# Foreign Direct Investment in Nigeria: Volume, Trends and its Effect on the Manufacturing Output (1981-2020)

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**Abstract**

In recent times, owing to the scantiness of earnings from the oil exports, the import-reliant industrial structure became unsustainable as it could not essentially cater for the humongous import bills. Hence, FDI has become more relevant to the developed nation and the vast majority of developing nation (Nigeria) through improvement in the attraction of immense inflows into these countries. Hence, the main thrust of this work is to ascertain the volume, trend, and impact of FDI on the Nigerian manufacturing output from 1981 to 2020. This was done by specifying and estimating a regression model using the Autoregressive Distributive Lag model (ARDL). The estimated regression model was found to have desirable statistical attributes thereby allowing valid statistical inferences to be made from it. The estimated regression results surprisingly suggest that FDI hurt manufacturing output in the country as it leads to a decline in the sector. Expectedly, exchange rate, has a positive effect on the manufacturing output and this is statistically significant at 5%. The conclusion inferred from this study is that FDI does not have a far-reaching effect on the manufacturing output in Nigeria. Consequently, more efforts should be geared towards blocking the loopholes and ensure that the inflow into the sectors are utilized for the purpose as to make its effect felt in the sector. Also, the exchange rate should be allowed to freely float to ensure the high competitiveness of the Nigerian manufacturing exports amongst others.

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**1. Introduction**

Private foreign investment and public development assistance are the major forms of inflows of financial resources internationally. Private foreign investment takes two forms: foreign direct investment(FDI) and portfolio. The main distinguishing factors between these two (FDI and portfolio) are in respect to ownership and control. The portfolio does not entail direct control over the multinational firms where the funds are invested while FDI encapsulates both ownership and direct control of the companies in the host nation. The main participants are multinational corporations (MNCs). The Nigerian FDI was mainly directed at Agricultural products and raw materials before the 1970s but presently, FDI focuses more on the oil sector (UNCTAD, 2018).

FDI inflow is capable of increasing both marketing and managerial skills and also technology transfer aims at improvement in the productivity level and economic upliftment of the host country. Evidently, FDI plays a vital role in globalization and has now become the most essential source of inflows of resources to developing nations (Chenery and Strout, 1996). It was also confirmed that the contribution of FDI to economic growth and employment opportunities cannot be overemphasized as it stimulates the inflows of foreign capital to enhance economic activities (Jenkins and Thomas, 2002). Various favorable policies and regulations and strategies have been developed by the Nigerian government towards increasing the inflows of FDI into the country (Onu, 2012). During the first National Development Plan (1962-1968), the import-substitution industrialization strategy was adopted by the country directed towards encouraging foreign exchange savings and eliminating the volume of imports of finished goods via local production of selected foreign consumer goods (Central Bank of Nigeria, 2021).

According to Aremu (2005), Nigeria has adopted several measures aimed at improving growth and development in the domestic economy one of which is attracting FDI into the country. FDI is significant for economic growth in developing countries because it affects economic growth by stimulating domestic investment, capital formation and also enhancing technology transfer to the host countries (Falki, 2009). Before the 1970s, Nigerian FDI was mainly directed at agricultural products and raw materials. According to the UNCTAD report (2018), the FDI in the oil sector amounted to only ten percent of the total inflows in the early nineteen seventies. This simply means that FDI inflows were mainly focused on the non-oil sectors which were mainly commercial sector and export-oriented agricultural sectors.
Succinctly, during the second National Development Plan (1970-1974) the import-substitution industrialization strategy fell within the oil boom period whereby the manufacturing activities then relied majorly on foreign input due to the pathetic nature of the technological base of the economy. As affirmed by Garuba (1998), policies and strategies by the Nigerian government depend mostly on demand for economic development and the desire for economic independence.

Orya (2016) stated that Special Economic Zones (SEZs) has been put in place by the Nigeria government since 2009 and that with the recent incentives that accompanied these zones, the only sustainable policy to enhance FDI inflows to the country, reduce unemployment, boost technological innovation, rise in government non-oil revenue, revitalize exports and achieve the much needed fiscal balance will be via establishing a zone in each state of the federation.

