# FOREIGN DIRECT INVESTMENT - LED INDUSTRIALISATION: ANY DIRECTION FOR SPILLOVERS IN NIGERIA?

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## Abstract
*The embrace of the neo-liberal policies has seen developing countries in recent times competing for the presence of foreign direct investment (FDI). This contrasts with the restrictive policies of the import substitution policies that thrived before the reforms of the 1980s. Nigeria, which is one of the top recipients of FDI, has a paradox of a low contribution of the manufacturing sector to Gross Domestic Product (GDP). Therefore, with particular concentration on the quantum of FDI flow to the manufacturing sector, this study assesses the direction of capital inflows for industrial development in Nigeria. Focusing on three industrial indices- manufacturing value added, manufactured exports and manufactured output in relation to GDP- and using a data set of 1970-2015, the Granger causal test showed a uni-directional causality from manufacturing sector FDI (MFDI) to manufactured exports; but not for manufactured output nor manufacturing value added. The influence of FDI flows into the manufacturing sector is seen via the limited outcomes within the industrial sector as MFDI caused manufactured exports in Nigeria. Therefore, if there will be any direction for industrialization in Nigeria via capital inflow investment, the benefits of FDI for industrial development is contingent on the ability to domesticate inflows for developmental purposes.*

**Keywords**: *Industrialization, manufacturing, FDI, Causality and Development*

## 1. INTRODUCTION
The neoliberal consensus on the received theory of industrial development states that foreign private capital, in the form of FDI, can hypothetically accelerate industrialization in developing economies. The reasoning is that, as multinational enterprises' (MNEs) subsidiaries established through FDI in host economies take root, their firm specific assets such as management and production technologies and access to international market will be transmitted to host country domestic firms to improve competitive advantage in manufacturing. Meanwhile, the inability of developing economies to fully consolidate the gains of FDI remains a subject of empirical discourse. This has spurred the debate on the desirability or otherwise of FDI for developing economies

Rather than examine the processes of growth outcomes, for instance sectoral analysis of FDI flows, most empirical works have delved more into the growth-driven outcomes of FDI (Bayulgen, 2004; Carkovic and Levine, 2005; Hameedu, 2014; Osama and Tahar, 2015). In development orthodoxy, the neoclassicals opine that FDI is ladder to development; however, the structuralist presented an opposite view. The benign-malign view of FDI-development nexus gave birth to the controversies that lingered long on the landscape of development theory. Although, the ideological contention appears settled in favour of neoclassical thinking after the communist-dominant era, the development outcome for developing economies has no crystal-clear empirical stance. Moreover, certain developments in the neoclassical camp such as the financial crisis points to the fact that the market induced benign view of FDI may be somehow

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defective. Nevertheless, some studies have observed market-seeking FDI can influence host economies positively (Nunnenkamp & Spatz, 2004).

The benefits of FDI have been documented in literature, which explains why most developing economies continue to conduct themselves to attract this type of investment. For instance, Jude & Levieuge (2017) observed that FDI can boost the absorptive capacity of host economies through demonstration effects of FDI, which in turn create productivity spillovers for local firms; thereby creating effects such as competition, linkages and labour turnover. Again, Jude & Levieuge (2017) noted that FDI can improve the financial market conditions of host economies thereby strengthening credit access and investment spillovers for local producers. In addition, according to Loungani & Razin (2001), among various forms of private capital flows, FDI is seen to withstand critical financial periods when compared to portfolio equity and debt flow. Some pieces of evidence of the resilience of FDI during financial recessions include the Latin American debt crisis of the 1980s, the Mexican crisis that occurred from1994-1995 and the global financial crises of 1997-98. Specifically, FDI in the East Asia region was distinctly stable compared to the decline in other investments. These varying features of FDI have spurred developing and emerging economies to keep attracting FDI flows. However, the import of FDI for industrial development in these economies remains unclear. Therefore, to shed more light in this regard, a country case study of Nigeria on the direction of industrial spillovers via FDI presence forms the crux of this study.

