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Distribution Effects of Foreign Direct Investment on the Performance of the Nigerian Economy from 1970 to 2013

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Abstract- This study focused on examining the distributive effect of foreign direct investment (fdi) inflows on the performance of the Nigerian economy, with specific reference to the real sector of the economy. The major problem was that despite increasing inflows of fdi to the Nigerian economy, the sectors identified in this work were performing poorly. Thus, the objective of this study were to establish the relationship that exists between capacity utilization rate, export volumes, growth rate of gross domestic and the inflows of fdi to mining & quarrying, manufacturing & processing, agriculture and fisheries, transport & communication, building and construction and trading and business. Literature was reviewed and the OLS multiple regression model was used to analyse the relationships.

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Keywords: foreign direct investment (fdi) inflows, distribution effect economic performance.

I. Introduction

In most developed and developing economies of the world, foreign direct investment had served as a major catalyst for economic development. The early recipient of foreign direct investment especially in the Sub Saharan African such as Botswana, Mauritius, Seychelles, Zambia, Angola, Guinea, Ghana, Nigeria, Namibia, Zimbabwe and Uganda among others can testify to this. Though the inflows of foreign direct investments to these economies have declined over the years, such inflows were directed to the mining and oil sectors of these economies. Most of them except very few have enough to show as evidences of being foreign direct investment (fdi) recipients.

Most of the recipient economies have been able to diversify their lending and investment to increase returns, finance rapid rate of investment and economic growth, enhanced competition in the domestic market, increase consumption and allow transfer of technology especially new varieties of capital inputs among other benefits (Amar, Peter and Sunil, 1997:3) and (Ubom, 2008:319). From the early 1970s, the inflows of foreign direct investment to Nigeria had witnessed serious fluctuations. Specifically inflows of foreign direct investment to mining and quarrying, communication, transport, business and infrastructure, to mention a few were significantly low (Ubom, 2005: 92). However, from the year 1990, the inflow of direct investment to Nigeria had significantly improved though there were some minor fluctuations. A steady rise in the inflows of foreign direct investment to Nigeria was recorded from the year 2003 upwards, (Ubom, 2008:174). During this time, a total of two hundred and twenty four (224) foreign firms invested in Nigeria.

This study sought to establish the trend and effects of the inflows of foreign direct investment to these subsectors and their impact on economic growth and development in Nigeria. Specifically, this work determines the relationship that exist among the inflows of foreign direct investment to the mining and quarrying, manufacturing and processing, agriculture, transportation and communication, trading and business and capacity utilisation rate, export volume and growth rate of gross domestic product in Nigeria. This work is organized into five sections. Section one which is the introduction is almost concluded, section two reviews literature relevant to the study. In section three, research methodology is presented and the empirical review made in section four while section five summarizes the work, makes recommendations and draw conclusion.

II. Theoretical and Conceptual Review

a) Introduction

This section reviews literature relevant to this work. Specifically the theories of foreign direct investment, nature and concept of foreign direct investment, sources and types of foreign direct investment, factors affecting foreign direct investment flows to a country and the distribution of foreign direct investment and the performance of the Nigerian economy are reviewed.

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b) Theories of Foreign Direct Investment

Many theories abound that explain the reason for the inflows of foreign direct investment to a nation. The dependency school are of the opinion that developing economies are exploited by industrialised nations through international trade leading to deteriorating terms of trade and through multinational firms drawing profits out of developing economies (Wilhelms, 1998:2). The modernization school are of the opinion that there is a natural order through which countries ascend to higher developmental stages, thus they see foreign direct investment as prerequisite and catalyst for sustainable growth and development.

The integrative school of thought considers the micro, macro and meso-economic variables as determinants of foreign direct investment inflow to a nation (Ubom, 2005:11). Bende and Ford (1998) in (Egwaikhide, 2012:123), are of the opinion that inflows of foreign direct investment produces externalities in the form of technology transfers, development of human capital and opening up of the economy among others, thus, these are the reasons for the inflow of foreign direct investment to an economy which are aimed at improving the productive sector of an economy. This work adopts the view of Bende et al.

c) Nature and Concept of Foreign Direct Investment

Generally, we know that investment refers to the commitment of funds or other resources into a project with the expectation of future benefits. When such investments move beyond the boundaries of the mother economy, we refer to it as foreign investment. This investment could be in real assets or in financial assets. When such investments are concentrated in real assets such as landed properties, machineries equipment, precious metals among others and undertaken in a country other than the mother country, this is known as foreign direct investment. When the investments are on marketable securities or have any net claims on similar financial assets of foreign countries, they are known as foreign indirect investments or foreign portfolio investments or rentier investments (Robinson & Wrightsman, 1974). This paper focused on foreign direct investment.