Numerous measures aimed at enhancing inclusive growth in the local economy via the attraction of FDI into the country and have been adopted by the government. The major stakeholders in the oil sector in Nigeria were the oil barons (the Royal Dutch Company, Shell from the Netherland, Total oil from France, Eni from Italy and Exxon Mobil, Texaco, and Chevron, from the United State of America) (UNCTAD, 2018). According to UNCTAD (2018), Latin American and African nations export mainly primary commodities. However,

as African countries focused more on primary products and commodity price boom, the manufacturing output as a percentage of total output falls drastically (African Development Bank, 2018). The volatility of these prices has indeed led to the unsustainability of economic growth and development.

Hence, owing to the scantiness of earnings from the oil exports, the import-reliant industrial structure became unsustainable as it could not essentially cater for the humongous import bills. Therefore, it becomes pertinent to re-examine and analyze the impact as well as the trends and volume of FDI on the manufacturing output in Nigeria by re-specifying a model that includes some important macroeconomic variables that were excluded from the extant literature. Therefore, Time Series data for various variables contained in the model for the period 1981 to 2020 was collected. The choice of date is to capture the impacts of the periods before and after the Structural Adjustment Programme (SAP). This paper is sectionalized as thus: Section 2- literature review, Section 3 presents the methodology and data issue, Section 4 presents the results while Section 5 presents summary, conclusion, and recommendation.

## 2. Literature Review

Under this section, both the theoretical review (Endogenous growth theory, Neo-classical theory, and Dependency theory) and empirical review of extant literature were extensively and meticulously examined as they relate to FDI and manufacturing output.

### 2.1 Theoretical Framework

The Neo-classical theory as postulated by Adams (2009) suggests that capital investment in the form of long-term commitment is indeed a vital tool for economic growth and development. It connotes that in the majority of the developing countries, a firm relationship between economic development and FDI is established in every setting of the society. Furthermore, the Neo-classical theory is associated with positive output growth as it either leads to a surge in the efficiency and investment level it puts the economy on a sustainable trajectory. The distinguishing feature of this model is that apart from the potential rise in FDI, the absence of qualitative difference in domestic capital is well situated in the theory.

Considering the dependency theory, as maintained by Aremu (2005), the theory suggests that the backwardness of the third world nations is owing to over-reliance on primary products as exports to the advanced countries, imperial neglect, the crowding-out effect of local companies resultant from controlling of key economic sectors by the foreign firm, corruption in the transfer of price mechanics by the foreign investors, the inception of international specialization of labour to the detriment of the world countries, forceful imposition of inadequate technology on the developing nations, discriminatory remuneration, and too much reliance on international capital leading to distortion of the domestic labour force, and the domestic technology and indigenous investors were sternly prevented from independent development strategies.

In contrast to the aforementioned theories, the dependency theory is geared towards how the developing national economy is being distorted by the inflows of multinational corporations in the country. The proponent of this theory noted that the distortive factors are an upsurge in the unemployment rate related to the use of capital-intensive technology, the crowding-out of local companies, and obvious loss of political authority (Umah, 2007). As argued by Anyanwu (1993), eliminating the distortive tendencies can be enhanced by ensuring that the host nation relies on the homegrown goods and her capital.

By way of comparative analysis, the endogenous growth theory indicates that physical investment is not a yardstick for the growth of an economy but the efficiency and effectiveness in its utilization while the Neo-classical theory put forward the idea that

investment over a long period of time is a determining factor of economic growth in the nation. Consequently, Barro (1991) asserted that the application of economic models of endogenous growth to observe the flow of technology.