The reports of the Central Bank of Nigeria (CBN) (2016) shows that given the import-dependent nature of the Nigerian economy especially for manufactured products, the real sector development has been dwindling. As a result, studies have partially attributed the challenge of increasing poverty in the country to lack of substantial investment in the real sector which largely involves the manufacturing sector (Orji, Aguegboh & Anthony-Orji, 2015). The manufacturing sector has been spotted as a viable channel for job creation, innovations, productivity, economic diversification and improved balance of payment. This development of the manufacturing activities and indeed overall industrial activities have therefore been a yardstick for segregating countries (Szirmai, 2009). In the manufacturing industry, growth indicators manifest in expanding manufacturing sector contribution to gross domestic product (MGDP), growing manufacturing value added (MVA) and raising manufactured exports (MEX). Positive improvements in these three indicators of industrial development mark the starting process of sustainable industrialisation. This is why neoliberal development orthodoxy prescribed globalisation of investment, in order to access industrial development benefits inherent in the above indicators. Therefore, based on these three indicators, this study intends to assess the direction of FDI-led industrialization by focusing on the manufacturing industry in Nigeria.

## 2. THE ROLE OF FOREIGN DIRECT INVESTMENT IN INDUSTRIALIZATION

Taking a clue from the Asian economies, Lloyd (1996) noted that the upsurge of FDI into Asia, especially East Asia, since the mid-1980s has resulted in certain economic spillovers. These spillovers include savings, technology transfer and structural transformation of the Asian economies. Also, Lloyd (1996) observed that most FDI have influenced more the export-oriented industries as well as engender structural adjustments through enhanced redistribution of productive activities known as *the Flying Geese pattern*. Hence, an FDI-led industrial growth does not only result in economic growth but assist emerging countries to sustain rapid growth through industrialisation, overtime.

Aside these, Reyes (2018) noted that Inflows of FDI to a country could engineer positive spillovers through demonstration effects of multinational corporations (MNCs) which is seen through technology and human capital development; as well as through contractual linkage-

which could occur via the input demand from local suppliers to MNCs thereby, improving local firms' performances. Also, Markusen & Venables (1999) observed that FDI could influence local firms within the host economies through linkage effects. This linkage is manifested through human capital development through skill acquisition, technological advantages and input supplies (Schoors & van der Tol, 2001; Kneller & Pisu, 2007). Recalling the arguments of the free market theory, developing economies conduct themselves to attract foreign direct investment (FDI) into their countries (Barrios, Gorg and Strobl, 2005).

## 3. AN OVERVIEW OF THE FDI-MANUFACTURING SECTOR NEXUS IN NIGERIA

Nigeria is one of the ten largest recipients of FDI in Africa in 2018[2]. The presence of FDI inflows into the Nigerian manufacturing sector is expected to increase the sector's contribution to gross domestic product, improve manufacturing value added and enhance exportation of manufactured products among other indices of industrial development. However, it still remains worrisome that Nigeria is a leader among countries that really has a low level in manufacturing sector competitiveness through negligible contribution to GDP, low manufacturing value added and insignificant manufactured exports. Figure I show the performance of three indicators of industrial development *vis-à-vis* foreign direct investment inflows into the manufacturing sector. In the figure, the relationship between manufacturing sector FDI inflows (MFDI) and each of manufacturing value added (MVA), manufacturing sector contribution to GDP (MGDP) as well as manufactured exports (MEX) is depicted. The variables MGDP, MVA and MEX represent indicators of industrial development.

Despite the fact that manufacturing sector FDI inflows increased from 22.4% of total FDI in 1970 to as high as 60.7% in 1990 and not less than 25% average during the study period, an examination of the trend (graph) of MGDP reveals the growing gap in productivity of the manufacturing sector. It can be seen that throughout the period of more than four decades, the sector's contribution to national output is less than 10% except for the year 1980, after which the value largely decreased. The downward slide is particularly worrisome in the last twelve years of the study period (2000-2012), for which structural composition revealed that the Nigerian economic profile stands at 4.3% manufacturing on average. In other words, only about 4% of economic activities took place in the manufacturing sector, despite that more than a quarter of FDI inflows to Nigeria in that period went to the sector (*see* Central Bank of Nigeria Statistical Bulletin, 2016). Besides, manufactured products in Nigeria remain at the lowest ebb of technology and this impede international competitiveness (Ogunwusi & Ibrahim, 2014).