Several authors have done a lot of work on this subject matter. (Onyali and Okafor, 2014:214) describes foreign direct investment as an amalgamation of capital, technology, marketing and management in an investment in a foreign country. They further described the context of being foreign to mean that the investor(s) retain control over the investment. According to them, foreign direct investment takes the form of a foreigner setting up a subsidiary or taking over control of an existing firm in the host economy. In this case, the investment must have both foreign ownership and foreign control. Mwillima, (2003) in Egwaikhide, (2012:1) and The World Bank, (2003) describes foreign direct investment as an investment made so as to acquire a lasting management interest of (e.g. 10% of voting, stock, 10% of equity shares) in an enterprise operating in another country other than that of the investor's country.

Jacob, Umoh and Chuku, 2012:2 describes foreign direct investment in three folds: (i) An investment that augments domestic savings in the process of capital accumulation. (ii) The main conduct through which technology spillovers lead to an increase in factor productivity and efficiency in the utilization of resources which leads to growth and finally. (iii) An investment that leads to increase in exports as a result of increased capacity and competition in domestic production. Foreign direct investment as seen in the works of Libor, (2012) is described as the transfer of ownership from domestic to foreign residents and as a mechanism that makes it possible for foreign investors to exercise management and control over host country firms. Foreign direct investment could be acquired through the acquisition of shares in associated enterprise, by incorporating a wholly owned subsidiary or company, through merger or acquisition of an unrelated enterprise or participating in an equity joint venture with another investor.

d) Sources and Types of Foreign Direct Investment in Nigeria

The sources of foreign direct investment (fdi) could be seen in various dimensions. It could be described in terms of the countries these investments are coming from such as from Europe, Japan, Germany, Asian countries, United States, United Kingdom among others. The sources could also be described in terms of the sectors to which they flow to, such as US $92.2billion of fdi to real estate as in the United States in the year 2013. It could also be described in terms of the nature it takes such as capital, human resources, machineries, equipment, precious metals, export processing zone, research and development support, special economic zones and investment in financial subsidies among others. In all, inflows of foreign capital to an economy come in three major forms; as official aids, through portfolio equity flows and as foreign direct investment.

Foreign direct investment (fdi) could be horizontal, vertical and/or platform. Horizontal fdi arises when a firm duplicates the activities of the mother firm in a host economy. Vertical fdi arises when a firm performs value adding activities stage by stage in a host country and platform fdi comes from a source country into a destination country through exportation to the third country.

e) Factors Affecting Foreign Direct Investment Inflows to a Country

According to Madura and Fox, 2011:55-56, capital flows resulting from foreign direct investment

change whenever conditions in a country change the desires of firms operating there. Changes in restrictions also open way to more foreign direct investment in such economies, for instance, relaxation of the indigenisation policy (trade liberalization) attracted many more foreign investors to Nigeria. Privatization allows for greater international businesses as foreign firms can acquire operations sold by national governments as in Chile when it was used to prevent few investors from controlling all the shares. In France it was used to prevent possible reversion to a more nationalized economy and in the United Kingdom to spread stock ownership across investors to mention but a few. Countries that have growth potentials attract more foreign investors as they may be able to capitalize on that growth by establishing more businesses. Foreign firms also prefer to channel foreign direct investment to countries where the local currency is expected to strengthen against their own. Here, they can invest funds to establish their operations in a country while the country's currency is relatively cheap. Countries that impose relatively low tax rates on corporate earnings are more likely to attract foreign direct investment because these firms gain from the estimate after tax cash flows that they expect to earn. In the work of Yakub, 2005:61, factors affecting fdi flows are those of abundance human and natural resources, openness of the economy, current economic reforms, restoration of macroeconomic stability, financial sector reforms, institutional reforms, privatization, deregulation of the oil sector and external sector reforms.

f) Distribution of Foreign Direct Investment and the Performance of the Nigerian Economy

As earlier stated in this study, the performance of the Nigerian economy in this work is measured in terms of the real sector, the amount of foreign direct investment inflows to its subsectors such as mining and quarrying, manufacturing and processing, agriculture, fisheries and forestry, transport and communication, building and construction, trading and business and how these inflows have impacted on capacity utilization rate, export volume, and growth rate of gross domestic product. It is a well-known fact that prior to the oil boom in the early 1970s, agriculture and other sectors of the real economy provided the bulk of employment and national income in Nigeria. The growth of the real sector then was driven by government policy stimulus, research and development support. With its fast growing population, there was need for creation of more job opportunities, industrial raw materials and more food, but the sector still remained in the hands of peasant farms and producers. Then came the oil boom in the early 1970s and foreign direct investment influx into the economy was witnessed.

