Business Mentoring and Domestic Entrepreneurship in Nigeria's Manufacturing Sub-sector: The place of Foreign Direct investment Inflows

Ebele S. Nwokoye[1]   Kevin Onwuka (PhD)[1]   N. R. Uwajumogu (PhD)[2*]

Innocent C. Ogbonna[2]

1.   Department of Economics, Nnamdi Azikiwe University, PMB 5025, Awka, Anambra State, Nigeria.
2.   Department of Economics, Renaissance University, PMB 0116, Ugbawka, Enugu State, Nigeria.

* ketchyus@yahoo.com

Abstract

Although there is a fairly extensive literature on the theory of foreign direct investment, not much of it is useful in providing insights into its effect on domestic entrepreneurship in Nigeria. This paper looks at the theoretical basis for business mentoring, examines the influence of foreign direct investment (FDI) inflow on domestic entrepreneurship in Nigeria's manufacturing sub-sector from 1973 to 2010 while employing OLS technique. Results identified a positive and highly significant effects of each of human capital and infrastructural development on activities on Nigeria's manufacturing sub-sector while each of manufacturing FDI, market size and anti-FDI policies has a negative and highly significant effect on activities in Nigeria's manufacturing sub-sector. This paper therefore recommends that policies on investment should be geared towards wooing foreign investors into the manufacturing sub-sector while giving the diversification of the country's productive base a top priority.
Keywords: Domestic entrepreneurship, Foreign Direct Investment, Spill-over

1. Introduction

Nigeria, a former British colony, is a triplistic economy as large as 924,768 square kilometres, the 12th largest world crude oil producer, the 9th world most populous country and Africa's second largest economy with estimated earnings $2.2 million a day in oil revenue (World Fact Book, 2010).

Amusan (2012) reports that Nigeria is the third fastest growing economy with sustained 7.5% GDP growth rate (though dependent on crude oil for more than 90% of its foreign exchange earnings). According to Momoh (2012), FDI inflows increased by 50% from 2011 value to $8.9 billion in 2012, placing the country as Africa's preferred investment destination. With a population of about 170 million people and the right demographics (70% arable, good road network, vibrant air, water and rail transportation and development of additional export processing zones in different parts of the country), Nigeria's strongest assets are its large labour and domestic commodity markets though analysis at the per capita level together with the reported 35% rate of unemployment suggests that these growth figures do not translate to job creation. Momoh (2012) further asserted that in the past 10 years, Nigeria's manufacturing sub-sector's contribution to economic growth hovered around 4% compared with the situation where manufacturing sub-sector's contribution to GDP in other emerging economies averaged 46%.

Evidences abound of the increasing openness of the Nigerian economy to FDI through the activities of Multinational Corporations (CBN, 2007) and a lower than expected level of domestic entrepreneurial activities (Uwatt, 2010). The National Bureau of Statistics (2010) reported that about 70% (105 million) Nigerians live below poverty line against 54% which was reported in 2008. Its harmonized Nigerian Living Standard Survey for 2010 further reported that 90% of Nigerians live on less than $2 a day and puts the current poverty rate at 79% out of which 30.3% are extremely poor. The United Nations Habitat puts the poverty rate at 76% for 2010 against 46% which it reported in 1996 and this is despite the increase in the foreign direct investment

Certain considerations suggest a degree of substitutability between foreign direct investment and domestic entrepreneurship in the manufacturing sector. For instance there are postulations that Multinational Enterprises (MNE$_S$) raise a large fraction of their capital locally in their host economies; this is most likely to lead to some crowding out of domestic entrepreneurship (Appleyard and Field, 1998; Jhingan, 2003; Salvatore, 2010). Managerial and entrepreneurial skills, ideas, technologies and overseas contacts brought in by MNEs through FDI may stifle the growth of domestic entrepreneurship because the MNE$_S$ are likely to dominate the local

commodity and factor markets as well as reduce the number of skilled labour available to domestic entrepreneurs (Braunstein and Epstein, 2002).

In contrast to the above considerations, a degree of complimentarity between FDI and domestic entrepreneurship exist. For instance there are postulations that MNEs generate knowledge spillovers in their host economies and transfer modern technology to domestic labour and upstream suppliers (increased knowledge) leading to improvement in domestic production (Blomstrom, 1986; Markusen and Venables 1999; Fosfuri et al 2001; Glass and Saggi, 2002, etc).

These possibilities have lent credence to the present study. In recent theoretical and empirical works (including Asiedu, 2005; Ajayi, 2006), entrepreneurship has been identified as a key variable determining economic growth, poverty reduction and employment generation in Nigeria. The East Asian countries are often cited as examples where this twin economic package (of domestic entrepreneurship cum foreign investment) have proved successful in boosting economic performances (World Bank, 1994).

Table 1.1 Trend in Nigeria's Development Indices

Year	Growth rate of GDP per capita	Rate of Poverty Incidence	Rate of Unemployment+	Net FDI ($m)
1980	0.08	27.2	-	-188.52
1985	-0.12	46.3	6.10	485
1992	-2.3	42.8	3.40	1157
1996	2.2	65.6	3.40	1593
2004	7.6	54.4	13.4	1866
2010	5.1	69.0	21.1	1864
2011	4.3	76.0	23.9	?

Source: National Bureau of Statistics various issues

Table 1.1 below reveals that although the economy has been on the growth path since 1980, poverty and unemployment have been on the increase despite the increase in FDI inflows.