This same worrisome pattern is shown by the graph of the manufacturing value added (MVA) which hovered around 7% in the first decade of the study period (the 1970s), but significantly declined to about 3 % in the first decade of the millennium (2000-2010). This low level of MVA reveals the poor technological content of the Nigerian manufacturing. As noted by UNIDO (2009), MVA captures the relative role of transformational capability in manufacturing of a country. As such, the Nigerian data points to poor macro-level effectiveness of "knowledge at work" in manufacturing. In other words, the Nigeria dataset from the industrial indictors queries the extent of innovations within the economy; as well as signals a low leverage at which economies of scope exploited by manufacturing firms.

The picture is worse when manufactured exports as a percentage of total merchandise exports (MEX), is considered for the study period. From 1970-1995, MEX was significantly less than 1%. Meager improvement, occurred thereafter to about 3% over the last two decades of the

[2] https://www.brookings.edu/blog/africa-in-focus/2019/10/09/figure-of-the-week-foreign-direct-investment-in-africa/

study period. It can be seen from the above discussions that despite substantial flows of FDI to the Nigerian manufacturing sector, the sector's contribution to export competitiveness in manufacturing has been substantially undermined.

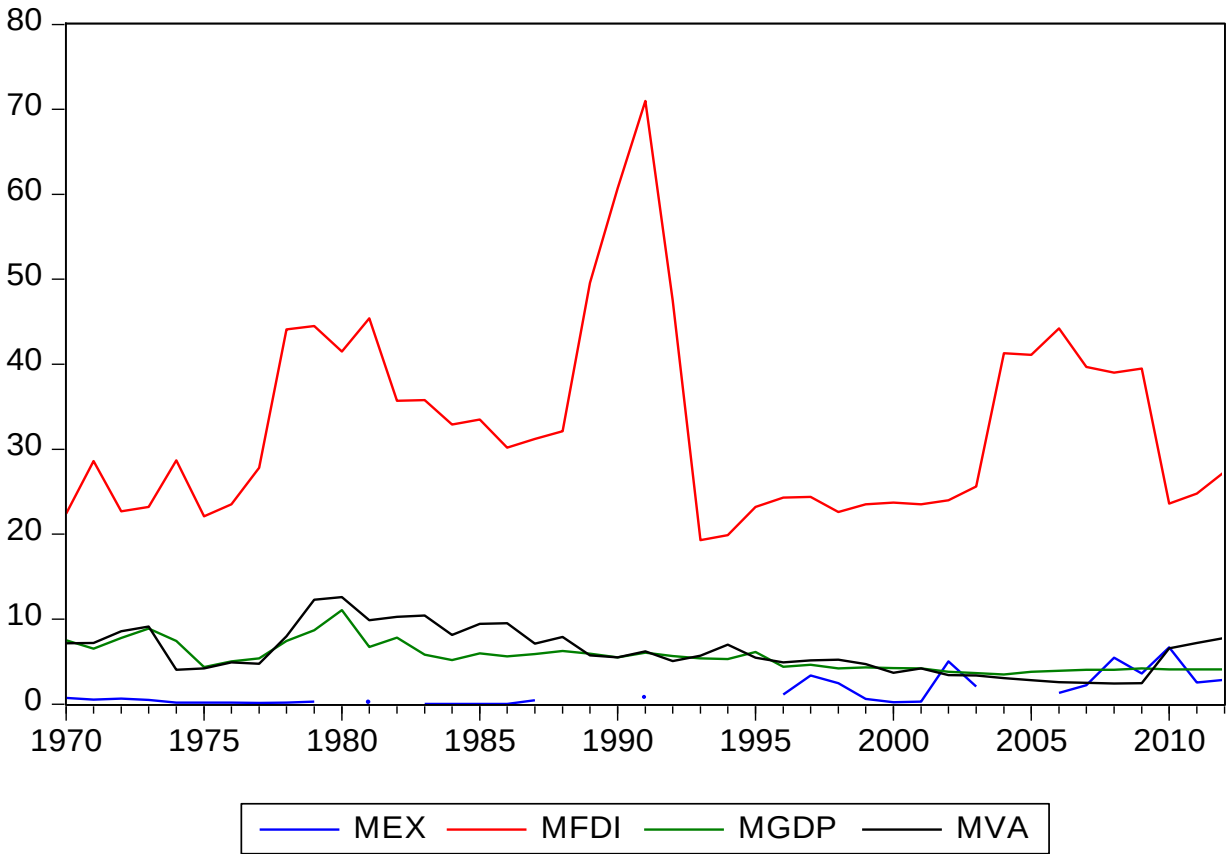


**Figure 1: FDI and Industrial Development Indicators (1970-2012)**
Source: World Bank Indicators, National Bureau of Statistics and Central Bank of Nigeria, various years.

Notes:

- Manufactured Exports (MEX)
- Manufacturing share of total Foreign Direct Investment (MFDI)
- Manufacturing share of total Gross Domestic Product (MGDP)
- Manufacturing Value Added (% of GDP) (MVA)

The gloomy picture of industrial development indicators described raises some issues on the theoretical merits of FDI in Nigeria, its composition and the incentives offered via foreign firms. What prospects lie ahead for Nigeria in achieving a vision of an industrialised economy in the decade starting with the year 2020? Pursuant to this goal, needed for brightening the country's gloomy industrialization scene, can Nigeria continue to lean on neoliberal policies which come from perceiving FDI as ladder to development? In addition, one is force to ponder who exactly is benefitting from the presence of the FDI in Nigeria?