A critical look shows that concentration of the foreign direct investors were mostly in the extractive sector, completely ignoring the agricultural sector. However, in recent years, there has been diversification into the manufacturing, transport and communication, trading and business, building and construction among others. That is why we've witnessed Julius Berger Construction Company, Gitto Construction Company, MTN, Airtel, Etisalat Communication Business and Coca-cola among others.

A sectoral analysis made by Ogunkola and Afeikhena, showed that as at the early 1990s, the primary sector accounted for only a little over 30% of total foreign direct investment, while manufacturing attracted 50% and services, close to 20%. They further observed that generally, outflows were smaller than inflows, thereby resulting in positive net flows.

III. Research Methodology

This section presents the research methods, design, types, sources of data and model specification.

a) Research Design, Types and Sources of Data

In this article, the desk, descriptive and analytical research designs were used. Secondary data were used in the study. The data were collected from existing documents such as the Central Bank of Nigeria (CBN) Statistical Bulletin, Annual abstract of statistics from the National Bureau of Statistics (NBS), internet websites and journals.

The data were collected on the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture, transport and communication, building and construction, trading and business and capacity utilization rate, export volume and growth rate of gross domestic product in Nigeria, from 1970 to 2013. The data were presented in tables and analysed using the multiple regression models. The analyses were made to address the research hypotheses posted as below.

1. H_o: There is no significant relationship between the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and capacity utilization rate in Nigeria.
   H_1: There is a significant relationship between the inflows of foreign direct investment to mining & quarrying, manufacturing & processing, agriculture & forestry, transportation & communication, building & construction, trading & business and capacity utilization rate in Nigeria.
2. H_o: There is no significant relationship between the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and Export Volume in Nigeria.

H_1: There is a significant relationship between the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and Export Volume in Nigeria.

3. H_o: There is no significant relationship between the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and growth rate of gross domestic product in Nigeria.
   H_1: There is a significant relationship between the Inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and growth rate of gross domestic product in Nigeria.

b) Regression Models

The multiple egression model given as:

$Y= a_o+ b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6+ b_nx_n$ is used to analyze the relationship that exist between inflows of foreign direct investment and the performance of the Nigerian economy from 1970 to 2013. The models are expressed as:

i. $Cut=a_o + b_1FDI_{mq} + b_2FDI_{mp} + b_3FDI_{af} + b_4FDI_{tc} + b_5FDI_{bc} + b_6FDI_{tb} + e$ – eqn I

ii. $ExV=a_o +b_1FDI_{mq} + b_2FDI_{mp} + b_3FDI_{af}+ b_4FDI_{tc} + b_5FDI_{bc} + b_6FDI_{tb} + e$ –eqn 2

iii. $GDPr+a_o + b_1FDI_{mq} + b_2FDI_{mp} + b_3FDI_{af} + b_4FDI_{tc} + b_5FDI_{bc} + b_6FDI_{tb} + e$ – eqn 3

Where:

Cut = Capacity utilization rates

ExV= Export Volume in naira

GDPr = Growth rate of gross domestic product

FDI_{mq}= Inflows of foreign direct investment to mining & quarrying

FDI_{mp}= Inflows of foreign direct investment to manufacturing & processing

FDI_{af} = Inflows of foreign direct investment to agriculture, fisheries and forestry

FDI_{tc} = Inflows of foreign direct investment to transport & communications

FDI_{bc} = Inflows of foreign direct investment to building & construction

FDI_{tb} = Inflows of foreign direct investment to trading & business

$bI-b_n$ = Regression coefficients

a_o = regression constant

x_1-x_n = independent variables

y = dependent variable

e = error term

IV. Empirical Review

a) Data Presentation

This work examined the distribution effects of foreign direct investment inflows on the performance of the Nigerian economy from 1970 to 2012. It is expected that the inflows of foreign direct investment to the subsectors of the real sector of our economy should booster development and growth in the entire economy which should be reflected by major economic indicators. In this work, the economic indicators considered were capacity utilization rate, export volume and the growth rate of gross domestic product. The data collected are presented in the table below:

Table 1 : Trend and Relationships among the Inflow of Foreign Direct Investment to Mining and Quarrying, Manufacturing and Processing, Agriculture, Forestry and Fisheries, Transport and Communication, Building and Construction, Trading and Business and Capacity Utilisation Rates (cut), Export Volume (ExV) and Growth rate of Gross Domestic Product (GDPr) in Nigeria from 1970 to 2013

Period	Cut (%)	Exv (₦'b)	GDPr (%)	FDI_{MQ} (%)	FDI_{MP} (%)	FDI_{AF} (%)	FDI_{TC} (%)	FDI_{BC} (%)	FDI_{TB} (%)	Total inflows of FDI (₦ b)
1970	n/a	374.2	46.80	51.4	22.4	1.0	1.4	1.4	20.6	251.0
1971	n/a	364.0	26.33	52.5	28.6	1.2	0.9	1.2	14.1	489.6
1972	n/a	250.7	8.45	54.7	22.7	0.6	0.8	2.2	15.4	432.8
1973	n/a	2006.0	59.09	52.5.	23.2	0.4	0.7	2.6	16.6	577.8

