

## Multinational Direct Investment and Economic Growth in Nigeria: An Empirical Study

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**Abstract:** One of the major macroeconomic variables that stimulate growth is investment. Economic theories have shown that there is a causal relationship between economic growth and the increase in investment. This study, however examined the growth implications of multinational direct investment in Nigeria. The results of the data analysis and estimation were obtained using the parsimonious error correction mechanism. The result demonstrated that there is a positive relationship between multinational direct investment and growth in Nigeria. It shows that 1% rise in multinational direct investments will cause as much as 80% growth in the gross domestic output. This result indicated that multinational direct investment has the greatest influence on the growth of Nigerian economy compare to other variable in the model and strongly support the need for the government to encourage multinational corporation to establish more direct foreign investment in Nigeria. This is possible by simplifying the screening process and by creating more conducive political, social and economic environment for effective operation of multinational corporations.

**Key words:** Multinational corporations, direct foreign investment economic growth, liberalization, deregulation and privatization, Akungba-Akoko, Nigeria

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### INTRODUCTION

The economic growth of any nation is traceable to so many factors among which investment is major. For an economy to grow, it must divert part of its resources from current consumption and invest it on capital formation. But many poor countries of the world are plagued by shortage of domestic savings and capital that can be put into such investment purposes. The alternative to this is to attract direct foreign investments in order to bridge the gaps created by shortage of domestic savings or capital. Foreign direct investments occur when foreigners either wholly or jointly with local investors establishes their physical presence in another country through the acquisition of physical assets such as factories, buildings, plants, machineries, etc.

The foreign entrepreneurs that engage in such ventures are referred to as Multinational Corporations (MNCs). Dunning (1996) used the term to refer to such enterprises which have their home base enterprises but which also establish or extend their business into another country, operate and live under the laws of those countries.

The examples of multinational corporation are Sony, Toyota, Royal Dutch, Shell, IBM, CIM, coca-cola, McDonald, Diameter-Benz, Bayer, Microsoft, Pfizer and Nestle to mention a few. Indeed the activities of these multinational corporations now play vital roles in linking

national economy and defining the nature of the emerging global economy. Their supportive and able recourses, tangible and intangible which they deploy across of national boundaries to pursue profit and bolster their competitive position augment domestic servings and provide foreign exchange required for massive investment in infrastructures.

Thus the activities of multinational corporation are supportive to the growth and development of many countries including Nigeria. Firstly, it is capable of contributing to the growth of real output direct investment in the production of tangible goods. Secondly, multinational direct investment generates and expands businesses, stimulate employment, raise wages and replace declining market sectors.

Thirdly, parent companies of transnational corporation systems do support their overseas affiliates by ensuring that appropriate human and material resources are put in place. Fourthly, when the crowding-in effects of multinational direct investment supersedes it's crowding out effects on domestic economy, growth is accumulated both in the upstream as well as in the down stream businesses. Fifthly, it reduces a country propensity to import and leads to increased competition in the host countries which promote efficient allocation of production resources.

All these notwithstanding domestic benefits from multinational investment are antigen on government

capacity, democratic accountabilities, political stability, economic stability, regulation standardization and development policies that maximizes freedom of production and consumption in the host country. It is however instructive to find out whether these supportive incentives are available in Nigeria and whether the existence of multinational corporations has actually contributed positively to the growth and development of the country. Accordingly, this study addresses the following questions: do we have multinational investment in Nigeria? Is the socio-economic and political system of Nigeria conducive for the existence and good performances of multinational corporation? Does multinational corporation investment really contribute to the growth and stability of Nigerian economy? If yes: to what extent and in what magnitude?

**Literature review;** The concept, importance, advantages, disadvantage, economic implications and policy implications of multinational direct investment have been reviewed and discussed by several authors and researchers. Dunning (1996) used the term: multinational corporation to refer to such corporations which have their home in one country but which operate under the laws and policies of other countries. For Dunning (1996), any enterprise that owns or control value adding activities in more than one country is a multinational corporation (MNCs). Hymer (1976) and Markusen (1995) posited that MNCs exist when a firm is able to expand its existence beyond its home circles and internationalize market for its assets.

