Effect of Foreign Direct investment on the Growth of Manufacturing Sector in Nigeria

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Abstract
The study examined the effect of foreign direct investment on the growth of the manufacturing sector in Nigeria. The specific objectives were, to examine the impact of foreign direct investment, interest rate, exchange rate, inflation on the growth of manufacturing sector in Nigeria. Secondary source of data was employed in this study using central bank statistical Bulletin. Desk survey method and expost facto were employed in this study. Ordinary least square of multiple regression statistical techniques was adopted in this study. Based on the analysis of this study, the findings revealed thus; foreign direct investment has a significant relationship with manufacturing sector value added output, interest rate has a significant relationship with manufacturing sector value added output, exchange rate has a significant relationship with manufacturing sector value added output and Inflation has a significant relationship with manufacturing sector value added output. The study recommended that Government should put stringent measures/ policies to ensure that the enormous benefit accrued to FDI in the manufacturing sector are taken advantage of and well utilized to positively enhance the Nigerian economy. Appropriate policy measures to attract foreign capital should be formulated and implemented to boost increased manufacturing sector output.

Introduction

1.1 Background to the study

Most countries strive to attract foreign direct investment (FDI) in the manufacturing sector because of its acknowledged advantages as a tool for economic development. Africa and Nigeria in particular joined the rest of the world to seek FDI as evidenced by the formation of new partnership for Africa's development (NEPAD), which has the attraction of foreign investment to Africa as a major component. Foreign Direct Investment is the investment made by a company outside its home country. It is the flow of long term capital based on long term profit consideration involved in international production . FDI is expected to transfer technology, as well as increase managerial and marketing skills to domestic industries in order to enhance their productivity and economic growth to the wider economy of the host nation. It is evident that in recent time, foreign Direct Investment (FDI) has become the most important source of external resource flows to developing countries and plays an extraordinary role in globalization. According to Sabina and Takon (2017), FDI is an investment which involves not only a transfer of funds and the reinvestment of profits but also a whole package of physical capital, techniques of production, managerial and marketing expertise, products advertising and business practices for the maximization of global profits. The world trade organization (2016) observes that FDI occurs when an investor based in a country which is the home country, acquires an asset in another country with the interest to manage that asset. **F**oreign direct investment (FDI) is a means to achieve economic development in its own rights, with expected spillovers and above those associated with domestically finished investments. In view of the contemporary developments in the Nigeria economy, there is incessant political, social and economic crisis in Nigeria which has manifested itself in the perpetual underdevelopment and structural backwardness of the economy (Odozi, 2017). Also, the government has projected the manufacturing sector as a priority by way of divisifying the economy from oil dependence to create employment

and building up the capacity to efficiently add value to the abundant natural resources. The constraining factors that historically hinder the growth of the manufacturing sector are; weak infrastructure, insecurity (militancy), market-distorting, state-owned monopolies, political instabilities, rampant corruption and unavailability of finance. Specific measures to boost investment in the manufacturing sector include improvements to road and rail infrastructure, power sector reforms to improve the reliability of electricity supply, availability of natural resources and the liberalization accelerated by information and communication technology. (Sabina & Takon (2017). The study intends to examine the effect of foreign direct investment on the growth of manufacturing sector in Nigeria

Statement of the problem

Given the economy's weak technological and industrial base, industrial activities were organized to depend largely on imported inputs and Nigeria has employed a number of strategies aimed at attracting FDI flows and to enhance the performance of the manufacturing sector, in order to increase economic growth and development. However, as a result of the collapse of the world oil market in the early 1980s which is the major source of the country's foreign earning from exports, it became inadequate to pay for the huge import bills. All the policy measures adopted to improve the situation such as the stabilization measure of 1982, as well as the restrictive monetary policy and stringent measure of 1984, however failed. This led to the introduction of the structural adjustment program (SAP) in 1986. The Nigeria manufacturing sector's performance has declined steadily, meaning that improving the Nigeria manufacturing sector does not depend largely on attracting FDI flows and raising the level of savings, but it depends mainly on the accumulation and efficient utilization of human capital. It is worthy to note here that insufficient or complete lack of human capital skills widens the technological gap between the domestic firms and foreign firms. Without the accumulation of knowledge through sound and qualitative education, there is no foundation on which technology and the manufacturing sector can grow or even survive. Furthermore, technology is the greatest obstacle constraining productivity in Nigeria's manufacturing sector, as development in technology and innovation are the primary forces of industrialization today. We cannot acquire technology without sound and qualitative education. Lack of engineers and technical staff is reported to be setting back potential foreign investment, especially in manufacturing sectors in Nigeria. Thus this study intends to investigate the impact of FDI inflow on Nigeria manufacturing sector.