The answers to these questions remain largely debatable. Fuelling this debate is the ambiguous empirical evidence for FDI generating spillovers for industrial development in host economies. Indeed, several studies have examined the FDI-growth and FDI-development nexus. (See for example Ayanwale and Bamire, 2001; Ayanwale, 2007; Okodua, 2009 for positive impacts of FDI on economic growth and; Adelegan, 2000; Otepola, 2002 and Akinlo, 2004; for negative or negligible FDI impact on growth). The balance of empirical literature in Nigeria also revealed

inconclusive results. Thus, examining the direction of causality between capital inflows into the manufacturing sector vis-à-vis peculiar indices of industrial development will give a headway to harnessing the spillover effects of FDI for economic development in Nigeria.

## 3. METHODOLOGY

In relation to the FDI inflow into the manufacturing sector in Nigeria, the indicators of industrial development utilized within this study include manufacturing value added, manufacturing gross domestic product (manufacturing sector output) and manufactured exports. Often, developing countries have been described as having low levels of industrialization because of low manufacturing value added, low levels of manufacturing gross domestic product and low manufactured exports. Therefore, to further harness the FDI flows for industrial development, it is pertinent to examine the direction in which FDI has affected the above indices of industrialization.

The model adopted in section 3.1 below specifies the expected direction for causation among the variables of interest. Before specifying the model to be estimated, it is noted that causal relations can be verified via a number of indicators to include Block Exogeneity test, Vector Autoregressive (VAR) or Vector Error Correction Modelling (VECM) approach; as well as the Toda-Yamamoto approach. Having pretested that the selected variables have a long-run relationship using the bounds test and the F statistic value of 4.6258 (*see Appendix I*), the Toda-Yamamoto test will be an overemphasis. Thus, apart from the strong predictive features of the Granger causality approach, it is appropriate to situate the short-run dynamics among the variables of interest. This is with a view to pinpoint in a more vivid manner, the direction in which manufacturing FDI flows has influenced and further influence industrial development (Amri and Ventelou, 2012). The VAR technique for causal estimates is relevant where there is no long-run relationship among the variables. Besides, VAR and VEC are relevant for measuring the effects of a shock and how the variables get to respond; however, this is not the focus of this study.