Studies on the effect of inward FDI on domestic entrepreneurship are not entirely new; they exist for the Asian continent (see Tang, Selvanathan and Selvanathan, 2008) but such studies are scarce for Nigeria as most of the studies are theoretical (Ohiorhenuan, 1983; Olopoenia, 1983; Forest, 1994; Ariyo, 1998; Ajayi, 2006) while few are empirical (Anyanwu, 1998; Adelagan, 2000); other studies have concentrated on the effects of FDI on economic growth (Adelegan, 2000; Jerome and Ogunkola, 2004; etc). The issue in focus is to establish the substitutability or the complimentarity effects of FDI on domestic entrepreneurship in Nigeria's manufacturing sub-sector. Thus, the objectives of this study are to ascertain the effect of FDI on domestic entrepreneurship in Nigeria's manufacturing sub-sector and to determine the long run relationship existing between FDI and domestic entrepreneurship in Nigeria's manufacturing sub-sector. The rest of the paper is structured as follows: section 2 highlights the conceptual, theoretical and empirical literature; section 3 presents the model while section 4 deals with results and discussion and section 5 conclude with some policy recommendations.

2 Conceptual, Theoretical and Empirical Literature

Cantillon (1755) cited in Schumpeter (1934) was the first economist to use the term entrepreneur in a precise manner; he placed the entrepreneurial function in the field of economics by causing the principles of profit maximization and that of risk bearing to become part of its definition; Marshall (1930) saw the task of an entrepreneur as being inventive while Schumpeter (1934) assigned the critical role of innovation and power to the entrepreneur; Knight (1961) identified uncertainty as a primary attribute of the entrepreneurship theory while Casson (2005) conceptualized entrepreneurs as decision makers who improvise solutions to problems which cannot be solved by routine alone. Hence, entrepreneurship is the creation of new enterprises that give value to humanity by filling up a yearning vacuum (the neglected area). The individual who creates the new enterprise is called the entrepreneur. Within this definition, there are various levels of entrepreneurial activities, from a micro level in the village to a transnational initiative. In Nigeria, domestic entrepreneurship is often discussed in the context of Micro (informal), Small and Medium Scale (formal) Enterprises

The World Bank Micro, Small and Medium Enterprise Development Group categorized MSMEs according to the following parameters

a. Micro Enterprise- up to 10 employees, total assets worth up to $100,000 and total annual sales of up to $100,000

b. Small Enterprise- up to 50 employees, total assets worth up to $3million and total sales of up to $3million.

c. Medium Enterprises-up to 300 employees, total assets worth up to $15million and total sales of up to $15million.

Nnanna (2003) and Salako (2004) acknowledge SMEs as the bedrock of industrial development of any country. Apart from the numerous commodities produced by SMEs, they provide veritable means of large scale employment as they usually adopt labour intensive techniques for production. They also provide training grounds for entrepreneurs even as they generally rely more on the use of local inputs. Moreover, if well managed, SMEs can turn into **giant corporations of tomorrow**. These contributions explain why governments and international agencies mobilise efforts towards the realization of sustainable industrial growth and the creation of mass employment through the rapid growth and development of SMEs.

Sule (1986) and World Bank (2006) assert that SMEs provide an effective means of stimulating indigenous entrepreneurship, enhancing greater employment opportunities per unit of capital invested and aiding the growth of local technology.

Okonkwo (1996) and Okonjo-Iweala (2005) cited in Ewurum and Ekpunobi, (2008) opined that strong entrepreneurial bases are essential drivers of economic growth and prosperity in a modern economy; it empowers the populace and provides greater possibilities for the use of available local raw materials and this goes a long way in encouraging vertical and horizontal linkages. Chibundu (2006) opined that it is encouraging to note that research findings and empirical evidences show that significant poverty reduction are possible and have occurred in many countries where SMEs are encouraged. To him, SMEs stimulate private consumption, ownership and entrepreneurial abilities, generate employment, help diversify economic activities and make significant contributions to export and domestic trade while utilizing local raw materials. Today, domestication of the entrepreneurial process and enhancement of economic efficiency has pre-occupied government policy thrust towards capacity utilization in the industrial sector for employment generation and poverty alleviation.

Jhingan (2003) observed that a low entrepreneurial ability is a strong factor responsible for the low rate of capital formation in LDCs. He recognised that, though LDCs are characterized by small size of the market, deficiency in capital, lack of private property and contract, entrepreneurship is the focal point in the process of economic development. He, therefore, attributed the spirit of nationalism to that of entrepreneurship.

SMEs are the backbone of any economy as they account for an average of 95% of manufacturing activities and 70% of industrial jobs. Between 1990 and 1995, an average of 84% of new jobs created in Nigeria was generated by SMEs (Manufacturers Association of Nigeria, 2000). Adelaja (2005) declared that SMEs account for an average of 60% of all regional entrepreneurship and up to 50% of paid employment.

Foreign entrepreneurship is often discussed within the context of Foreign Direct Investment (FDI).