Theoretical framework

This study is anchored on spillover theory

Spillover theory

This theory was propounded by Dunning in 1993. This theory tries to explain and analyze the process of spillovers from multinationals to host country firms through industrial organization. Dunning's ecletic paradigm has been for long an effective framework for empirical investigation of determinant of foreign direct investment. The basic assumption of the theory is that it tries to explain FDI and the returns on it by bringing together a set of three factors, which are ownership advantages of firms "O", that is the monopolistic advantage, locational advantage factors "L" which concentrates on where to produce: and by the internalization factor "I" that addresses the question of why firms engage in FDI rather than license foreign firms to use their proprietary assets. The OLI theory explains FDI by merging three isolated theories of international production, the monopolistic advantage, the location advantage and internalization theories, in a single approach, hence it is often called an ecletic theory.

Review of empirical literature

Limited number of empirical studies of the relationship between FDI and the performance of manufacturing sector in Nigeria exist. Edame (2015) assessed the influence of FDI on firm level of productivity of domestic firms. Also Iyoho and Oriaklun (2013) examined the role of FDI in the process of technology diffusion and economic growth. They found out a positive impact of FDI on economic growth, and also showed that the extent of the impact depends largely on the amount of human capital available in the host country in line with the view of Iyoho and Oriaklun (2013). The study revealed that there is an effect of human capital on growth and productivity, export promotion, technology transfers and domestic economy through FDI. Edozie (2018) employed Chinery and Stout's two-gap model, he observed that FDI has a negative effect on economic growth in Nigeria. He hypothesized foreign loans, direct investment and export earnings. Bradely(2011) investigated the impact of FDI on economic growth in Nigeria and found that FDI is pro consumption and pro import and negatively related to gross domestic investment. Ayanwuocha (2014) investigated the empirical relationship between non- extractive FDI and economic growth in Nigeria using OLS estimates, and found that FDI has a positive link with economic growth. However, he cautioned that the overall effect of FDI on economic growth may not be significant. Alfaro and Kalemi (2013) found that FDI is positively associated with GDP, concluding that greater inflow of FDI will spell a better economic performance for the country.

Foreign direct investment

Foreign direct investment is expected to be influenced by the size of the market for the product of such investment and is expected to increase where there exist higher profit rates so as to follow the direction of marginal productivity of capital. Ahmed (2011) states that foreign direct investment has grown significantly in the world economy, especially in developing countries. He stated that as such, foreign direct investment (FDI) is seen as an important channel for obtaining access to resources for development, and the emerging positive attitude to foreign direct investment are reflected in policy changes that increasingly facilitate direct investment. However, the availability of relevant raw materials is a useful catalyst of the in- flow of foreign direct investment. Most states in Nigeria are striving to promote FDI and to promote economic growth. This is more so with the advent of democratic rule. Akinfesi (2011) states that one important economic consequence of globalization for developing countries has been the massive and unprecedented inflow of foreign private capital by way of investments.