In a nutshell, FDI is capable of propelling economic growth and development via improving human capital- an essential factor in Research and Development(R&D) (Romer, 1990). However, Grossman and Helpman (1991) pointed out that a rise in innovation and competition can transform into an increase in productivity and technological advancement and therefore enhancing economic growth and development in the log-run. From the foregoing, it can be observed that these theories better suggest the relationship between FDI and the manufacturing sector output.
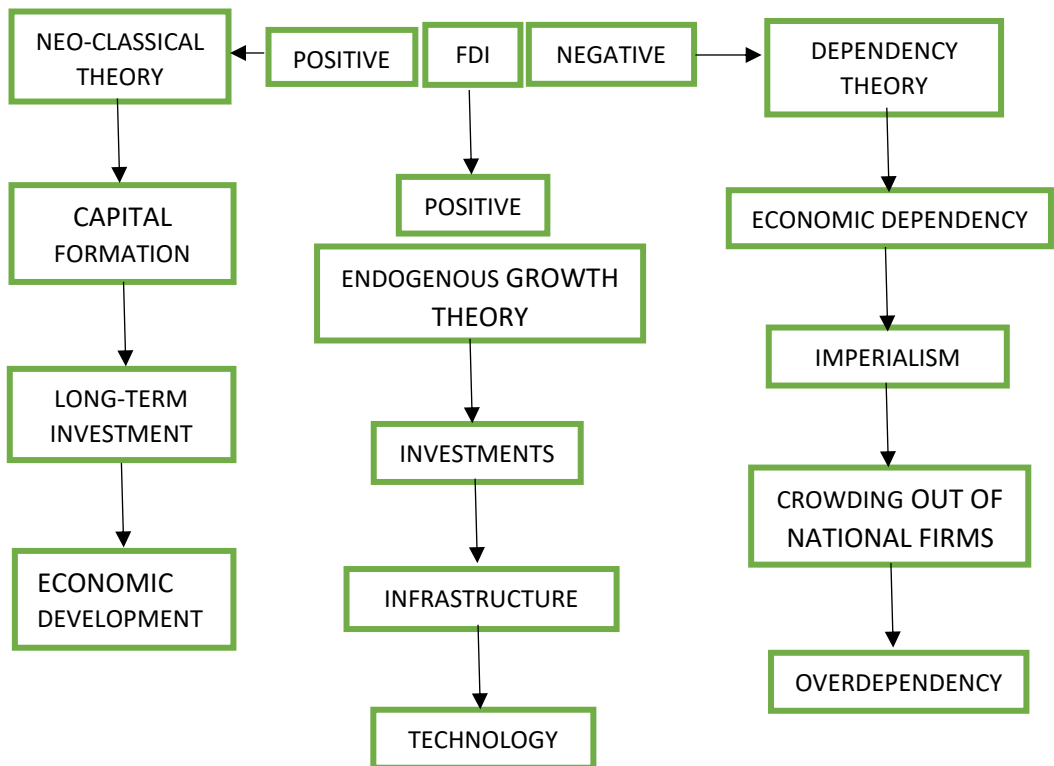


**Source**: Research Finding
**Figure 2.1**: Theoretical framework of foreign direct investment.

### 2.2 Empirical Review of Literature

A plethora of studies have been conducted on the relationship between FDI and economic growth but studies on FDI and manufacturing sector output are very scanty. Hence, extant literature is meticulously reviewed to determine the research gap in the various studies.

Chandran (2008) in his work on FDI and growth of manufacturing sector in Malaysia for 1970 to 2003. The study employed Bounds Test and Autoregressive Distributive Lag(ARDL) approach. The result suggests that FDI positively affected manufacturing sector output in Malaysia during the period under consideration. Therefore, policies towards improving innovative capacity and productivity in the manufacturing sector of the economy should be rigorously pursued.

In another study that set out to examine the inflows and trends of FDI in the Nigerian construction industry, Andrew, Chukwudi, and Uchenna (2015) used the Ordinary Least Square(OLS) econometric technique and found that FDI does not have a significant impact on the construction industry. It is therefore pertinent on the side of the government to provide enabling environment capable of attracting more FDI into the sector. Contrariwise, examining the inflow of FDI on the manufacturing firms in Nigeria, Okoli and Agu (2015) employed the OLS econometric technique and established that FDI has a significant impact on the manufacturing sector performance in the country. Thus, promoting an efficient and effective macroeconomic environment will ensure a drastic improvement in the output level emanating from the sector. However, the relationship between manufacturing output and FDI was critically examined by Orji, Anthony, Nchege, and Okafor (2015) using Classical Linear Regression on secondary data spanning from 1970-2010. The outcome from the study indicates that FDI hurts manufacturing output. Therefore, there is a need for the inflows to complement the local industries through the provision of necessary inputs and raw materials.