### 3.1. Model Specification

To investigate the causality between FDI (MFDI) and each of the indicators of industrial development in the Nigerian economy, namely; manufacturing value added (MVA), and manufactured exports (MEX); using a data set of 1970-2015, we examine whether FDI inflows Granger causes each of the Industrial indices. Based on the foregoing, equations 1 to 6 below are specified to establish the short-run causal relationships.

MFDI and MVA

$$MFDI_t = \sum_{i=1}^{n} \alpha_i MVA_{t-i} + \sum_{j=1}^{n} \beta_j \ MFDI_{t-j} + \mu_{1t} \dots\dots\dots\dots\dots\dots\dots 1$$

$$MVA_t = \sum_{i=1}^{n} \lambda_i MVA_{t-i} + \sum_{j=1}^{n} \delta_j \ MFDI_{t-j} + \mu_{2t} \dots\dots\dots\dots\dots\dots .2$$

MFDI and MEX

$$MFDI_t = \sum_{i=1}^{n} \alpha_i MEX_{t-i} + \sum_{j=1}^{n} b_j MFDI_{t-j} + \mu_{1t} \dots\dots\dots\dots\dots\dots\dots .3$$

$$MEX_t = \sum_{i=1}^{n} \sigma_i MEX_{t-i} + \sum_{j=1}^{n} \varsigma_j MFDI_{t-j} + \mu_{2t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots 4$$

MFDI and MGDP

$$MFDI_t = \sum_{i=1}^{n} \mathrm{r}_i MGDP_{t-i} + \sum_{j=1}^{n} \mathrm{s}_j MFDI_{t-j} + \mu_{1t} \ldots\ldots\ldots\ldots\ldots\ldots 5$$

$$MGDP_t = \sum_{i=1}^{n} \mathfrak{g}_i MGDP_{t-i} + \sum_{j=1}^{n} \mathfrak{h}_j MFDI_{t-j} + \mu_{2t} \ldots\ldots\ldots\ldots\ldots\ldots 6$$

### 3.2. Variable Measurement and Sources

i) Manufacturing Foreign Direct investment (**MFDI)**: This refers to the quantum of FDI inflows that goes into the manufacturing sector. The dataset for MFDI is sourced from the CBN Statistical Bulletin, 2016.

ii) **Manufacturing Value Added (MVA):** This is the remaining output of the manufacturing sub-sector, generated when every output has been summed and the intermediate inputs deducted. The MVA dataset is derived from African Development Indicators, 2016.

iii) **Manufactured Exports (MEX):** This is the share of manufactured exports as a proportion of the total merchandise exports. The dataset for MEX is obtained from the World Development Indicators (WDI), 2016.

iv) **Manufacturing Output (MGDP)**: This is generated as the proportion of the manufacturing sector output to GDP. The dataset for MGDP is generated from the CBN Statistical Bulletin, 2016.

## 4. RESULT OF THE TESTS OF CAUSALITY

To provide empirical evidence on the fundamental question of whether industrial development gives any direction for FDI or whether FDI enhances industrial development, the study adopted the granger causality test (GCT) (Greene, 2005). The scope of the study is between 1970 and 2015; and for the purpose of analysis, all the data sets have been transformed into their natural logarithmic form before adopting them for estimation purposes. Reiterating, the measurement of industrial development has been proxied using manufacturing foreign direct investment (MFDI), manufacturing value-added (MVA), manufactured exports (MEX) and manufacturing output (MGDP). Basically, the causality test to be carried out is to examine if a uni-directional or bi-directional relationship exists between the pairs MVA and MFDI, MEX and MFDI as well as MGDP and MFDI. The null hypothesis is stated in a pair-wise form such that a particular variable does not granger cause the other; hence if the F-statistic is seen to be significant at 5%, the alternate hypothesis is accepted, while the null hypothesis is rejected.