Blomstrom and Person (2013) argued that the most important reason behind many countries' efforts to attract more foreign investment today is a desire to acquire modern technology. They and others suggested that the investments of multinational corporations generate important externalities that enhance the productivity of indigenous firms in the economy. These externalities, which are typically referred to as "Positive Productivity Spill Over" are seen as helping to improve the comparative advantage of the economy over time. Positive Productivity Spill Over increased reliability of service provision resulting from FDI which may allow manufacturing firms to optimize their machinery usage and it provides incentives for firms to use. Technologically, more advanced production processes depend on data connection. These possibilities capture multiple dimensions of technological change, thus, motivating a positive effect of FDI in services to firms. (Globermans, 2015)

Altken and Harrison (2010) showed that foreign entry, by distributing the existing market equilibrium in host country, could force domestic firms to produce less output, push to their average cost curves and hence, lower the production of domestic firms. From a domestic policy perspective, Obadan (2014) states that the direct effects of FDI, and particularly employment creation have been

the main focus of attention in Nigeria. Since the Mid-1990s the focus has begun to shift to the indirect impact of FDI on the manufacturing sector. Consequently, the direct benefits of additional employment in the multi-national corporation sector are seen as having reduced values. This emphasis is evident in the policy of building between multinational corporations and local companies as well as in the policy of building manufacturing industries in targeted sectors, especially in electronics, and health care products. Foreign direct investment is a two-way process; it could be inward or outward. Just as foreigners invest in Nigeria, citizens of Nigeria also engage in foreign direct investment. Flores and Rogen (2013), suggests that a firm that will want to establish an oversea subsidiary company should do so if it enjoys a firm-specific competitive advantage over its local rivals and that advantage is most profitably exploited through managerial control over operations in foreign countries. It is in this sense that policy makers should not regard foreign direct investment as a cause of economic growth, but rather that FDI has the potential to contribute to economic expansion only after such expansion has begun. Odozi (2017) opined that foreign investment appears to be the most crucial component of capital inflow that Nigeria should seek to attract in the light of her current economic circumstances. As pointed out by Pfefferman and Madarasly (2012), foreign direct investment has come to be regarded as a means to achieve economic development in its own right, with expected spillovers.

Generally, foreign investment involves the transfer of a package of resources including capital, technology, management, and marketing expertise, such as resources that have the effect of extending the production capabilities of the recipient country (Odozi, 2017). He opined that the decision to invest capital in a project abroad should be based upon considerations of expected return and risk. In other words, the motivation is two fold, to obtain returns higher than those obtainable in their own country, and to reduce overall risk through intentional diversification. The reason for foreign direct investment can be as follows;

(1) Foreign direct investment could serve as a strategy by a firm to reduce the political risk of over-concentration of operations in a particular region.
(2) FDI in services may lead to service quality improvements. These may result from increased competition and the superior technological, organizational and management know-how of foreign-owned service providers.
(3) Foreign direct investment could serve as an integral part of firms overall strategy for global production and sales. This is because international diversification is reducing a company's risk in relation to expected return. The economic cycles of various countries do not tend to be completely synchronized, so it is possible to minimize risk relative to expected return by investing across frontiers.
(4) FDI in services may result in greater variety of services being provided, including new and technologically advanced service.

Effect of foreign direct investment on manufacturing sector in Nigeria

Odozi (2017) opined that the role of foreign direct investment in capital formation in Nigeria has been increasing over the years. Apart from its direct contribution to capital formation, foreign direct investment may also influence investment by domestic firms and by other foreign affiliation. However, the Nigerian currency depreciated during the 2000-2003 period. This was partly due to the strength of the US dollar in the global market. Despite high oil earnings, the naira experienced a sharp depreciation in 2000. This could be due to large outflow of short-form capital to finance imports. Edame (2015) states that Nigeria has initiated reforms aimed at increasing the role of prize sector. Notable among these reforms are the privatization of many public corporations, restoration and maintenance of microeconomic reform embarked upon in 1986, improving regulatory framework for foreign direct investment by promoting profit repatriation and proving tax incentives

to attract foreign investment.