These assets sometimes could be skill, patent rights, marketing abilities and managerial skill. According to Odozi (1995), multinational direct investment generally involves the transfers of resources including technology management and marketing expertise. Such resources usually extend the production capabilities of the recipient country. Supporting the argument of Odozi (1995) and Obadan (1982) found that the activities of multinational corporation is beneficial to recipient nations in that it necessitates the inflow of foreign exchange and new technologies, generates employment, infuse labour and marketing skills and enhance the income of the recipient countries through taxation and payment of royalties.

To the contrary, Porter (1999) argued that multinational corporation activities can sometimes be detrimental to the recipient developing nations. According to him, they are able to influence the domestic policy outcomes of host countries by threatening to move resources both human and material overseas. This situation often raises questions about whether corporate

powers enable MNCs to undermine sustainable development by circumventing domestic environmental standards.

Moreover, the fear that MNCs can move resources overseas and the calculation of the effect that this could have on the economy can influence the degree to which development countries will impose environment regulations on multinational enterprise. Lewis (1948), Sachs (1989), Cardoso and Faletto (1979) and O' Hearn (1990) allied with the position of porter. They stressed further that multinational corporation served only to enrich the western world and further impoverish the poor nations of the world.

They believed that MNCs relates to the African economies mainly as their sources of raw of materials and market for their manufactured good. Ogiogio (1995) held the same opinion.

Turning to the growth implications of the multinational investments some ancient and recent studies prove that MNCs investment is positively correlated with growth. Researchers like Akinlo (2004), Aseidu (2003), Obinna (1983) and Ayanwale and Bamire (2001) found that multinational corporation investment have contributed positively to the growth of Nigerian economy. Specifically, Brown (1962) and Obinna (1983) carried out empirical studies on the activities of multinational corporation in Nigeria.

Their findings show a positive linkage between the multinational investment and the economic growth in Nigeria. But the findings of some other researches have been contrary. For instance, Endozien (1968) discussed the linkage effects of multinational investment or economic growth of Nigeria.

He submitted that it has not been considerable and that the broad linkage effects were lower than the Chenery-Watanabe average (Chenery and Watanabe, 1958).

Adelegan (2000) explored the seemingly unrelated regression model to examine the impact of multinational investment on economic growth in Nigeria. He found that multinational investment is pro-consumption and pro-import and negatively related to gross domestic investment. In summary, there is no consensus in the literature on the impact of multinational investment on the growth of Nigerian economy.

The empirical evidences are not unanimous either. While some agree with short run positive spillover from multinational investment; some submitted entire negative growth implications. It is instructive therefore to carry an error correction mechanism to study the direction, the extent and magnitude of the impact of multinational investments on growth positively or negative. This study attempts to fill this gap.

## MATERIALS AND METHODS

Issues relating to the choice of research design and strategies, model specification, data requirements and sources, the nature and scope of data collected, the data processing technique and the theoretical significance of parameter estimate are discussed.

The models were adjudged reliable before they were used. The components of the model were defined and a prior expectation of the relationship among the variables explained for the purpose of giving the reviewers and users a deep insight into the phenomenon under study.

**Research design and strategies:** The study uses quasi-experimental research design approach for the data analysis. This approach combines theoretical consideration (a prior criterion) with the empirical observation and extracts maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables.

**Data requirement and sources:** Given the nature of the model, it is imperative that the data that will permit the estimation of the stochastic equations representing the impact of multinational investment on economic growth can be collected. These include: gross domestic output growth rate, direct foreign investment, exports earnings and exchange rate. Time series data were used for the study and they are purely secondary data. The data were obtained from Central Bank of Nigeria (CBN) annual statistical bulletin and National Bureau for Statistics (NBS).

**Data processing techniques:** The secondary data used for the study were processed using the E-view for windows electronic packages.

These packages are suitable because they are time efficient in terms of output and adequacy of statistics generated. The empirical study uses a simulation approach to investigate the relationship between the economic growth and multinational investment.