Similarly, the impact of FDI on the manufacturing sector was conducted by Ekienabor, Aguwamba and Nuruddeen (2016) with the aid of the OLS econometric technique. The result suggests that a positive relationship between FDI and the manufacturing sector in the country. Thus, it was recommended that efforts towards attracting FDI into the sector must be scaled up through instilling investor confidence.
Mounde (2017) investigated the relationship between FDI and manufacturing output in Nigeria. Secondary data spanning from 1981 to 2016 was used while the result from the Error Correction Model(ECM) shows that there exists bi-directional causality between FDI and output growth of the manufacturing sector.

Also, Idoko and Taiga (2018) studied the impact of FDI on the manufacturing output in Nigeria from 1981 to 2016. The study employed Vector Auto Regression (VAR) technique and the Johansen Co-integration test. The result shows that FDI positively affected the manufacturing sector. Hence, the need for government to strengthen the efforts aimed at enhancing the inflows of FDI into the sector to achieve inclusive growth and development.

Afolabi, Laseinde, Oluwafemi, Atolagbe, and Oluwafemi (2019) conducted a study on the correlation between the manufacturing sector and FDI in Nigeria with the aid of the Autoregressive Distributive Lag model(ARDL). The outcome suggests that FDI is not a determining factor of manufacturing sector growth in the country. Consequently, the need to increase the inflows of FDI into the sector to aid GDP growth and employment generation in Nigeria. In another major study examines the effect of FDI of foreign direct investment on manufacturing sector output growth in Nigeria from 1970 to 2016. The study used OLS and Granger Causality Test. Eze, Nnaji, and Nkalu (2019) established the absence of a relationship between the variable of concern (FDI and manufacturing sector).

The extant literature review above indicates a conflicting finding on the role of FDI on the manufacturing output(MO) in Nigeria. While some studies found a positive role of FDI on MQ [Mounde (2017); Idoko and Taiga (2018)], others established a negative role of FDI on MQ [ Afolabi, Laseinde, Oluwafemi, Atolagbe and Oluwafemi (2019); Eze, Nnaji, and Nkalu (2019)]. Hence, this research work contributes to the extant literature on FDI and manufacturing output(MQ) growth in Nigeria.

## 3. Methodology and Data Issues
This section presents the research methodology adopted for this work. It consists of model specification, data requirement and data sources and lastly methods of estimation.
### 3.1 Model Specification
This study seeks to examine the effect of FDI on manufacturing output in the Nigerian economy. Previous empirical studies such as Afolabi, Laseinde, Oluwafemi, Atolagbe, and

Oluwafemi (2019) and Eze, Nnaji, and Nkalu (2019) amongst others have in their respective studies shown that inflation rate, FDI, exchange rate, and Domestic credit have an impact on the manufacturing output. Therefore, the model shall be specified following these previous studies as:

$$MQ = F(FDI, EXCR, GFCF, INF, DC) \qquad (3.1)$$

where: MQ = Manufacturing output; FDI = Foreign direct investment; EXCR = Exchange rate; GFCF = Gross fixed capital formation; INF = Inflation rate and DC = Domestic credit to the manufacturing sector.

Equation (3.1) can be written in log- linearized form as:

$$\ln Mq_t = \beta_0 + \beta_1 \ln FDI_t + \beta_2 \ln GFCF_t + \beta_3 \ln EXCR_t + \beta_4 INF_t + \beta_5 \ln DC_t + \varepsilon_t \qquad (3.2)$$

where:
$\varepsilon_t$ = stochastic error term
t = Time Period
$\beta_0$ = Intercept of the regression
$\beta_1$, β2, β3, β4 and $\beta_5$ are the parameters of the regression.
ln = Logarithm operator.
Similarly, the ARDL model of equation 3.2 is specified following Pesaran, Shin and Smith (2001) as:

$$\begin{aligned}
\Delta[\log(mq_t)] = {}& \alpha + \beta T + \gamma_1 \log(mq_{t-1}) + \gamma_2 \log(fdi_{t-1}) + \gamma_3 \log(dc_{t-1}) \\
& + \gamma_4 \log(excr_{t-1}) + \gamma_5 \log(inf_{t-1}) + \gamma_6 \log(gfcf_{t-1}) \\
& + \sum_{i=1}^{K} \delta_i \, \Delta \log(mq_{t-i}) + \sum_{j=0}^{M} \rho_j \, \Delta \log(fdi_{t-j}) \\
& + \sum_{r=0}^{N} \sigma_l \, \Delta \log(gfcf_{t-l}) + \sum_{P=q}^{O} \mu_s \, \Delta \log(dc_{t-d}) \\
& + \sum_{f=h}^{Q} \omega_x \, \Delta \log(excr_{t-b}) + \sum_{j=0}^{R} \vartheta_y \, \Delta \log(inf_{t-u}) + \varepsilon_t
\end{aligned} \qquad (3.3)$$

### 3.2 Apriori expectations

$dMQ/dFDI > 0$ The expectation is that when the FDI inflows into the manufacturing sector increases, the MQ will also increase. Hence, the coefficient is expected to be greater than zero.

$dMQ/dEXCR > 0$ An increase in exchange rate means a depreciation of naira which tends to raise export as export becomes cheaper; this is expected to increase GDP and MQ as well. The coefficient is therefore expected to be positive.

$dMQ/dGFCF > 0$ As gross fixed capital formation increases, the capital stock is increased such that MQ will increase. Therefore, this coefficient is expected to be positive.

$dMQ/dINF > 0$ As the rate of inflation increases, the price of MQ increases. Similarly, given the effect of money illusion on the part of the workers, MQ is increased. The expectation is positive.

$dMQ/dDC > 0$ A rise in the domestic credit to the manufacturing sector is expected to stimulate the level of manufacturing output. So, this coefficient is expected to be positive.

### 3.3 Data Requirement and Data Sources

To estimate the model specified in this study, data is required on the following variables: foreign direct investment (FDI), manufacturing output (MQ), Inflation rate (INF), Gross fixed capital formation (GFCF), Exchange rate (EXCR), and Domestic credit to the manufacturing sector (DC). Needed data covers 1981 to 2020 which is obtainable from the Central Bank of Nigeria statistical bulletin (Central Bank of Nigeria, 2021).

### 4. Empirical Results and Discussion

This section presents the volume of FDI inflow into the manufacturing sector in Nigeria between 1981-2020.This is immediately followed by the results of various diagnostic test using EViews 10. This is followed by a presentation and discussion.

#### 4.1 Volume and Trends of FDI in Nigeria

The table below shows the trends of FDI inflows into the sector covering the period 1981 to 2020.
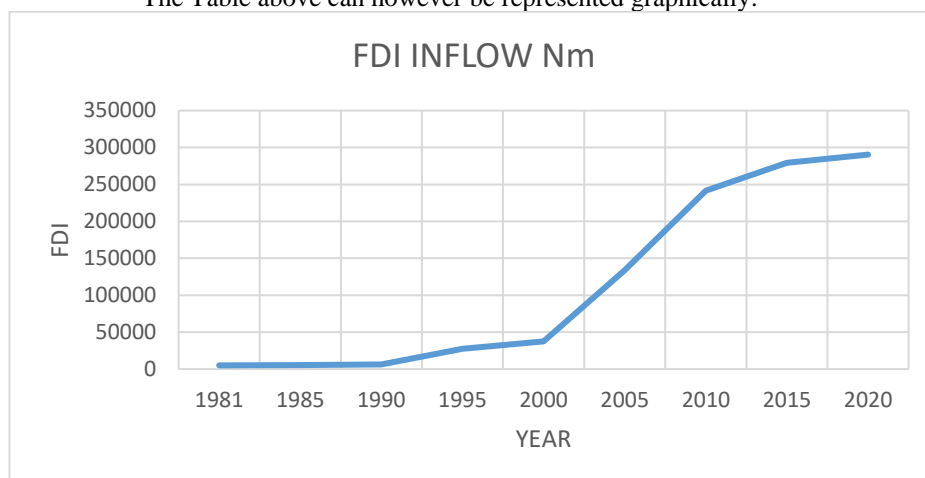
**Table 4.1** FDI inflow into the Nigerian Manufacturing Sector in selected Years: 1981-2020