World Bank (1996), IMF (2001) and UNCTAD (2007) see FDI as investment made to acquire a lasting management interest (normally 10% of voting stock) in a business enterprise operating in a country other than that of the investor's. Hence FDI refers to the activities of subsidiaries of multinational enterprises. These subsidiaries perform different functions; some duplicate the activities of their parent company; some produce components of the parent company's products while others engage in activities that are completely unrelated to the parent company's products

According to Agosin and Mayer (2000), FDI is prized by LDCs for the bundle of assets which MNEs deploy through their investments. These assets include advanced technology, improved management skills, improved channels for marketing products internationally, enhanced product design, high quality characteristics, superior brand names, etc. FDI is a major path through which LDCs can integrate into the global world and is often seen as the driving force behind economic convergence (Dike, 2005). FDI are regarded as alternatives to international trade in order to penetrate markets which are protected by strong barriers (Markusen and Venables, 1999; Dike, 2005).

Business mentoring is a one-on-one relationship that helps entrepreneurs learn and develop their business ideas while providing them with useful second options, impartial feedbacks and different perspective of issues that arise within the business environment (Aganga, 2012). Mentoring between domestic and foreign entrepreneurs is theoretically based on the Spill-over Hypothesis.

2.1 The Spillover Hypothesis

Markusen (1995) and Caves (1996) support the well developed literature which tries to explain why MNEs set up overseas instead of exporting directly and /or licensing their technology out. The most accepted explanations

are those that emphasise the existence of both a form of proprietary knowledge and some forms of market failures in protecting that knowledge. Thus, MNEs try to internalize certain transactions in order to protect its technology and marketing advantages. The general literature on FDI takes it as given, these motives and in particular, the existence of some kind of firm's specific asset (some kind of technological advantage which may include innovative management, organizational processes and new production methods/techniques). The literature also acknowledges the possibilities of these advantages being indirectly transferred to domestic enterprises through the MNEs operating within same industry. An MNE will not handover their advantages voluntarily hence, these gains from external benefits are regarded as **spill-overs** (Blomström and Kokko, 1998). The spill-overs come in the following ways:

1.   **Theories of horizontal integration:** Markusen (1984) and Alguacil and Orts (2003) confirm that some MNEs may sets up shop abroad to produce a commodity (a close substitute to one which is already being produced in its host country. As Aitken and Harrison (1999) pointed out, knowledge spill-overs within an industry may be counterbalanced by this competition effect; that is, as domestic firms lose market share to foreign entrants, they experience lower productivity since their fixed costs are spread over a smaller market. Thus, the reported increase in competition levels due to FDI is consistent with the lack of intra-industry spill-overs found in current analysis.

2.   **Theories of vertical integration:** Helpman (1984) confirm that FDI which MNEs bring in are complementary to the host country's activities; an MNE sets up shop abroad in order to geographically separate different production stages across countries with the aim of taking advantage of lower factor prices. Two instances include

- a situation where the unskilled stages of production are located in a lower wage country and the final commodity re-exported back to the home base (source country). Here, the source country exports services and factor inputs and imports their final commodities. (Onwuka and Zoral, 2008) The scenario above presents a forward linkage otherwise seen as a downstream linkage.
- a situation where an increase in MNEs activities leads to an increase in demand for factor inputs and capital goods from the host country. This scenario presents a backward linkage otherwise seen as an upstream linkage (Javorcik, 2004).

In line with Aitken, Hanson and Harrison, 1997; Wang and Blomstrom, 1992; Fosfuri, Motta and Ronde, 2001 Gorg and Greenaway, 2004; Madariaga and Poncet, (2007); economic theory identifies four channels through which inflows of capital can generate potentially beneficial spill-overs to enhance the productivity of domestic firms.

1. **Imitation**. This is the classic transmission mechanism for new products/processes; this mechanism is commonly alluded to in the theoretical literature on North-South technology as reverse engineering. Its scope depends on product/process complexity with simple manufactures and processes easier to imitate than complex ones. For instance, managerial/organizational innovation is far easier to imitate. Imitation involves the adoption of new production methods and managerial practices/ techniques and any upgrading of domestic technology resulting from imitation is likely to lead to increased productivity in the domestic firm.

2. **Competition**. Except an incoming MNE is offered a monopoly status, it will produce in competition with domestic entrepreneurs. Even when these domestic entrepreneurs are unable to imitate the MNEs' technology/production processes, they are under pressure to use existing technology more efficiently in order to yield productivity gains. Thus, competition leads to reduced X-inefficiencies and the more rapid adoption/imitation of new technologies with a view to increasing productivity gains.

3. **Human Capital Acquisition**. This is considered as a most important source of beneficial spill-over to domestic entrepreneurs. It involves knowledge transfers to domestic firms via labour mobility. Even when the locational pull is the relatively low wages. MNEs demand for skilled workers in their host country. MNEs invest in training and in the absence of slavery, it is impossible to impound such resources completely. As a result, the movement of labour from MNEs to domestic firms can generate an improvement in productivity via two mechanisms. First, a direct spill-over to complementary workers; second, workers that move may carry with them knowledge of new technology or new management techniques.

4. **Export Spill-overs**. This is also considered as an additional source of productivity gains. Exporting usually involves the acquisition of fixed costs in a bid to establish distribution networks, creating transport infrastructure, learning about consumers' tastes and preferences, regulatory frameworks, etc, in the overseas markets. Already established MNEs are armed with this information and exploit them when exporting from their host countries. Through imitation and collaboration (as is the case of spill-

overs), domestic firms can learn how to penetrate export markets hence increase their productivity gains as existing literature suggest that the productivity levels of exporting firms are higher than those of non-exporting firms as the former learn by exporting. Hence, export spill-overs, through scale economies and increased exposure to international best practices and 'frontier' technologies, boast productivity gains for domestic entrepreneurs.