**Model specification:** The main question or hypothesis being addressed in this empirical analysis is whether or not multinational direct investment has positive and significant impact on the output growth in Nigeria. The study built upon Aremu (1997) model. According to Aremu, the growth of an economy is determined by various variables such as rate of interest, inflation rate, investment, exchange rate, etc. The study

included multinational investment variable. Consequently, the growth model is specified mathematically as:

$$GDP = F (MNCI, RT, INF, EXR) \quad (1)$$

This can be expressed in a linear form as:

$$GDP = \Phi_0 + \Phi_1 MNCI + \Phi_2 INF + \Phi_3 EXR + \Phi_4 RT \quad (2)$$

If we include the error term, Eq. 2 can be rewritten as:

$$GDP = \Phi_0 + \Phi_1 MNCI + \Phi_2 INF + \Phi_3 EXR + \Phi_4 RT + U_i \quad (3)$$

Where:

- GDP = Gross Domestic Product
- MNCI = Multinational Direct Investment
- RT = Percentage Rate of Interest
- INF = Inflation Rate
- EXR = Exchange Rate
- $\Phi_0$  = Constant Factor
- $\Phi_1 - \Phi_n$  = Slopes of the variables for estimation
- $U_i$  = Error term

On theoretical ground, (a priori) researchers expect the parameters to take positive signs except for Percentage Rate of Interest i.e.,  $\Phi_1, \Phi_2, \Phi_3 > 0, \Phi_4 < 0$ . This means there should be positive relationship between GDP growth rate and multinational direct investment, exchange rate and inflation rate and a negative relationship between GDP growth rate and percentage rate of interest.

## RESULTS AND DISCUSSION

The value of standard error and t-statistics are stated in the parentheses, respectively while the other parameter estimates are stated below the results. The data were tested at 95% degree of confidence (5% level of significance).

$$GDP = -12.6724 + 0.008 EXR - 0.0396 INF + 0.8135 MNCI + 0.4535 RT$$

(1.5921)	(0.0051)	(0.0121)	(0.1629)	(0.03663)
(-7.9521)	(1.6061)	(4.9316)	(-4.994)	(12.5001)

$$ECM = 0.9551; \text{Adj } R^2 = 0.9792; F\text{-stat} = 242.6030$$

$$DW\text{-Stat} = 2.5731, \text{Prob (F) stat} = 0.0000$$

The study modeled the Nigerian economy by making use of time series data from 1981-2007 to analyze the effect of multinational direct investment on the growth of Nigerian Economy, using growth equation.

**The coefficient of the multiple determination  $R^2$ :** The coefficient of the multiple determination stood at 0.9792 (97%). This means that the explanatory variables: multinational direct investment, exchange rate, inflation rate and percentage rate of interest accounted for 97% of the total changes in the dependent variable (GDP). This is a good fit.

**The standard error:** The value of the standard error for the entire variables in the model show that the parameter estimate were statistically significant, except for exchange rate. These values were less than half of the values of the coefficient of the variables.

**The F-statistics:** The F-statistics test was also carried out to test for stability in the regression parameter coefficient when sample size increases, as well as the overall significance of the estimated regression model. Thus, we compare the calculated F with the critical value at 5% level (0.05) at  $K - 1$ , i.e.  $(5 - 1 = 4)$  and  $N - K = 26 - 5 = 21$  degree of freedom) for the model. Where  $K$  = the number of parameter estimated and  $N$  = the number of the observed years. If  $F > F_{0.05}$ , we reject the null and accept the alternative hypothesis and if otherwise we accept the null hypothesis and reject the alternative hypothesis.

From the statistical table,  $F_{0.05}$  at (4, 21) degree of freedom is 2.84 while estimated  $F$  is 242.6030. Obviously,  $F > F_{0.05}$  (i.e.,  $242.6030 > 2.84$ ). This shows that variation in the gross domestic output in Nigeria could be attributed to changes in the independent variable including the multinational direct investment.