1974	n/a	430.0	60.00	54.1	20.7	1.0	1.2	3.5	17.0	507.1
1975	76.6	349.8	17.09	41.1	22.2	0.8	1.0	4.9	22.0	757.4
1976	77.4	425.6	24.66	39.3	23.5	0.9	0.7	5.2	26.7	521.1
1977	78.7	523.0	17.41	43.1	27.8	3.0	1.2	4.8	14.4	717.3
1978	72.9	627.7	7.32	14.7	44.1	4.3	1.9	7.8	18.2	664.7
1979	71.8	670.0	19.03	7.32	44.5	3.8	1.9	9.3	17.5	704.0
1980	70.1	553.7	18.62	18.7	41.5	3.3	1.9	8.5	19.1	786.4
1981	73.1	342.8	40.29	14.0	45.4	3.2	1.6	8.7	20.4	584.9
1982	63.6	203.2	2.36	18.1	35.7	2.2	1.3	7.8	27.6	2,193.4
1983	49.7	301.3	9.99	8.6	35.8	2.1	1.3	7.5	38.2	1,673.6
1984	43.0	247.4	11.32	10.9	32.9	2.0	1.3	6.8	40.9	1,385.3
1985	38.3	497.2	13.76	10.9	33.7	1.9	1.3	6.7	39.7	1,423.5
1986	38.6	552.1	0.97	27.0	30.0	1.4	0.9	5.4	29.6	4,024.0
1987	40.4	2,152.0	49.03	22.6	31.2	1.2	0.8	4.6	34.0	5,110.8
1988	42.4	2,757.4	33.39	30.0	32.2	1.1	1.4	4.3	27.6	6,236.7
1989	43.8	2,954.4	54.78	5.8	49.6	1.2	1.5	4.4	32.1	4,692.7
1990	40.3	3,259.6	15.94	10.5	60.7	3.2	2.3	7.1	16.4	10,450.2
1991	42.0	4,677.2	24.31	-6.6	71.0	3.1	3.0	12.0	11.9	5,610.2
1992	38.1	4,228.3	69.69	31.3	47.5	1.9	1.9	6.9	7.2	11,730.7
1993	37.2	4,986.4	26.79	41.5	19.3	1.8	0.8	0.1	2.6	42,624.9
1994	30.4	5,349.0	31.25	37.7	19.9	1.7	0.6	2.4	3.2	7,828.5
1995	29.29	20,102.8	116.46	47.5	23.2	1.0	0.3	1.3	2.5	55,999.3
1996	32.46	20.059.5	42.79	46.3	24.3	1.0	0.4	1.5	3.0	5,672.9
1997	30.40	25,629.3	4.09	46.2	24.4	0.9	0.5	1.5	2.3	10,004.0
1998	32.40	31,222.3	3.48	39.3	22.6	0.8	0.5	1.0	6.9	32,434.5
1999	34.40	19,493.0	2.80	38.2	23.5	0.8	0.5	2.6	7.1	4,035.5
2000	36.1	24,822.9	3.80	38.5	23.7	0.8	0.5	2.6	7.1	16,453.6
2001	42.7	28,018.6	4.60	38.0	23.5	0.8	0.6	2.5	7.5	4,937.0
2002	54.9	95,046.1	3.5	37.0	24.0	0.7	1.0	2.6	7.4	8,988.5
2003	56.5	94,092.5	10.20	34.6	25.6	0.7	1.6	2.6	8.1	13,531.2
2004	55.7	113.3	7.10	38.0	26.5	0.7	1.8	2.5	9.9	20,064.4
2005	54.8	106.0	6.20	4.05	0.01	4.6	21.3	n/a	23.0	26,083.7
2006	53.3	133.6	6.90	0.21	34.5	0.20	1.35	n/a	1.8	616,290.17
2007	53.38	199.3	5.30	0.13	30.4	0.18	1.5	n/a	1.8	721,700.02
2008	54.67	252.9	6.40	0.09	15.9	0.20	0.8	n/a	1.4	978,036.50
2009	55.52	296.7	7.00	0.07	13.5	0.98	1.03	n/a	1.25	1,28,824.06
2010	56.22	406.2	7.9	0.10	19.9	1.61	1.47	n/a	1.97	916,679.7
2011	n/a	499.5	6.8	0.10	13.6	1.13	0.98	n/a	1.36	1,371,646.51
2012	n/a	576.1	6.5	0.83	16.8	1.41	1.3	n/a	1.7	1,122,565.5
2013	n/a	708.9	n/a	0.11	22.8	1.8	1.7	n/a	2.2	882,273.14