Before the presentation of the causal estimates, the results of the descriptive statistics and stationarity test are presented. The descriptive statistics of data series presents general statistical information to include the measures of central tendency (mean, median, minimum value, maximum value) and the distribution of the sample measured by skewness, kurtosis and the Jaque-Bera statistic.

From the results in Table 1, the natural average growth of MFDI, MVA, MEX and MGDP is 8.4%, 9.9%, 1.2% and 10% respectively. With MGDP showing the highest growth rate, it shows that among the selected industrial indices, manufacturing output has the largest influence in the manufacturing sub-sector; while the low growth rate of MEX, at 1.2%, is an indicator of a

poor growth of manufactured export. It can be inferred that most products manufactured in Nigeria are utilized domestically while a fraction is being exported. This finding is consistent with the reality of export in Nigeria which is more of primary products such as crude oil and cash crops (Nwachuku, Agwu, Nwaru, Imonikhe, 2010; Anthony & Mustafa, 2011).

**Table 1: Descriptive breakdown of selected variables**

| Statistic | MFDI | MVA | MEX | MGDP |
|---|---|---|---|---|
| **Mean** | 8.441727 | 9.905315 | 1.24664 | 10.14449 |
| **Median** | 8.198914 | 9.85 | 0.619766 | 9.870758 |
| **Maximum** | 12.29916 | 12.59 | 6.685777 | 13.47487 |
| **Minimum** | 3.160399 | 5.717357 | 0.022718 | 5.935952 |
| **Std. Dev.** | 2.450253 | 2.270749 | 1.564602 | 2.404418 |
| **Skewness** | -0.319262 | -0.325298 | -1.873493 | -0.117661 |
| **Kurtosis** | 2.471274 | 1.738039 | 6.026903 | 1.689698 |
| **Jarque-Bera** | 1.231346$^{\neq}$ | 3.611679* | 41.57034** | 3.175312* |
| **Probability** | 0.540277 | 0.164336 | 0 | 0.204404 |
| **Sum** | 362.9943 | 425.9285 | 53.60554 | 436.2129 |
| **Sum Sq. Dev.** | 252.157 | 216.5647 | 102.8151 | 242.8116 |

*Note: Critical values of $\chi^2$ at 5% and 1% levels are 5.99 and 9.21 respectively. * (**) denotes the acceptance of the null hypothesis that the variables are normally distributed at 5% and (1%) significant level, while ($\neq$) implies the rejection of normality at all levels.*

Meanwhile, the median values are seen to lie between the maximum and minimum values; while the standard deviation are not far-off from their mean values. The skewness explains the symmetry of the probability distribution of the dataset, while the kurtosis statistic gives information on the thickness of the tails of the dispersal. From Table 1, the skewness property are determined when the series are close to zero. Therefore, since all the series lies within this range, it can be inferred that the series are normally skewed. By the rule of the thumb for normal distribution, the kurtosis of a distribution is expected to be less than or equal 3 for it to be platykurtic; and anything greater 3 is described as leptokurtic. (Bai & Ng, 2005). Thus, except for MEX which appears leptokurtic, the kurtosis of the distribution are tagged platykurtic which is typical of a normal distribution.

Table 2 presents the results for the unit root tests. The stationarity of a time series affects the consistency of the estimates of the econometric analysis, it was necessary to examine the order of integration of data employed in the study. In testing for the stationarity of variables, the Augmented Dickey-Fuller (ADF), Phillip-Perron (PP), as well as Kwiatkowski-Philips-Schmidt-Shin (KPSS) unit root tests were adopted. The ADF test adopted lag 1 for its estimation; while the Phillip-Peron test specified 3 lags for its estimation. The use of the PP estimate is a confirmatory process of the ADF test adopted for stationarity. This is to lend credence to the estimates utilized within the study

*The null hypothesis formulated using both test statistics is that the variable in question has a unit root.*

Thus, if the variables have no unit root, we accept the alternate hypothesis that stipulates that the variables are stationary in the order verifiable, I(0) for levels and I(1) for first difference. From Table 2, the results of Augmented Dickey Fuller and Phillip Perron tests at level and first difference equally reveal that the logarithms, ratios and percentages of all the variables are

stationary at first difference given the 5 and 10 percent significance levels. Having established that the variables are stationary, the Granger causality estimate is conducted.