Ekpo (2017) opined that the economic climate in Nigeria has improved considerably for FDI since 1988. Moreover, macroeconomic strategies have emphasized restrictive monetary and fiscal policies to achieve internal and external balances as well as structural, institutional and governance reforms in order to provide conducive environment for private sector led growth. In 1988, the GDP growth rate was 39.6 percent, 40.9 percent in 1989, 57.3 percent in 1933, 72.8 percent in 1995, 10 percent in 1998, if decreased to 6.6 percent in 1999, in 2000, 2001 and 2002 was 5 percent. According to Bradely (2011), foreign direct investment on gross domestic product (GDP) of the host country improves the allocation of resources in the country. It is obvious that the flow of foreign direct investment in the Nigerian manufacturing sector is not only a source of finance of employment. It is certainly a medium for acquiring skills, technology, and access to market. Akinfesi (2011) FDI would then be restricted to technology transfer through which foreign direct investment may affect growth. Along this line, Sodersten (2000) argued that foreign direct investment can have a positive effect on growth in developing countries by helping them bridge the ideal gap with respect to industrial countries.

Determinants of FDI

1. Exchange rate

The impact of exchange rate on foreign investment is evident from the works of Edame(2015), He examined empirically the link between exchange rate uncertainty and investment in least developed countries (LDCs). His result showed a negative and highly significant impact of real exchange rate uncertainty on private investment. Exchange rate is the rate at which one currency exchanges for another. It is the link between various national currencies. The concept of exchange rate is so critical and vital that it is normally used to characterize the international monetary system in use at any time. Exchange rate fluctuation is a situation where economy is not stable. According to Anyanwuocha (2014), the foreign exchange rate refers to the price of one currency in term of another currency. That is, it is the number of unit of one currency of another. For example, the Nigerian naira (N) has an exchange rate against US dollar (S), pound, sterling, Deutsch Mark Japanses Yen, French France etc.

Foreign direct investment in Nigeria has been unstable over the years and the contribution of exchange rate fluctuations to capital flow variability cannot be underestimated. Exchange rate level has implications for balance of payment viability and the level of external debt. For instance, if the exchange rate is over valued, then it would lead to unsustainable balance of payment deficit and escalating external debt stock. This will in turn lead to a fall in foreign direct private investment.
Exchange rate capture and measure the international competiveness of countries. Exchange rates can affect FDI through an imperfect capital market channel. In this case a real depreciation of the domestic currency raises the wealth of the foreign investors relative to that of domestic investors and thereby increases FDI.

2. Interest rate

Interest rate on foreign direct investment is the rate which is charged or paid for the use of money or more precisely the cost of borrowing. Also the real interest rate in the host economy captures the host country's return on investment as an attracting factor for FDI. However, the direction of the impact could be in a reverse if the foreign investors depend on host countries' capital market for raising FDI fund, the expected sign is positive relation to FDI inflow. Interest rate is return on investment, investors will channel their investments from low interest rates to higher interest rate, because it provides incentive to foreign investors looking for higher returns, therefore high interest rate can lead to increase in FDI.

3. Inflation

Inflation rate affects capital preservation of FDI. Higher or lower inflation can effect on profitability as higher or lower prices can lead to increased cost or lower profits. So, stable inflation rate is desirable for FDI. The rate of inflation is a crucial factor in influencing the inflow of foreign investment. A high rate of inflation signifies economic instability associated with in an appropriate government polices, especially the monetary fiscal policy mix. The high rates of inflation distort the economic activities, leading to lesser inflow of capital. A low and stable inflation rate acts as a sign of internal economic stability. This is because it reduces uncertainty and boosts the confidence of people and businesses in investment.

Research methods

Based on the nature of this study and the variables involved, the research design suitable is the ex-post facto research design. Thus, it was employed in this study. The secondary source of data provided the most reliable data for this study, and the specific source is the Central Bank of Nigeria (CBN) statistical bulletins

Model specification

MSV = F (FDI, INTR, EXCHR, INF)

Where;

MSV = Manufacturing sector value added output
FDI = Foreign Direct Investment
INTR = Interest rate
EXCHR= Exchange rate
INF = Inflation

These variables are further incorporated into ordinary least square model. This is expressed as;

$MSV=b_0+b_1FDI+b_2INTR+b_3EXCHR+ b_4INF + e$

Dependent variable = MSV
Independent variable = FDI, INTR, EXCHR, INF
Regression constant = b_o
Unknown parameters = b_1 - b4
Stochastic error term = e

In analyzing the data gathered for this work, multiple regression model was employed to establish the relationship between dependent variable and independent variables.