Source: CBN Statistical Bulletin of various years, up to 2013.

b) Data Analysis

Between the years 1970 and 1974, the highest inflow of foreign direct investment (fdi) to Nigeria was in the mining and quarrying sector as at least fifty three percent (53%) of the inflows were directed to this sector. In other words, out of the ₦2, 258.3billion inflows of fdi for that year, ₦1,197.80billion was directed at only the mining and quarrying sector. This was followed by the manufacturing and processing sector that attracted an average of 23.52%, that is ₦531.15billion only. An average of .0084% or ₦18.97billion was spent in agriculture, forestry and fisheries. In the transport and communication sector, .01% or ₦22.58billion of foreign direct investment was attracted to this sector. A total of 0.022% or ₦49.23billion was used in building and construction while 0.167% or ₦378.04billion was directed at trading and business. The balance of ₦60.53billion was used in miscellaneous services and other sector. Within this period, there was no record of capacity utilisation rate, export volume ranged between ₦364billion and ₦2006.0billion while GDPr moved from between 8.45% and 60%.

From the year 1975 to 1979, the distribution of foreign direct investment to these sectors totalled ₦3, 364.5billion. Out of this amount, an average of 0.3076% or ₦1, 035billion was directed to the mining and quarrying sector. 0.32% or ₦1, 090.8billion went to the manufacturing and processing sector while agriculture, forestry and fisheries made use of only 0.026% or ₦86.13billion. Within the same period, transport and communication sector benefitted to the tune of 0.013% or₦45.08billion, building and construction sectors attracted 0.064% or ₦215.33billion while trading and business made use of 0.2036% or ₦685.01billion and

the balance of ₦207.15billion directed to the provision of miscellaneous services. This period, capacity utilisation rate raged between 71.8% and 78.7%, export volume rose from #349.8billion to 670.0billion while growth rate of gross domestic product fluctuated between 7.32% and 24.66%.

The year 1980 to 1984 witnessed a significant reduction in the inflow of foreign direct investment to the mining and quarrying sector as a total of ₦6, 623.6billion foreign direct investment flowed into Nigeria. Out of this, the mining and quarrying sectors used an average of 0.141% or ₦931.3billion while manufacturing and processing used 0.472% or ₦3, 123.69billion. The third beneficiary sector was trading and business attracting an average of 0.292% or ₦1, 936.74billion foreign direct investment. This was followed by building and construction sectors attracting an average of 0.079% or ₦520.61billion of foreign direct investment. Agriculture, forestry and fisheries attracted only 0.026% or ₦169.56billion foreign direct investment while transport and communication attracted an average of 0.0148% or only ₦98.03billion fdi in this period. Here, capacity reduced from 73.1% to 43%, export volume reduced from₦553.7billion to₦247.4billion while GDPr fluctuated between 2.36% and 40.29%.

From the years 1985 to 1989, significant increase in foreign direct investment inflows was witnessed in the manufacturing and processing sector of the Nigerian economy. This was evident in the fact that out of ₦21,487.7billion inflows of foreign direct investment to Nigeria within this period, manufacturing and processing sectors attracted an average of 0.3534% or ₦7,593.75billion of it, trading and business attracted an average of 0.326% or ₦7,004.99billion, mining and quarrying attracted an average of 0.1386% or ₦2,9978.20billion, building and construction attracted an average of 0.051% or ₦1,091.58billion foreign direct investment, agriculture, forestry and fisheries attracted only 0.0136% or ₦292.233billion while in transport and communication, only 0,0118% or ₦253.55billion of foreign direct invest was directed to this sector. Within this period, capacity utilisation rate rose from 38.3% to 43.8%, export volume increased from ₦247, 4billion to ₦2,954.4 billion while GDPr fluctuated between 0.97% to 54%. However, as observed by Imoudu, 2012:125, this work also observed that despite the recent increase and improvement in the communication sector in Nigeria today, this is yet to be translated to other sectors of Nigerian economy. The forgone analyses supports the views of Imoudu, 2012:125 again which states that inflows of foreign direct investment in Nigeria are concentrated at the mining, quarrying, manufacturing, processing and partially on trading and business but these are not linked to or directed to the domestic market which would have improved the standard of living and lifestyle of the populace. The remaining part (₦2, 273.397billion) of the fdi for that period was also directed at miscellaneous services.