| YEARS | FDI INFLOW ₦m |
|-------|----------------|
| 1981 | 5004.3 |
| 1985 | 5368.0 |
| 1990 | 6339.0 |
| 1995 | 27668.8 |
| 2000 | 37333.6 |
| 2005 | 133894.5 |
| 2010 | 241643.5 |
| 2015 | 279523.0 |
| 2020 | 290456.5 |

**Source:** CBN statistical bulletin (various issues)

The chart in Figure 4.1 posits that the inflow of FDI into the manufacturing sector overtime has an upward trend. The graph shows that between 1981 and 1990, FDI was low and remained stagnant. However, as from 1995 it began to witness an upward trend. The upward continued till 2020.

The Table above can however be represented graphically:



**Source:** CBN statistical bulletin (various issues)
**Figure 4.1.** FDI inflow into the Nigerian Manufacturing Sector in selected Years: 1981-2020

**4.2 Regression Results and interpretation**
In this section, Stationarity tests, Co-integration tests, Autoregressive Distributive Lag (ARDL) and Regression results are summarized in the tables that are presented in this segment. The Stationarity tests is presented in Table 4.2-4.4, co-integration test in Table 4.5 and ARDL result in Table 4.6.

**4.3 Stationarity test**
The ADF tests for stationarity shows that all the vriables are non-stationary at the level data except *lngfcf* and *inf* which are stationary at level with the intercept and time trend. This suggests that the variables are combination of stationary at level I(0) and after first differencing I(1)(Table 4.2).

The Philip-Perron (PP) test results also indicates that all the variables are non-stationary except for *lngfcf* and *inf* which is consistent with the ADF test results (Table 4.3). Similarly, the result form KPSS test for stationary also confirm the results of ADF and PP (Table 4.4)

**Table 4.2** ADF test results

| | Intercept | | | | Trend and intercept | | | |
|---|---|---|---|---|---|---|---|---|
| **Variable** | Level | | First difference | | Level | | First difference | |
| | t-stat | p-value | t-stat | p-value | t-stat | p-value | t-stat | p-value |
| *lnmq* | -0.869 | 0.787 | -3.029 | 0.041** | -1.932 | 0.618 | -3.054 | 0.002** |
| *lndc* | -0.811 | 0.805 | -4.482 | 0.000** | -0.904 | 0.945 | -4.473 | 0.000** |
| *lnexcr* | -2.112 | 0.241 | -5.300 | 0.000** | -1.365 | 0.856 | -5.678 | 0.000** |
| *lngfcf* | -2.233 | 0.000** | | | -6.901 | 0.000** | | |
| *inf* | -4.75 | 0.000** | | | -10.502 | 0.000** | | |
| *lnfdi* | 0.917 | 0.995 | -7.321 | 0.000** | -1.103 | 0.916 | -8.293 | 0.000** |

**Source:** Research Finding

**Table 4.3** Philips-perron test results

| Variable | Intercept | | | | Trend and intercept | | | |
|---|---|---|---|---|---|---|---|---|
| | Level | | First difference | | Level | | First difference | |
| | t-stat | p-value | t-stat | p-value | t-stat | p-value | t-stat | p-value |
| lnmq | -0.537 | 0.873 | -3.716 | 0.008** | -1.616 | 0.789 | -3.697 | 0.035** |
| lndc | -0.758 | 0.819 | -4.407 | 0.001** | -0.904 | 0.945 | -4.358 | 0.007** |
| lnexcr | -2.282 | 0.183 | -5.299 | 0.000** | -1.357 | 0.858 | -5.836 | 0.000** |
| lngfcf | -3.408 | 0.017** | | | -5.643 | 0.000** | | |
| Inf | -4.795 | 0.000** | | | -18.790 | 0.000** | | |
| lnfdi | 1.412 | 0.995 | -7.228 | 0.000** | -0.855 | 0.955 | -8.390 | 0.000** |