Analysis of data

The regression results on the impact of foreign direct investment on the growth of the manufacturing sector in Nigeria (1990-2017)

Regression result

Dependent Variable: MSV

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.687593	1.533983	2.403933	0.0247
FDI	0.957859	0.201195	4.760852	0.0001
INTR	1.569728	0.259084	6.058758	0.0000
EXCHR	3.481684	0.932634	3.733174	0.0010
INF	0.972772	0.099138	9.812283	0.0000

R^2 = 0.984930 R^2(adj) = 0.978402 SER = 0.737319 F - Stat = 186.9630, DW = 1.812365

The coefficient of multiple determination (R^2) is 0.9849 and an adjusted R^2 of 0.9784. The later

indicates that 98percent of variations in the observed behaviour of MSV is jointly explained by the independent variables namely: FDI, INTR, EXCHR, INF. This shows that the model fits the data well and has a tight fit. Also, the f-statistic is used to test for the significance of such good or tight fit. The model reports on effectively high f-statistics value of 186.9630 which when compared with the table value, .thus indicates that the high-adjusted R^2 value is better than would have occurred by chance; therefore, the model is statistically robust. Using this criterion, therefore, FDI, INTR, EXCHR, INF are significant at 1 percent level. Specifically, a one percent increase in FDI (0.95%), INTR (1.56%), EXCHR (3.48%) and INF (0.97%) will prop up the growth of the manufacturing sector more then proportionate percentage point. The constant term indicates that if all variables are held constant, the growth of the manufacturing sector will be improved by 3.68. The DW statistic (1.81) is used to test for the serial correlation in the residuals of the model. The calculated DW is 1.81. The decision rule is that if the calculated DW falls outside du and 4-du, then there is a serial correlation in the residuals. This shows that our calculated DW falls outside indicating that the estimates should be taken with caution. The goodness of fit of the model as indicated by the adjusted, R-squared shows a good fit of the model that the model fits the data well; the total variation in the observed behavior of manufacturing sector output, used as a measure of growth, is jointly explained by variation in FDI, INTR, EXCHR, INF. For the overall significant of the model, the ANOVA on the f-statistic is used. Hence, the model did not occur by chance, it actually confirms that the model fits the data well. To test for the individual statistical significant of the parameters, the t-statistic of the respective variable were considered. Considering their probability values, computer software shows the constant term is positive, while independent variables are statistically significant at 1 percent level. The a priori expectations about the signs of the parameter estimates are a confirmation to economic theory.

Findings

Based on the analysis of the study, the following findings were made;

1. There is a positive and significant relationship between foreign direct investment and the growth of manufacturing sector
2. There is a positive and significant relationship between exchange rate and the growth of manufacturing sector
3. There is a positive and significant relationship between interest rate and the growth of manufacturing sector
4. There is a positive and significant relationship between inflation and the growth of manufacturing sector

Conclusion/Recommendations

This study was aimed at examining the growth of FDI on manufacturing sector in Nigeria. The study revealed that foreign direct investment, exchange rate, interest rate and inflation positively affected the performance of the manufacturing sector in Nigeria. Foreign Direct Investment is the investment made by a company outside its home country. It is the flow of long term capital based on long term profit consideration involved in international production. FDI is expected to transfer technology, as well as increase managerial and marketing skills to domestic industries in order to enhance their productivity and economic growth to the wider economy of the host nation.

The following recommendations are:

1. Government should put stringent measures/ policies to ensure that the enormous benefit accrued to FDI in the manufacturing sector are taken advantage of and well utilized to positively enhance the Nigerian economy.
2. Appropriate policy measures to attract foreign capital should be formulated and implemented to boost increased manufacturing sector output.

3. The policies that will bring about improvement in foreign direct investment should be encouraged, as well as policies and programmes that would promote or stimulate foreign capital in the form of FDI and reduced interest rate should be encouraged.

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