**Table 2: Unit Root Test for Model I (Dependent Variable-Manufacturing Value-Added)**

| Variable | ADF* (1 Lag) With Constant (No trend) | With Constant & trend | d* | PP* (3 Lags) With Constant (No trend) | With Constant & trend | d* |
|---|---|---|---|---|---|---|
| MFDI | -1.544473 | -0.728981 | I(1) | -1.725229 | -1.725229 | I(1) |
| ΔMFDI | -6.291510 | -6.602166 | | -6.291518 | -6.602166 | |
| MVA | -2.190820 | -0.701656 | I(1) | -2.169900 | -0.323966 | I(1) |
| ΔMVA | -3.929451 | -4.574041 | | -3.953328 | -4.575202 | |
| MEX | -1.702995 | -1.131221 | I(1) | -3.099606 | -4.932913 | I(0) |
| ΔMEX | -5.027617 | -5.862246 | | -20.68785 | -22.53872 | I(1) |
| MGDP | -1.575506 | -1.488401 | I(1) | -1.377953 | -1.503243 | I(1) |
| ΔMGDP | -6.404709 | -6.617331 | | -6.404847 | -6.617331 | |
| Mackinnon critical values: | | | | | | |
| Level | -3.610453 | -4.211868 | | -3.610453 | -4.211868 | |
| 1% | -2.938987 | -3.529758 | | -2.938987 | -3.529758 | |
| 5% | -2.609066 | -3.198312 | | -2.607933 | -3.196411 | |
| 10% | | | | | | |
| 1st Difference | -3.615588 | -4.219126 | | -3.615588 | -4.219126 | |
| 1% | -2.941145 | -3.533083 | | -2.941145 | -3.533083 | |
| 5% | -2.609066 | -3.198312 | | -2609066 | -3.198312 | |
| 10% | | | | | | |

*Notes*: *Source: Self computation using E view 9.0*
* *d denotes decision about the order of integration respectively.*

In Table 3, the GCT test carried out revealed that short-run uni-directional causality existed between nominal MVA and MFDI at 5% level of significance since the probability value is less than 0.05; that is, at 5% level of significance, MVA was seen to be granger causing MFDI and not the other way round; as a result, the null hypothesis is rejected. The implication of the result is that MVA has facilitated the flow of MFDI in Nigeria but FDI has not caused MVA to really develop. Similarly, the causality test revealed that MGDP has caused MFDI to grow, but FDI has not caused MGDP to grow. This implies that the growth of manufacturing output in Nigeria has caused MFDI growth, but not MFDI growth causing MGDP-output growth. In a different sphere, Table 3 showed that in the GCT test carried out, short-run uni-directional causality existed between MEX and MFDI at 5% level of significance, since the probability value is less than 0.05; that is, at 5% level of significance, MFDI was seen to be granger causing MEX and not the other way round; as a result, the null hypothesis is rejected. The implication of the result is that MFDI has to a large extent influenced the manufacturing exports within the Nigerian economy, but the performance of manufactured exports has not been the cause of MFDI flows into Nigeria.