The data shows that between the years 1990 and 1994, the direction of the inflows of foreign direct investment to Nigeria had significantly shifted from mining and quarrying to manufacturing and processing and marginally to trading and business. Within this period, a total of ₦78, 244.5billion of foreign direct investment inflows was recorded in the real sector in Nigeria. Out of this, the manufacturing and processing sectors attracted an average of 0.437% or ₦34, 177.20billion, trading and business attracted 0.083% or ₦6, 462.996billion, mining and quarrying attracted an average of 0.23% or ₦17, 824.1billion, building and construction used an average of 0.057% of ₦4, 459.94billion, agriculture, forestry and fisheries attracted an average of 2.34% or ₦183,092.13billion while transport and communication attracted only 0.0234% or ₦1,830.92billion for the period. Also, capacity utilisation rate reduced from 40.5% to 30.4%, export volume increased from ₦3, 259.6billion to ₦5, 349.0billion while GDPr dangled from 69.69% to 31.25%.

From 1995 to 2004, concentration of fdi inflows was directed at the mining & quarrying, followed by manufacturing and processing and then trading and business. Agriculture, forestry and fisheries, transport and communication attracted very insignificant inflows of foreign direct investment. Out of a total of ₦172,120.9billion foreign direct investment inflows, an average of 0.404% or ₦69,467.1billion was directed to the mining and quarrying sector, 0.2413% or ₦41,53.56billion was directed at manufacturing and processing while trading and business attracted only 0.0618% or ₦10,637.1billion. In this period, the growth rate of gross domestic product reduced from 116.46% to 7.10%, export volume reduced from ₦29, 102.8billion to ₦113.3billion while capacity utilisation rate increased from 29.29% to 55.7%.

From the year 2005 to 2013, the inflow of foreign direct investment concentrated in the manufacturing and processing subsectors with highly fluctuating percentages, trading and business and transport and communication. Other subsectors witnessed very minute inflows. Of the total of ₦7, 923,099.3billion inflows of foreign direct investment, manufacturing and processing enjoyed an average of 2.30% or ₦18,236,961.68billion, trading and business attracted an average of 4.05% or ₦32, 114.963billion while transport and communication utilized 3.492% or ₦27, 669.22billion. During this time, growth in the economic variables were very slow as capacity utilisation rate rose from 54.8% to 56.22%, export volume, rose from ₦106.0billion to ₦708.9billion and growth rate of gross domestic product, from 6.20% to 6.5% respectively.

c) Hypothesis Testing

This hypothesis sought to establish the relationship that exist among the inflows of foreign direct investment (fdi)to the earlier mentioned subsectors and capacity utilization rate in Nigeria from 1970 to 2013. The regression equation was given as:

$$Cut = a_o + b_1FDI_{mq} + b_2FDI_{mp} + b_3FDI_{af} + b_4FDI_{TC} + b_5FDI_{BC} + b_6FDI_{TB} + e$$

The regression result is stated below:

$$Cut = 4.272 + .195FDI_{mq} - .467FDI_{mp} + .137FDI_{af} + .427FDI_{tc} + .081FDI_{bc} + .147FDI_{tb} + e$$

t values = (2.772) (1.351) (-1.338) (1.215) (2.763) (0.949) (1.618)

Adj R = 43.7%, R^2 = 55.8%, F_{cal} = 4.627, F_{tab} = 3.76, $_{tab}$ = 2.048

From the regression result above, it was observed that within the period under review, average capacity utilization rate stood at 4.272%. Considering the independent variables, a one naira increase in the inflow of fdi to mining/quarrying subsector increases capacity utilization by ₦195million, as a one naira increase in the flow of fdi to manufacturing/processing reduces capacity utilization by – ₦467 million. A one naira increase in the flow of fdi to agriculture and forestry increases capacity utilization by ₦137million, a one naira increase in the flow of fdi to transport/communication, building/construction and trading/business increase capacity utilization by ₦427million, ₦081million and N147million respectively.

R^2 of 55.8% means that the inflows of fdi to these subsectors can only explain 55.8% of the variations in capacity utilization. The remaining 44.2% are explained by other variables not included in the model. Comparing the t values of the independent variables, only inflows of fdi to transport and communication was statistically significant as its t_{cal} values of 2.762 was higher than the t_{tab} of 2.048. Since F_{cal} of 4.627 is higher than F_{tab} of 3.76, we reject the null hypothesis and accept the alternative hypothesis. Inother words, a significant relationship exist between the inflows of foreign direct investment to mining/ quarrying, manufacturing/processing, agriculture/ forestry, transport/communication, building/ construction, trading/business and capacity utilization rate in Nigeria.

The second hypothesis examined the relationship that exist among the inflows of fdi to mining/quarrying, manufacturing/processing, agriculture/forestry,transport/communication,building/construction,trading/ business and export volume in Nigeria from 1970 to 2013.