*** significance at 5 percent level*
**Source:** Research Finding

**Table 4.4** KPSS test results

| Variable | LM Statistics KPSS tests | | | |
|---|---|---|---|---|
| | Intercept | | Trend and intercept | |
| | Critical value @ 5%=0.463 | | Critical value @ 5%=0.146 | |
| | level | First diff. | level | First diff. |
| lnmq | 0.761 | 0.100 | 0.151 | 0.081 |
| lndc | 0.764 | 0.180 | 0.117 | 0.133 |
| lnexcr | 0.721 | 0.180 | 2.282 | 0.183 |
| lngfcf | 0.321 | 0.297 | 0.127 | 0.114 |
| Inf | 0.313 | 0.500 | 0.113 | 0.500 |
| lnfdi | 0.613 | 0.995 | 0.500 | 0.199 |

*** significance at 5 percent level*
**Source:** Research Finding

### 4.4 Cointegration/ long-run relationship test

Enger Granger cointegration test deals with single-equation models. This test was developed by Engle and Granger (1987) and they show that if after using either DF or Augmented DF (ADF) unit root test, the variables in the regression model are I(1) and the residual component obtained from the regression is I(0), then there is a linear combination (long-run relationship or equilibrium) between or among the variables in the model. This is illustrated as follows:

$$y_t = \alpha + \beta x_t + \varepsilon_t \text{ where } y_t \sim I(1) \text{and} x_t \sim I(1) \tag{4.1}$$

For $y_t$ and $x_t$ to be co-integrated, $\varepsilon_t$ must be I(0); otherwise the regression is spurious. Thus, the basic idea behind the EG cointegration test is to test whether is I(0) or I(1).

The Engle-Granger test is conducted to establish the existence of long-run relationship among the selected variables under consideration. The outcome therefore suggests the cointegration of the variables as the p-value is less than the 5 percent significant

level. This implies that there exists a long-run relationship among the variables. The summary of the test is as presented in Table 4.5. Hence, necessitating estimating ARDL model.

**Table 4.5** Engle-Granger Cointegration Test

|  | **Value** | **p-value** |
| --- | --- | --- |
| **Engle-Granger tau-statistics** | -2.740507 | 0.0479 |
| **Engle-Granger z-statistics** | -12.3433 | 0.0564 |

**Source:** Research Finding.

### 4.5 Autoregressive Distributive Lag Result

The long-run estimates of ARDL in Table 4.6 show that lnfdi and lnexcr are the major determinants of manufacturing output in Nigeria during the period under review. This shows that foreign direct investment and exchange rate are the determining factor of manufacturing output in the country. Based on the results, surprisingly, there is a negative relationship between FDI and manufacturing output. Hence, the higher the inflow of FDI into the country, the lesser the output emanating from the manufacturing sector. This suggests that despite the rigorous efforts of the government to diversify the economy and ensure regular inflow of foreign investment into the country, the impact has been negligible and even having drastic effect on the manufacturing sector. Therefore, one percent change in foreign direct investment brings a change of about 0.2 percent in manufacturing output. This is in line with the findings of Afolabi, Laseinde, Oluwafemi, Atolagbe, and Oluwafemi (2019); Eze, Nnaji, and Nkalu (2019). Conversely, study by Duramany-Lakkoh, Jalloh and jalloh (2021) established that FDI positively affected manufacturing sector in Sierra Leone.

In the same vein, there is positive relationship between exchange rate and manufacturing output. This means that as exchange rate increases, manufacturing output also increases. It implies that exchange rate appreciation is indeed healthy for the sector output to increase. Hence, one percent change in exchange rate leads to a change in Nigeria's manufacturing output by about 156.4 percent. This result is in conformity with the previous studies of Oriji, Ogbuabor., Okeke, and Oriji. (2019). However, Falaye, Eseyin, Otekunrin, Asamu, Ogunlade, Egbide and Rasak (2018) and Mlambo (2020) found that exchange rate has a negative impact on the manufacturing sector.