**Table 3: Causality test of the relationship between MFDI, MVA, MEX and MGDP**

| Null Hypothesis: | Obs | F-Statistic | Prob. | Granger Causality? |
|---|---|---|---|---|
| LNMGDP does not Granger Cause LNMFDI | 42 | 3.9974 | 0.0526* | Yes |
| LNMFDI does not Granger Cause LNMGDP | | 1.14841 | 0.2905 | No |
| LNMVA does not Granger Cause LNMFDI | 42 | 4.16455 | 0.0481* | Yes |
| LNMFDI does not Granger Cause LNMVA | | 0.2945 | 0.5904 | No |
| MEX does not Granger Cause LNMFDI | 42 | 0.00123 | 0.9723 | No |
| LNMFDI does not Granger Cause MEX | | 13.9583 | 0.0006* | Yes |
| LNMVA does not Granger Cause LNMGDP | 42 | 2.7686 | 0.1041 | No |
| LNMGDP does not Granger Cause LNMVA | | 0.22702 | 0.6364 | No |
| MEX does not Granger Cause LNMGDP | 42 | 0.12669 | 0.7238 | No |
| LNMGDP does not Granger Cause MEX | | 12.1652 | 0.0012* | Yes |
| MEX does not Granger Cause LNMVA | 42 | 1.76403 | 0.1918 | No |
| LNMVA does not Granger Cause MEX | | 9.1709 | 0.0043* | Yes |

*Source: Author's Computation from E-views 7*

** represents the level of significance at 5%*

Other results in Table 3 showed the interdependencies between MVA, MEX and MGDP in the study period. For instance, it was revealed that a unidirectional relationship between MVA and MGDP, where growth in MVA caused MGDP to grow; this implies that the growth experienced through manufacturing value added caused MGDP to grow. In addition, between MEX and MGDP, a unidirectional relationship was seen to exist; with MGDP causing MEX, it implies that the growth in manufactured output has caused manufactured export to grow. Similarly, between MEX and MVA, a uni-directional relationship existed where MVA causes MEX; thereby implying that the growth of manufacturing value-added has caused manufactured exports to grow.

## 5. CONCLUSION

The analysis showed the preponderance of FDI-led industrial activities in Nigeria for the study period. Despite that the GDP of the economy has recently been growing at a fairly decent rate of 4 percent (CBN, 2018), the results puts a check on FDI-led industrial development in Nigeria.

From the above analysis, it is seen that FDI causes only one of the industrial indices which is manufactured exports, leaving negligible or no influence on manufacturing value added and manufactured output. The plausible explanation manufacturing FDI influencing manufactured exports is that these exports occurred within foreign rather than local firms. According to the statistics from *Worlds top Export*[3], in 2018, the top 10 exports showed that apart from oil mining which constitutes the bulk of exports in Nigeria, the construction of ships and boats was one of the most thriving manufactured export sectors. As at 2018, foreign owned construction sub-sector contributed 2.4% to total exports and was the second largest export category in Nigeria. Most of the firms in the manufacturing industry that also top the export list are largely owned by foreigners[4]; which explains why manufactured FDI influences manufactured export.

[3] http://www.worldstopexports.com/nigerias-top-10-exports/

[4] http://www.6000profiles.com/Categories/Boat,%20Barge%20&%20Ship%20Building%20&%20Services.htm

Industrial development is critical for the achievement of development goals of Nigeria and the quest for economic diversification through structural change. It is therefore imperative to understand the path to industrialisation in the current policy environment of economic globalisation. The results of this study have shown that Nigeria though can use foreign direct investment as ladder to industrial development if the government attracts the right kind of FDI into the manufacturing sector. However, in contrast to the findings of Gui-Diby & Renard (2015) that found that FDI had no effect on industrialization, if there will be any direction for industrialization in Nigeria via capital inflow investment, it is imperative to develop domestic firms development of absorptive capacity to take advantage of the beneficial impacts of FDI.

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**Appendix I:**

**F-Statistic for Testing the Existence of Long-Run Relationship (1, 0, 0, 0, 0) Model Dependent Variable- Manufacturing Foreign Direct Investment (LNMFDI)**

| Order of Lag | F Statistics | 95% Lower Bound | 95% Upper Bound | 90% Lower Bound | 90% Upper Bound |
|---|---|---|---|---|---|
| 1 | 4.6358 | 2.5082 | 3.7843 | 2.0464 | 3.1839 |

*Source: Self computation using Micro fit 5.0*