Various schools of thought have explicitly aired their views on the influence of FDI on domestic entrepreneurship. For instance, **the dependency school**, which flourished between the 1960s and 1980s, sought to overcome economic dependence through internal structural and institutional changes in order to achieve higher equality in wealth, income, and power distributions. This can be achieved through self-reliance and a mutual cooperation amongst developing nations in the form of regional economic cooperation and international commodity agreement. Dependency theorists (Furtardo, 1964; Sukel, 1969; Santos, 1970; Emmanuel, 1972; Frank, 1976; Amin, 1976) all cited from Jhingan 2003, though belonging to different schools of thoughts, see the cause of underdevelopment primarily in exploitation of the underdeveloped countries by the industrialized ones. The dependency school's major contribution to the domestic entrepreneurship-foreign direct investment nexus is its focus on the consequences of FDI on industrialization in developing countries and its cynic analysis of western development paradigms that regard FDI as unequivocally positive. This school posits that developing countries are exploited either through international trade which leads to deteriorating terms of trade (an unequal exchange in Marxist terms) or through profit repatriation by the MNEs (Packenham, 1992).

The **modernization school** which developed before the dependency school has remained widely influential to the present day. Modernization theorists assert that there is a natural order through which countries ascend to what is seen as higher developmental stages. The theorists recommend that developing countries should follow the footsteps of developed countries and overcome endogenous barriers to exogenously motivated development through deregulation, liberalization, and opening up the economy. This school views FDI as a prerequisite and catalyst for sustainable growth and development. For FDI to fulfill its crucial role, economies have to be freed from distorting state interventions and opened up to foreign investment and trade. This stance is reflected in the big bang theories (postulating immediate all-encompassing privatization in Eastern Europe) and structural adjustment norms (transforming economic and political structures to overcome poverty in Latin America and Africa).

Lagace (2002) reported that Chinese investment policies are friendlier to foreign enterprises than to domestic enterprises. Consequently, Chinese entrepreneurs are more eager to team up with foreign investors than with fellow domestic investors. Hence, FDI crowds out domestic investments from this viewpoint.

3 Empirical Literatures

The empirical evidences on the effects of FDI on domestic entrepreneurship are often mixed with some studies finding positive effects. Kokko, Tansimi and Zejan, (1996) reported that the extent of spill-over will depend on the complexity of the technology transferred by FDI and on the technology gap between domestic and foreign firms. A large technology gap may not constrain technology spill-over but an extensive number of foreign firms will lower spill-overs. Glass and Saggi (1998) supported this assertion; domestic firms using very backward production techniques and low skilled labour may be unable to tap from the knowledge (technology) spill-over provided by the presence of MNEs.

A thread of literature provides evidences in support of the Spill-over Hypothesis. For instance:

Conditioned on **FDI-productivity nexus**, empirical works on spill-overs from FDI reported by Caves (1974) and Globerman (1979) for manufacturing firms in Australia and Canada respectively using panel data showed that productivity in competing domestic firms increased with increases in number of foreign subsidiaries.

Blomstrom and Perssion (1983)'s studies on Mexico's manufacturing firms confirmed strong support for spill-overs from FDI for 1970 while a similar study by Blomstrom (1986) testing for spill-overs based on efficiency index discovered that entry of foreign firms had a positive effect on each industry's average productivity but had no impact on technical progress in the least productive firms in each industry. These studies were interpreted to mean that FDI in Mexico did not speed up technological transfer; rather it promoted efficiency through increased competition.

Blomstrom and Wolff (1989) conducted studies on Mexico's manufacturing industries between1965 and 1984. Result showed that productivity of domestic firm converged with that of foreign firms and both the rate of productivity growth of domestic firms and the rate at which they catch up with the MNEs are positively related with the extent of foreign presence within the industry.

Bieishowsky (1994) and Kokko, et al (1996) found a positive impact of FDI on labour productivity and economic growth in Brazilian and Uruguayan manufacturing industries respectively.

Narayanan and Wah (2000) found that the presence of MNEs in Malaysia greatly increased the productive capacity and quality of Malaysian domestic products but there are doubts about the long-run sustainability of this finding given the absence of local research and development efforts.

Ayanwale and Bamire (2001) investigated the influence of FDI on firm level productivity in Nigeria and reported a positive spill-over of foreign firms on domestic firms' productivity.

Gorg and Greenaway (2004) postulates that MNEs provide incentives to domestic firms and helps them increase productivity and quality by imposing high standards on them.

Conditioned on **FDI-labour turn-over nexus**, Gershenberg (1987) studied the Kenyan domestic economy and discovered that amongst other observations, a 16% labour turn-over from MNEs to domestic firm hence increasing Kenyan domestic entrepreneurship.

UNCTAD (1992) conducted studies on the Bangladesh garment industry and observed that Desh, a domestic firm in Bangladesh, benefitted from technology and credit from Daewoo (South Korea). Desh further transmitted its know-how to other domestic counterparts clearly demonstrating that technology diffusion (through activities of MNEs) can positively affect domestic entrepreneurship (through labour turn-over).

Forrest (1994) provides evidences suggesting that indigenous entrepreneurial activities in Nigeria have benefited from activities of foreign firms. He studied 13 firms in Nigeria to locate the background of the founders of these firms and discovered that 10 out of 13 chief executives had worked with oil companies in various capacities before founding theirs. Forrest (1994) further reported that these new domestic firms employed not less than 1000 people thereby boasting domestic entrepreneurship in Nigeria.