From the short-run estimate, the error correction term (ECT) suggests that the speed of adjustment from short-run disequilibrium to long-run equilibrium is about 16.3 percent. Also, the Adjusted $R^2$ of 0.99 indicates that the variables included in the model improves the prediction. Finally, the value of Durbin Watson test implies that the model is considered to be autocorrelation free.

**Table 4.6** ARDL test statistics

| Coefficient | Estimates | t-stats |
|---|---|---|
| **Long-run estimates** | | |
| lngfcf | 1.062 | 0.246 |
| lnfdi | -0.002** | 0.051 |
| lnexcr | 1.564** | 0.009 |
| lndc | -0.053 | 0.834 |
| Inf | -0.025 | 0.047 |
| **Short-run estimates** | | |
| Δlngfcf | 0.195 | 0.578 |
| Δlnfdi | -0.002 | 0.909 |
| Δlndc | -0.022 | 0.897 |
| Δlninf | -0.856 | 0.161 |
| Ect | -0.163** | 0.000 |
| Adj. R2 | | 0.99 |
| Durbin-Watson | | 2.79 |
| F-Statistics | | 2170 |

** Significance at 5 percent level
**Source:** Research Finding

### 4.6 Policy Implication

The policy implication of the findings is examined below:

The results suggest that both FDI and the measure of export competitiveness represented by the exchange rate are the major determinants of manufacturing output in Nigeria which conforms to previous studies such as Afolabi, Laseinde, Oluwafemi, Atolagbe, and Oluwafemi (2019); Eze, Nnaji, and Nkalu (2019) amongst others. However, the domestic credit to the manufacturing sector, inflation rate, and gross fixed capital formation are not the main determinants of the manufacturing output in the country as they are not statistically significant. This being the case, policies that will attract more inflows of FDI into the country should be encouraged. Both inward and outward FDI should be considered as an integral part of Nigeria economic policy in order to spur the manufacturing sector growth.

The implication of exchange rate having positive effect on the manufacturing sector suggests that government can formulate a policy through the Central Bank of Nigeria and other regulatory bodies to minimize the exchange rate volatility or fluctuations and ensure availability of foreign currencies in the country for foreign investments in the manufacturing sector. Stability of exchange rate will aid in stabilizing the Nigerian currency against other currencies of the world which will in turn create value for the county's currency.

### 5. Contribution

The main contribution of this study is that it contributed to the extant literature in Nigeria on the likely impact of FDI on manufacturing sector output. Surprisingly, FDI rather than contributing to the development of the sector, reduces the output in the sector which causes for serious concern from both the government and stakeholders on possible way forward in ensuring that the inflows have the desired effect on the sector and in the long run on the country at large.

## 6. Summary, Conclusion, and Recommendation

This study delved into the effect of foreign direct investment on the manufacturing output in Nigeria. Also, attention was given to its volume and trend into the economy i.e. manufacturing sector. FDI and exchange rate are the major determinants of manufacturing output in Nigeria. However, gross fixed capital formation, domestic credit to manufacturing sector and inflation rate are not the major determinants of manufacturing output in Nigeria. Manufacturing output (MQ) was regressed on lnGFCF, lnFDI, lnEXCR, INF, and lnDC using relevant data for 40 years (1981-2020). It was found that though FDI has a negative effect on the manufacturing output, this effect is not significantly different from zero.

From the findings, it is obvious that FDI does not have a significant impact on the manufacturing output in Nigeria. Hence, the following recommendations were put forward:

1.  There is need for the government to put place policies capable of attracting more inflows of FDI in the country. Both inward and outward FDI should be considered as an integral part of Nigeria economic policy in order to spur the manufacturing sector growth.
2.  The Central Bank of Nigeria and other regulatory bodies should try as much as possible to formulate policies that align the exchange rate to the actual needs of the manufacturing sector.

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