**Durbin-watson statistics:** The test for the presence of autocorrelation was performed by making use of the Durbin Watson statistics. The Durbin Watson statistics is 2.5. This was found to be within the normal region which falls within the determined region (i.e.,  $1.5 < d < 4$ ) and imply that there is negative first order serial autocorrelation among the explanatory variables. The error correction term (ECM) included in the model to capture the long run dynamics between the co-integrating series though not correctly signed (positive) is statistically significant. The coefficients indicated adjustment of 95% for the model. These adjustments imply that errors are corrected within one year with a high speed. The ECM also reveals a long run relationship between explanatory and dependent variables in each model.

The multinational direct investment variable was correctly and positively signed. It is also statistically

significant. The expected outcome of this variable is a positive one. Some researchers found a negative relationship between the growth in economy's output and multinational direct investment. But the result shows a positive relationship. The implication of this result is that if multinational direct investment increases in the long-run the economy will grow. It shows that a 1% rise in multinational direct investments will cause as much as 80% growth in the gross domestic output. This result indicated that multinational direct investment has the greatest influence on the growth of Nigerian economy compare to other variable in the model. The foreign exchange rate variable was positively signed but statistically not significant. The implication of this result is that though a positive relationship exists between exchange rate and GDP growth rates, it does not contribute significantly to the long run of output growth in Nigeria.

The inflation rate variable was negatively signed but statistically significant. The implication of this result is that though inflation contributed significantly to the long run of output growth in Nigeria, its contribution is negative. This proposes that if inflation increases in the long-run the economy will deteriorate and vice versa.

The rate of interest variable was positively signed but statistically significant. This is contrary to the theoretical proposition. The implication of this result is that rate of interest contributed positively and significantly to the long run of output growth in Nigeria. This might be as a result of the interest rate reform in Nigeria which brings down the rate of interest in recent time.

This study investigated the growth implications of multinational direct investment in Nigeria. Stochastic economic model was used on Nigeria time series data. The long run stability of the variable was tested and it has found that the data were stationary and co-integrated. The study carried out comprehensive literature renews and found that there was no consensus among the researchers on the impact of multinational investment on the growth of Nigerian economy. While some agree with short run positive spillover from multinational direct investment some other submitted entire negative growth implications. An error correction test was performed to detect the speed of adjustment to equilibrium in case of sudden shock.

The outcome of the test shows that multinational direct investment has a positive relationship with output growth in Nigeria. The impact is of a higher magnitude. Among other variables included in the model, multinational direct investment accounted for  $>70\%$  of

the total variation in the output growth. About 1% increase in multinational direct investment lead to 80% rise in the output growth.

The result is in consonance with the findings of Akinlo (2004), Aseidu (2003), Obinna (1983) and Ayanwale and Bamire (2001). The researchers discover that if the political atmosphere could be made more conducive for the establishment of more multinational corporation in Nigeria, there would be industrial and technological transformation and the growth and development would be sustained.

### CONCLUSION

Multinational direct investment according to the findings is a stimulant to economic growth of any country including Nigeria. It is an effective strategy that can be used to achieve sustainable growth and development. But for the multinational direct investment to achieve this noble goal, a competitive economy through liberalization, deregulation and privatization should be pursued. The conclusion therefore is that multinational direct investment is good for Nigerian economy. The only thing is that the country should minimize political violence, social and economic vices capable of discouraging and jeopardizing the interest of the multinational corporation to investment in the country. In other words democracy together with its complementary institution should be strengthened and corruption should be adequately tackled. Above all, the multinational corporations should comply with various national and industrial regulation and code of conduct.

### RECOMMENDATIONS

The government of Nigeria has a lot of roles to play in order to maximize the benefit of multinational direct investment. Primarily, the Nigerian government should encourage the in flows of the multinational direct investment by simplifying the screening process and by creating more conducive political, social and economic environment.

Furthermore, efforts should with more vigor at ensuring consistency in policy objectives and instrument through a good implementation strategy as well as good sense of discipline, understanding and cooperation among the policy maker.

Friendly economic policies and good business environment is required. Conclusively, the provision of basic socio-economic infrastructure such as good road, constant and consistent electricity supply, water supply

and good telecommunications system is germane to efficient operation of multinational direct investment in the country. The international image and integrity along with the indigenization policy should be improved upon.

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