Pack (1997) conducted studies on Taiwan's domestic economy and reported evidences on the role of labour turn-over in technology diffusion from MNEs to domestic firms. For instance, in the mid 1980s, almost 50% of all the engineers and approximately 63% of all the domestic skilled workers left the MNEs to either join or form Taiwanese domestic firms.

Conditioned on **FDI-domestic investment nexus**, Borensztein, De Gregorio and Lee (1998) employed regression analysis on cross-sectional data for 69 developing countries and discovered that a one-dollar of FDI inflow led to a more than one dollar increase in domestic investment.

Agosin and Mayer (2000) analyzed the relationship between various types of private capital inflows and both domestic investment and savings and discovered that FDI had a strong and significant impact on domestic investment.

Tang, Selvanathan and Selvanathan (2008) explored the causal link between FDI, domestic investment and economic growth in China between 1988 and 2003, using the multivariate vector auto regression and error correction model and discovered a single directional causality from FDI to domestic investment.

Another thread of literature gives insights into the reasons for contradictions to the Spill-over Hypothesis. Some these studies which contradicts the Spillover Hypothesis are conditioned on the **FDI-domestic productivity nexus**. For instance:

Haddad and Harrison (1993) reported absence of a positive short-run spillover for domestic firms and that the concentration of foreign firms in particular industries lowers the productivity of domestic firms in that industry.

Aitken, Harrison and Lipsey (1996) conducted a study for Mexico and Venezuela and results found no positive impact of FDI on wages in domestic firms.

Aitken and Harrison (1999) could not establish any evidence of a positive technology spill-over from Multinational enterprises to domestic enterprises in Venezuela in the 1980s.

Conditioned on **FDI-domestic investment nexus**, Adelegan (2000) conceptualized a seemingly unrelated model and through regression analysis, discovered that FDI was negatively related to domestic investment in Nigeria.

Braunstein and Epstein (2002) fit a regression model to panel data generated from 1986 to 1999 and discovered that FDI crowded out domestic investments in China.

4 Model Specification and Data Analyses

The effect of FDI on domestic entrepreneurship in Nigeria's manufacturing sub-sector may be analyzed within Solow (1957) augmented Cob-Douglas production function fundamentally presented as

$$Q = A(t)f(K, L) \text{ -- 1}$$

which presents quantitative links between output (Q) and inputs. Based on the theoretical and empirical discourse, the model for the study is presented as:

$$MAN = f(FDI, HC, GDP, INFR, IC) \text{ -- 2}$$ where manufacturing capacity utilization rate (MAN) is a proxy for the extent of domestic entrepreneurship in the manufacturing sub-sector; manufacturing FDI is a proxy for contributions of foreign capital to business mentoring in the sub-sector, human capital stock (HC) and infrastructure (INFR) measured respectively by ratio

of secondary and tertiary school enrolment to the population and government capital expenditure as percentage of GDP are proxies for absorptive capacity, Gross Domestic Product (GDP) measures market size while investment climate (IC) is a dummy for the presence of anti-FDI policies (from 1975 – 1985, era of indigenization policy).

A testable linear mathematical form of equation 2 is presented as

$$MAN_t = \beta_0 + \beta_1 FDI_{t-1}, + \beta_2 HC_t, + \beta_3 GDP_t, + \beta_4 INFR_t, + \beta_5 IC + \mu_t \text{ --- 3}$$

The natural log transformation of equation 3 allows for the interpretation of the coefficients as elasticities. Hence,

$$LnMAN_t = \beta0 + \beta_1 LnFDI_t, + \beta_2 LnHC_t, + \beta_3 LnGDP_t, + \beta_4 LnINFR_t, + \beta_5 IC + \mu_t \text{ ------------------ 4}$$

where Ln is natural log, β_0 is intercept, $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are output elasticities of associated variables, μ_t is error term while t is the time factor. Time series data 1973 to 2010 sourced from Central Bank of Nigeria's Statistical Bulletin, Statement of Accounts and Annual Reports, World Bank Indicators and UNCTAD online database.

First, an Augmented Dickey-Fuller (ADF) was employed to test the stationarity variables. All variables were stationary at first difference with and without trend as indicated by unit root test (see appendix 1) except the per capita GDP which is a proxy for market size.

For the short-run analysis, although the error correction model showed some functional form problem, no data serial correlation, constant variance and normal distribution of the error term, at 99%, 95% and 90% confidence interval, all of the short-run estimated parameters are insignificant. Furthermore, the adjusted R^2 is abnormal (0.075) with a highly insignificant F-statistic (see appendix 2) hence the need for a long run analysis.

The long-run analysis required a co-integration test in order to determine the existence of a long-run relationship amongst the variables. The Maximal Eigen value of the stochastic matrix detected only one cointegration vector while Trace value detected three cointegrating vectors but due to difficulties associated with interpreting the latter, this study adopts the former test. Restricting the value of manufacturing capacity to unit, this study discovers that all the variables have a significant long-run relationship with each other.