The regression equation was given as:

$$ExV = a_o + b_1FDI_{mq} + b_2FDI_{mp} + b_3FDI_{af} + b_4FDI_{TC} + b_5FDI_{BC} + b_6FDI_{TB} + e$$

The regression result is as presented below

$$ExV = 11.862 - 1.157FDI_{mq} + 1.462FDI_{mp} - 1.622FDI_{af} - .823FDI_{TC} + 262FDI_{bc} - 2.022FDI_{tb} + e$$

(0.719)

t values = (1.665) (-1.762) (0.899) (-2.935) (-1.109) (0.663) (-4.924)

Adj R = 57.8%, R^2 = 65.4%, F_{cal} = 8.521, F_{tab} = 3.56, t_{tab} = 1.960

Based on the regression result above, average export volume in Nigeria between the years 1970 and 2013 stood at ₦11.862billion. A one naira increase in the flow of fdi to mining/quarrying reduced export volume by -₦1.157billion while the flow to manufacturing/processing increased the export volume by ₦1.462billion. The flow to agriculture and forestry reduced export volume by ₦1.622billion. In other words, inflow of fdi to these subsectors are minute, thus very little or nothing from the subsectors have been exported. The same thing is applicable to transport and communication and trading and business. Inflows of fdi into these subsectors are minute, thus their contribution to export volume is negative. In other words, a one naira increase in the flow of fdi to these subsectors reduced export volume by ₦823billion and – ₦2.022billion respectively. However, the flow of fdi to building and construction increases export volume by ₦262billion.

However, the inflows of fdi into these subsectors have been able to explain 65.4% of variations in export volume in Nigeria as indicated by R^2. The remaining 34.6% of variations in export volume are explained by variables not included in the model. None of the independent variables had significant impact on export volume as their statistical values were below the critical value of t (tab) of 1.960. With f_{cal} of 8.521 higher than f_{tab} of 3.56, we reject the null hypothesis and accept the alternative hypothesis which states that a significant relationship exist between the inflows of foreign direct investment to mining & quarrying, manufacturing & processing, agriculture and fisheries, transport & communication, building and construction, trading & business and export volume in Nigeria. The third hypothesis sought to establish the relationship that exist among the inflows of fdi to mining & quarrying, manufacturing & processing, agriculture & fisheries,

transport & communication, trading & business and the growth rate of gross domestic product (gdp_r). The regression is stated as follows:

$$Gdpr = a_o + b_1FDI_{mq} + 2FDI_{mp} + b_3FDI_{af} + b_4FDI_{tc} + b_5FDI_{bc} + b_6FDI_{tb}$$

The regression result is as shown below:

$$Gdpr = 0.549 + .022FDI_{mq} + .044FDI_{mp} + .234FDI_{af} - .011FDI_{tc} - .141FDI_{bc} + .020FDI_{tb} + e$$

t values = (0.719) (2.246) (1.838) (0.883) (-0.144) -1.038) (1.034)

$$Adj\ R^2 = .058,\ R^2 = .196 = 19.6\%,\ f_{cal} = 1.424,\ f_{tab} = 1.960.$$

From the regression result, a one naira increase in the inflow of fdi to mining & quarrying increases the growth rate of gross domestic product by ₦.022billion naira, fdi inflow to manufacturing & processing increases gdpr by ₦.044billion, that of agriculture& fisheries increases gdpr by ₦.234billion and fdi inflow to trading& business recorded improvements in air travels, rail transportation, MTN, Airtel, Glo, Etisalat and Visafone communication businesses to the tune of ₦0.020 billion An inverse relationship also exists among the inflows of fdi to transport & communication, building & construction and growth rate of gross domestic product. The implication here is that the inflows were not directed at improving the growth rate of gross domestic product (gdpr) in the economy (i.e. the domestic market). In any case, inflows of fdi to mining & quarrying, manufacturing & processing, agriculture & forestry, trading & business boosted the gdpr because they were positively and directly related. Only the inflow of fdi to mining & quarrying impacted significantly ongdpr.

V. Summary, Recommendations and Conclusion

This study is focused on the distribution effects of fdi on the performance of the Nigerian economy with emphasis on the real sector. Literature had been reviewed after the introduction and research, methodology presented. From the analysis and discoveries made, the following recommendations were made that:

i. The inflows of fdi to the real subsectors of the economy should be directed at productive purposes.
ii. When productive machineries are efficiently utilized, end products should be channelled to end users so that the impact could be felt in the entire economy. Otherwise, production capacity would be high, higher volumes of export recorded and high gross domestic product recorded, but the poor become poorer and poorer on daily basis.
iii. Inflows of fdi to manufacturing & processing should be encouraged as this would lead to efficient and effective utilization of productive machineries and subsequent rise in goods and services produced for domestic and international consumptions.
iv. Also, very little fdi are directed at agriculture & fishery, trading business, that of mining & quarrying are diminishing, that is the reason for the inverse relationship among them and export volume. Foreign direct investors should be encouraged to explore these areas because for instance, Nigeria is blessed with substantial mineral ores and agricultural products apart from crude products.
v. Foreign investment in transport & communication should be directed at productive purposes to boost the growth rate of gross domestic products, in Nigeria.
vi. Since mining & quarrying are beginning to witness diminishing returns especially on crude products, fdi should be redirected to building & construction, transport & communication, agriculture & fisheries, trading & business among other less attractive subsectors.

