourable signal by foreign investors when making investment decisions (Asiebu, 2003; Erdal and Tatoglu 2002).GDP can be used to capture the influence of proven economic performance (Obwona, 2003), so the annual growth rate of real GDP is used as a measure of how attractive the market is.

INFLATION RATE (INF) – A high inflation rate is an indication that government lacks the ability to manage the economy (Fisher, 1993). Hence, high inflation rate is expected to lead to a contraction of foreign investment by raising the risk of long term investment projects, and distorting price signals in the economy.

POLITICAL STABILITY (POL) – Political stability is important for creating a climate of confidence for investors. Political instability whether perceived or real could be a serious deterrent for FDI as it creates uncertainties and increases risks and costs (Obwona, 2003). The frequency of coup d'état in the country is used as a measure of political instability and the transition to democracy would be used as an indicator of political stability. Dummy variables would be used to capture these variables and their effect on FDI.

4. 0 Research Findings

PRESENTATION AND INTERPRETATION OF THE GMM RESULT

Table 1: GMM RESULT:

Instrument list: LOG(FDI(-1)) C LOG(EXCR(-1)) LOG(GDP(-1)) LOG(INF(-1)) LOG(INT(-1)) POL(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.219107	0.896784	4.704708	0.0000
LOG(EXCR)	1.197472	0.096894	12.35858	0.0000
LOG(GDP)	0.335722	0.119425	2.811143	0.0080
LOG(INF)	-0.644592	0.308001	-2.092825	0.0437

R-squared	0.940984	Mean dependent var	8.881938
Adjusted R-squared	0.935925	S.D. dependent var	3.148750
S.E. of regression	0.797044	Sum squared resid	22.23477
Durbin-Watson stat	1.133072	J-statistic	0.112502

Source: Authors' computation (2024)

From the regression result above, we obtained the following:

$\log FDI_t = 4.22 + 1.20EXCR_t + 0.34GDP_t - 0.64INF_t$

The parameter estimates comply with 'apriori' expectations of a positive relationship between foreign direct investment and the exchange rate, gross domestic product while domestic inflation rate has the expected negative relationship with foreign direct investment as indicated by table 1 above.

The coefficient of determination (R^2) value is high at 0.94 and statistically different from zero. Thus, there is a significant relationship between the foreign direct investment and the independent variables as they account for over 94% of the variations in the foreign direct investment.

The Durbin-Watson statistic of 1.13 suggests that there is a positive autocorrelation between the independent variables. The justification for this result is that the exchange rate and other explanatory variable are significant in explaining the variations in the explained variable as indicated by the t-statistic. The j-statistic of 0.11 is very low, showing that all the explanatory variables are jointly significant in explaining the behaviour of the explained variable.

5.0 Conclusions

The impact of exchange rate on the inflow of foreign direct investment has been analyzed in this study.

The model makes economic sense because the parameter estimates complied with the 'apriori' expectations of a positive relationship between exchange rate and foreign direct investment while inflation rate was also significant and complied with the negative 'apriori' expectations as set by economic theory.

The results obtained indicated that the inflow of foreign direct investment into Nigeria has been significantly and positively affected by exchange rate. The result indicated that there is a very strong and positive correlation between the explanatory variables and foreign direct investment. It has also been shown from the data collected that on the average, exchange rate has performed positively in influencing the inflow of foreign direct investment in Nigeria.

Our recommendation centre's on how to stabilize the domestic inflation rate for improved inflow of foreign direct investment by maintaining a single digit inflation rate. Exchange rate should be given due attention in order to gain maximum benefits that accrue from foreign direct investment in Nigeria.

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