From the cointegrating table (see appendix 3) one can easily observe that a positive and highly significant effects of each of human capital and infrastructural development on activities in Nigeria's manufacturing sector while each of manufacturing FDI, market size and anti-FDI policies has a negative and highly significant effect on activities in Nigeria's manufacturing sub-sector. Hence the long-run estimated regression line

$$LnMAN = -0.36612LnFDI + 0.35040LnHC - 1.5186LnGDP + 0.53770LnINFR - 1.3570IC \text{ ---------------- 5}$$

5 Policy Implication and Conclusion

The long run analysis reveals that FDI inflow into Nigeria's manufacturing sub-sector did not impact positively on the Nigerian economy hence the absence of mentoring (spill-overs and linkages) from FDI inflow to Nigeria's manufacturing sub-sector. This is not surprising as Ayanwale & Bamire (2001) rightly pointed out that most FDI inflow goes to Nigeria's oil and gas sub-sector. Nigerian government is therefore advised to provide enough incentives (electricity, security, friendly FDI-policies, communication/transportation/information-technology facilities, etc) to woo more foreign investors to the manufacturing sub-sector.

It is also observable that the presence of anti-FDI policies impact negatively on the manufacturing sector. This suggests a degree of complimentarity between domestic and foreign entrepreneurship. Policy makers should therefore continue in the deregulation/liberalization processes introduced by the structural adjustment program as these processes will not only boast FDI inflow bur will also make room for FDI spill-overs especially to the manufacturing sub-sector.

The growth in market size proxied by per capita GDP has no positive effect on Nigeria's manufacturing sector. This finding is collaborated by table 1.1 above; even with increases in the GDP growth rate, hunger deprivation, poverty, unemployment is still on the increase. Hence, economic growth has not translated to economic development.

In conclusion, this paper joins issues with UNCTAD (2001)'s world investment report in stressing the need to develop strong linkages between the MNEs and domestic entrepreneurs in Nigeria's manufacturing sub-sector more strongly in order to reap the potential benefits of Foreign Direct Investment. Whatever be the case, Nigeria's economy is long over-due for diversification of its production-base in order to reap the gains of the Millennium Development Goals as well as Vision 20 2020.

REFERENCES

Adelegan, J.O. (2000). Foreign Direct Investment and Economic Growth in Nigeria: A Seemingly Unrelated Model, *African Review of Money, Finance and Banking*, *Supplementary issue of Savings and Development 2000:5–25*

Adelaja, M A (2005) *Enhancing the Microfinance Sector for Sustainable Development in Nigeria*, a

Seminar Paper presented at the Central Bank of Nigeria launching of Microfinance Policy, Regulatory and Supervisory Framework for Nigeria, December.

Aganga, O (2012) Mentoring Small Businesses, Businessday Newspaper, Monday 10, page 39

Agosin, M. R. & Mayer, R. (2000) Foreign Direct Investment in Developing Countries: Does It   Crowd   in Domestic Investment? *United Nations Conference on Trade and Development   Discussion Papers no 146.*

Aitken, B. J., & Harrison, A.E. (1999), Do Domestic Firms Benefit from Direct Foreign   Investment? Evidence from Venezuela, *American Economic Review 89(3): 605–618.*

Ajayi, S. I. (2006) Foreign Direct Investment and Economic Development in Africa, *ADB/AERC   International Conference, Tunis Tunisia November 22-24.*

Alguacl, M T & Orts, V (2003) Inward Foreign Direct Investment and Imports in Spain,   *International Economic Journal 17(3): 19-38*

Amusan, T (2012) Nigeria: Leveraging Current Impressive Economic Outlook, *Businessday   September 17, back page*

Anyanwu, J.C (1998) An Econometric Investigation of Determinants of Foreign Direct Investment   in Nigeria in Investment in the Growth Process; *Proceeding of the Annual Conference of the   Nigerian Economic Society, 210-241*

Appleyard, D R & Field, A.J (1998) *International Economics 3rd edition*, McGraw Hill

Ariyo, A (1998) Investment and Nigeria's Economic Growth, in *Investment in the Growth Process;   Proceedings of Nigerian Economic Society Annual Conference 1998*: 389–415 Ibadan,   Nigeria

Asiedu, E (2005) Foreign Direct Investment in Africa: the Role of Natural Resources, Market Size,   Government Policy, Institution and Political Stability, *UN/WIDER Research Paper 2005/24,   World Institute for Development Economics Research Helsinki*

Ayanwale, A.B. & Bamire, A.S. (2001), The Influence of FDI on Firm Level Productivity of   Nigeria's Agro/Agro-Allied Sector*, Final Report Presented to the *African Economic   Research Consortium, Nairobi*

Bieishowsky, R (1994) Two Studies on Transnational Corporations in the Brazilian Manufacturing   Sector: The 1980s and 1990s, *The Journal of Development Studies 34(99): 1-34*

Biersteker, T J (1978) *Distortions or Development? Contending Perspectives on the Multinational Corporations*, Cambridge: MIT Press

Blomstrom, M & Perssion, H (1983) Foreign Investment and Spillover Efficiency in an   Undeveloped   Economy; Evidence from the Mexican Manufacturing Industry, *World Development   11: 493- 501*

Blomström, M (1986) Foreign Investment and Productivity Efficiency: The Case of Mexico,   *Journal   of Industrial Economics 15: 97-110*

Blomström, M & Wolff, E. N (1989) Multinational Corporations and Productivity Convergence in Mexico, *Working Paper 3141 National Bureau of Economic Research Massachusetts*

Borenszetein, E, De Gregorio, J & Lee, J W (1998) How Does Foreign Direct Investment Affect   Economic Growth, *Journal of International Economics 45, 115-135*