Foreign investments have promoted the growth and development of many recipient economies that have put such investment to efficient and productive purpose. If the foreign direct investment is not directed at sectors that are in need and even when directed, the end products are not put to productive usage or directed at end users or domestic market, the impact of such investments would not be felt in the economy. But if recipient economies direct fdi into efficient and effective productive usage, the growth and development of the real sector and the economy at large would be sporadic.

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Appendix A

Regression Result for FDI inflows and Capacity Utilization rate in Nigeria, 1970-2013 Variables Entered/Removed

Model	Variables	Variables	Method
1	LogFDItb, LogFDIaf, LogFDItc, LogFDIbc, LogFDImo, LogFDImp[a]		Enter

a. *All Requested variables entered.*

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	.747[a]	.558	.437	.24414

a. Predictors: (Constant), LogFDItb, LogFDIaf, LogFDItcLogFDIbc, LogFDImo, LogFDImp

ANOVA[b]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.655	6	.276	4.627	.003[a]
Residual	1.311	22	.060		
Total	2.966	28			

a. *Predictors: (constant), LogFDItb, LogFDIaf, LogFDItc, LogFDIbc, LogFDImo, LogFDImp*

b. *Dependent Variable: LogCur*

Coefficients[a]

Model	Unstandardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	4.272	1.541		2.772	011
LogFDImq	.195	.145	.378	1.351	.190
LogFDImp	-.467	.349	.449	-1.338	.195
LogFDIaf	.137	.113	.243	1.215	.237
LogFDItc	.425	.154	.674	2.763	.011
LogFDIbc	.081	.086	.229	.949	.353
LogFDIt	.147	.091	.407	1.618	.120

a. *Dependent Variable: LogCur*

Appendix B

Regression Result for FDI inflows and Exports Volumes in Nigeria, 1970 – 2013 Variables Entered/Removed

Model	Variables	Variables	Method
1	LogFDItb, LogFDIaf, LogFDItc, LogFDIbc, LogFDImo, LogFDImp[a]		Enter

a. *All Requested variables entered.*

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	.809[a]	.654	.578	1.27865

Predictors: (Constant), LogFDItb, LogFDIaf, LogFDItcLogFDIbc, LogFDImo, LogFDImp

ANOVA[b]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	83.587	6	13.931	8.521	.000[a]
Residual	44.143	27	1.635		
Total	127.730	33			

a. *Predictors: (constant), LogFDItb, LogFDIaf, LogFDItc, LogFDIbc, LogFDImo, LogFDImp*

b. *Dependent Variable: LogExV*

Coefficients[a]

Model	Unstandardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	11.862	7.126		1.665	.108
LogFDImq	-1.157	.657	-.379	-1.762	.089
LogFDImp	1.462	1.627	.227	.899	.377
LogFDIaf	-1.622	.553	-.494	-.2.935	.007
LogFDItc	-.823	.742	-.204	-1.109	.277
LogFDIbc	.262	.395	.117	.663	.513
LogFDIt	-2.022	.411	.861	-4.924	.000

a. *Dependent Variable: LogExV*

Appendix C

Regression Result for FDI inflows and Growth rate of Gross Domestic Product (GDPr) in Nigeria, 1970 – 2013

Variables Entered/Removed

Model	Variables	Variables	Method
1	LogFDItb, LogFDIaf, LogFDItc, LogFDIbc[a], LogFDImo, LogFDImp[a]		Enter

a. *All Requested variables entered.*

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	.443[a]	.196	.058	1.00702

a. *Predictors: (Constant), FDItb, FDIaf, FDItcFDIbc, FDImo, FDImp*

ANOVA[b]

Model	Sum of Squares	Df	Mean Square	F	Sig.
1. Regression	8.665	6	1.444	1.424	.233[a]
Residual	35.493	35	1.014		
Total	44.159	41			

a. *Predictors: (constant), FDItb, FDIaf, FDItc, FDIbc, FDImo, FDImp*

b. *Dependent Variable: LogGDPr*

Coefficients[a]

Model	Unstandardized Coefficient		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	.549	.764		.719	.477
FDImq	.022	.010	.403	2.246	.031
FDImp	.044	.024	.549	1.838	.075
FDIaf	.234	.265	.252	.883	.383
FDItc	-.011	.078	-.034	-.144	.886
FDIbc	-.141	.136	-.422	-.1.038	.307
FDIt	.020	.019	.221	1.034	.308

a. *Dependent Variable: LogGDPr*