Bosworth, B & Collins, S M (1999) Capital Flows to Developing Economies; Implications for   Savings   and Investment, *Brookings Papers on Economic Activities 1: 143-169*

Braunstein, E & Epstein, G (2002) Bargaining Power and Foreign Direct Investment in China; Can   1.3billion Consumers Tame the Multinationals? *CEPA Working Paper 13, New York: Center   for Economic Policy Analysis*

Casson M (2005) Entrepreneurship and the Theory of the Firm, *Journal of Economic Behavior and   Organization, 58(2) 327-348*

Caves, R E (1996) *Multinational Enterprise and Economic Analysis,* New York: Cambrigde   University Press

Chibundu, E (2006) How Nigerian SMEs can Grow the Economy, *Vanguard Newspaper September 29: 46.*

Das, S (1987) Externalitites, and Technology Transfer through Multinational Corporations: A   Theoretical Analysis, *Journal of International Economics*, *Vol. 22: 171-182*.

Dike, M E (2005) Sub-Saharan Africa, Multinational Enterprises and Foreign Direct Investment in   the Context of Globalization, *Journal of Economic Studies 5(1): 94-117*

Forrest, T (1994) *The Advance of African Capital: The Growth of Nigerian Private Enterprise*,   London: Edinburgh University Press for the International African Institute.

Fosfuri, A, Motta M & Rønde, T (2001) Foreign Direct Investment and Spillovers through Workers'   Mobility, *Journal of International Economics 53: 205-222*

Glass, A J and Saggi, K (2002) Multinational Firms and Technology Transfer, *Scandinavian   Journal   of Economics 104: 495-514*

Globerman, S (1979) Foreign Direct Investment and Spillover Efficiency Benefits in Canadian Manufacturing Industries, *Canadian Journal of Economics 105(4): 581-595*

Gershenberg, I (1987) The Training and Spread of Managerial Know-How; A Comparative Analysis of Multinationals and other Firms in Kenya, *World Development 15: 931-939*

Görg, H. & Greenaway, D. (2004) Much Ado About Nothing? Do Domestic Firms Really Really Benefit From Foreign Direct Investment? *World Bank Economic Observer 19(2): 171-197*

Haddad, M and Harrison, A (1993) Are There Positive Spillovers from Direct Foreign Investment? *Journal of Development Economics 42: 51-74*

Harper, M & Finnegan, O (1998), *Value for Money; Impact of Small Enterprises Development*, London: Intermediate Technology Publications.

Helpman, E (1984) A Simple Theory of International Trade with Multinational Corporations, *Journal of Political Economy 92: 451-471*

International Monetary Fund (2001) *World Economic Outlook*, October, Washington DC

Jerome, A. & Ogunkola, J. (2004) Foreign Direct Investment in Nigeria: Magnitude, Direction and Prospects, Paper presented at *the African Economic Research Consortium Special Seminar Series. Nairobi, April*.

Javorcik, B.S. (2004), Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers through Backward Linkages, *American Economic Review 94(3)*

Jhingan, M.L. (2003) *The Economics of Development and Planning 36th revised edition*, New Delhi: Vrinda Publications (P) Ltd

Knight F H (1961) *Risk, Uncertainty and Profit 2nd edition*, New York: Kelly

Kokko, A, Tansimi, R and Zejan, M C (1996) Local Technological Capability and Productivity Spillovers from Foreign Direct Investment in Uruguayan Manufacturing Sector, *Journal of Development Studies 32(4): 602-611*

Lagace, M (2002) Entrepreneurship in Asia and Foreign Direct Investment, Executive Summary of Proceedings at the Harvard Business School International Seminar assessed on 10 September, 2009 from http://www.hbsworkingknowledge.com/

Madariaga N & Poncet S (2007) FDI in Chinese Cities: Spillovers and Impact on Growth, *The World Economy 837-862*

Manufactures' Association of Nigeria (2000) *Half Yearly Economic Review* July – December 1999, Lagos, Nigeria

Markusen, J R (1995) The Boundaries of Multinational Enterprises and the Theory of International Trade, *Journal of Economic Perspectives 9(2): 169-190*

Markusen J R & Venables A J (1999) Foreign Direct Investment as a Catalyst for Industrial Development, *European Economic Review 43: 335-338*

Momoh, S (2012) Manufacturing Association of Nigeria's Drive to Change the Face of Manufacturing Sector, *BusinessDay Monday 17 September, pages 45 and 47*

Nnanna O.J. (2003) The Role of Central Bank of Nigeria in Enterprise Financing, *Central Bank of Nigeria Bullion 27(1), 19-28*

Narayanan S and Wah L W (2000) Technological Maturity and Development without Research; The Challenge for Malaysian Manufacturing Industries, *Development and Change 31(2): 435-457*

Olopoenia, R A (1983) Foreign Investment and Growth Rate of Capital-Importing Countries, *Nigerian Journal of Social Studies 25(2):221-232*

Onwuka, K O & Zoral, K Y (2008) Foreign Direct Investment and Import Growth in Turkey, *Journal of Economics Studies 7(1): 61-74*

Pack, H (1997) The Role of Exports in Asian Development, in Birdsall, N & Jaspersen, F (eds) *Pathways to Growth; Comparing East Asia Latin America*, Washington DC: Inter-American Development Bank

Packenham, R.A. (1992) *The Dependency Movement: Scholarship and Politics in Development Studies*, Cambridge, MA and London, England: Harvard University Press.

Salako M O (2004) Financing Micro, Small and Medium Scale Enterprises in Nigeria; the Small and Medium Industries Equity Investment Scheme (SMIEIS) Experience, *Union Digest, 8(1): 66-81*

Salvatore, D. (2010) *International Economics*, India: John Wiley & Sons Inc.

Sule, E.I.K (1986) Small Scale Industries in Nigeria: Concepts Appraisal of Government Policies and Suggested Solutions to Identified Problems, *Economic and Financial Review Bullion 24(4)*

Tang, S., E.A. Selvanathan and S. Selvanathan (2008) FDI, Domestic Investment and Economic Growth in China: A Time Series Analysis. *UNU-WIDER Research Paper No. 2008/19*.

United Nations Conference on Trade and Development (1992) *World Investment Report: Transnational Corporations as Engines of Growth*, New York: United Nations

United Nations Conference on Trade and Development (2001), *World Investment Report*: *Promoting Linkages*, Geneva: United Nations.

United Nations Conference on Trade and Development (2007) *World Investment Report*: *Transnational Corporations, Extractive Industries and Development*, New York and   Geneva: United Nations

Uwatt, B. U. (2010), Small Scale Industrial Policy in Nigeria: Short, Medium and Long Term   Policy Options in Nze, F. C. (ed), *Development and Public Policy In Nigeria: Futuristic   Scenarios*, Nigeria: Tamaza Publishing Company Limited Zaria.

World Bank (1994) *The East Asian Miracle: Economic Growth and Public Policy*, New York: Oxford University Press

World Bank (1996) *Global Economic Prospects and the Developing Countries*, Washington DC: The   World Bank

World   Bank   (2006)   World   Business   Environment   Survey,   assessed   on   11   October   2011   from http://www.worldbank.org/busensurvey/article.289

World Fact Book assessed on 29 March 2011 from   http://www.odci.gov/cia/publications/factbook/index.html

APPENDICES

Appendix 1
Unit Root Test

Variable	Level		First Difference		
	No Trend	**With Trend**	**No Trend**	**With Trend**	
**					
LNMAN	-1.7492	-1.4256	-3.0369	-3.1873	
LNFDI	-1.0724	-1.8186	-5.3001	-5.5176	
LNHC	-0.50281	-1.6882	-5.3351	-5.2807	
LNGDP	-2.0760	2.0118	0.21437	-0.62661	
LNINFR	-2.0047	-3.7551	-5.3926	-5.5496	
**					**Critical**
Value	**-2.9378**	**-3.7551**	**-2.9400**	**-3.5313**	

Appendix 2

ECM for variable LNMAN estimated by OLS based on cointegrating VAR(3)

****

Dependent variable is dLNMAN
38 observations used for estimation from 1973 to 2010

****

Regressor	Coefficient	Standard Error	T-Ratio [Prob]
Intercept	.53076	.57489	.92325[.365]
dLNMAN1	.16871	.29467	.57252[.572]
dLNFDI1	-.040671	.071953	-.56525[.577]
dLNHC1	-.0027214	.051410	-.052935[.958]
dLNGDP1	.15675	.17181	.91231[.371]
dLNINFR1	-.026833	.054938	-.48841[.630]
dIC1	.022799	.081416	.28003[.782]
dLNMAN2	-.15428	.28244	-.54625[.590]
dLNFDI2	-.023658	.065436	-.36154[.721]
dLNHC2	-.003172	.043796	-.072425[.943]
dLNGDP2	.27318	.37032	.73769[.468]
dLNINFR2	-.02819	.044599	-.63206[.533]
dIC2	-.0096582	.078902	-.12241[.904]
ecm1(-1)	.10199	.11031	.92453[.364]

R-Squared =0 .30296   Adjusted R^2 = -0.074596
S.E. of Regression =0 .094218   F-stat = 0.80243[.652]
Mean (Dependent Variable) = -0.010313   S.D. (Dependent Variable) = 0 .090889
Residual Sum of Squares = 0 .21305 Equation Log-likelihood = 44.5727
Akaike Info. Criterion = 30.5727   Schwarz Bayesian Criterion =19.1096
DW-statistic = 2.0747   System Log-likelihood = 24.7129

****

A:Serial Correlation*CHSQ(1)= 1.2868[.257]*F(1, 23)= .80613[.379]
B:Functional Form *CHSQ(1)= 6.5009[.011]*F(1, 23)= 4.7468[.040]
C:Normality   *CHSQ(2)= 1.6799[.432]*   Not applicable
D:Heteroscedasticity*CHSQ(1)= 2.1066[.147]*F(1, 36)= 2.1128[.155]*

****

Appendix 3

Cointegration with unrestricted intercepts and no trends in the VAR
Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

****

38 observations from 1973 to 2010, Order of VAR = 3.
List of variables included in the cointegrating vector:
LNMAN   LNFDI   LNHC   LNGDP   LNINFR   IC
List of eigenvalues in descending order:
.80415   .55365   .46042   .33530   .29161   .0015218

****

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	61.9552	39.8300	36.8400
r<= 1	r = 2	30.6531	33.6400	31.0200
r<= 2	r = 3	23.4446	27.4200	24.9900
r<= 3	r = 4	15.5202	21.1200	19.0200
r<= 4	r = 5	13.1008	14.8800	12.9800
r<= 5	r = 6	. .057872	8.0700	6.5000

****

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