

An Analysis of the Trends of Foreign Direct Investment Inflows in the Nigerian Construction Sector

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Abstract

This study performed an analysis on the inflow trends of Foreign Direct Investment investigated in the Nigerian construction industry with a view to studying the pattern of flow and assessing the effect of increased flow of FDI on the industry. Annualized time series archival data from the central bank of Nigeria and the National Bureau of Statistics served as the data source. The data collected was analyzed using simple percentages, regression analysis, Duncan Multiple Range Test and Granger Test, while the hypotheses were tested with the aid of the f-test. Results revealed that there is poor flow (or an insignificant flow) of FDI into construction sector when compared to other sectors of the economy. According to Granger sense, the Granger Causality is bi-directional, suggesting that FDI is an important prerequisite and catalyst for sustainable growth and development in construction and on the other hand, the level of infrastructural facilities available on ground is a prerequisite for attracting foreign direct investors. A high positive correlation or significant relationship between FDI and the construction sector further corroborates this result. Based on the results and inferences, it was recommended that aside massive investment in infrastructure, the Nigerian government should also create the enabling environment, by devising policies, enforcing existing laws that will portray the country in a positive light, encourage foreign investors and ultimately attract the much needed FDI to boost the nation's economic status.

Keywords: Analysis, Trends, Foreign Direct Investment, Construction sector, Nigeria

1. Introduction

The construction sector occupies a focal position in the economy of any nation because it is an important contributor to the process of development (Aje, 2008). In the conduct of economic activities, the construction sector is always used by government as the stimulus for the buoyancy of the economy (Akindoyemi, 2011). The construction industry is therefore a critical factor or variable of progress in the drive for economic advancement of nations, especially Less Developed Countries (LDCs) such as Nigeria. Nigeria no doubt requires substantial amounts of foreign investment in the construction sector to speed up her economic growth most especially in the area of building and construction infrastructure/facilities investment and to promote development, which will in turn boost GDP.

The significance of foreign capital for the provision of infrastructure development for both macroeconomic and microeconomic activities of the society, cannot therefore, be overemphasized.

Toderò (2001) described infrastructure as the pillar of growth in Africa and it is generally inadequate and of poor quality when compared to developed nations of the world. Foreign capital has long been accepted as an inevitable input in the development process, given the fact that no country is an “island” with self sufficiency on her in terms of needed resources, to stimulate economic growth and development (Orji, 2004). This is a continuation from experience of some countries in South East Asia notably, Singapore, South Korea, Taiwan and Hong Kong (Ayo, 2008).

The Organization for Economic Co-operation and Development (OECD), (2002) succinctly described Foreign direct investment (FDI) as follows: an integral part of the international economic system and a major catalyst for development or the flow of capital and human resource from one country to another. Foreign direct investment (FDI) is thus part of the economic system that stimulates economic growth including infrastructural development. In view of the role of foreign capital inflows as investment mechanism for economic growth in most countries, it is a strong indicator of the economic strength of Nations.

National policies and the international industrial architecture obviously play a significant role in attracting FDI to most countries and stimulating growth. For instance, Nigeria’s vision 20: 2020 sets strategies and targets in every sector of the economy that are expected to ensure that the country joins the group of twenty most developed economies in the next ten years. Kolapo (2010) asserted that it is unfortunate that the palpable bottleneck in the way of sustainable growth in Nigeria are only a clear manifestation of five decades of dishonest and egocentric governance. Some notorious past leaders had unwittingly given themselves away as incompetent by saying that Nigeria’s problems defiled all logic. Discerning Nigerians only need to study the development strategies of hitherto neglected African countries to unveil real economic pests. In his view too, there is also lack of effective interplay between leaders of African countries to provide the support institutions and the dynamic domestic entrepreneurial class which is a key success factor for attracting foreign direct investment.

Another major hindrance to FDI inflow in the continent is the fact that a number of investors are not aware of the strides taken by African countries towards development, as many of them limit their focus to political stability, corruption and weak infrastructure (Eboh, 2011). It has been observed that the infrastructural base of the Nigerian economy has remained weak in the past decades. This is because of the low gross domestic savings of Less Developed Countries (LDCs) such as Nigeria, which is a major limitation in financing infrastructural development (Orji, 2004), hence the need for foreign direct investment (FDI) to maximize advantages such as managerial skills, marketing connection, technical knowledge, technological transfer, training of local work force and movement of hard currency into the country.

According to Mogbo (2004) and Egolum (2011) past governments have made attempt in solving the problem by expressing determination to improve basic infrastructures as a means of promoting economic development through soft loans and grants from Multilateral Financial Institutions (MFIs) such as International Monetary Fund (IMF), World Bank and other lending nations. These loans and grants are normally characterized with conditionality’s such as budgets cuts in the social sectors; subsidy removal, leading to exchange rate crisis, massive devaluation of local currency and terms of trade determination, foreign content and expatriate usage, unemployment and underemployment (Egolum, 2011).

A number of studies have been carried out on FDI and growth in Nigeria with varying results and submissions. However, these studies did not establish that most of the FDI was concentrated in the extractive industry. In other words, it could be said that these works assessed the impact of investment on the extractive industry (oil and natural resources) on Nigeria’s economic growth and not the construction industry.

Based on afore mentioned facts and issues, it becomes expedient to study and investigate the pattern or impact or adequacy of FDI inflow and its effects on the Nigerian construction industry. It is thus expected that this study, while bringing to the fore, the extent of FDI impact or effect on the construction sector, it will also show the significant response of the Nigerian construction sector to FDI inflow in Nigeria. The study will also spur government agencies/departments involved in foreign investment to identify and tackle the hindrances of FDI flows with a view to enhancing the inflow of FDI in the construction sector; since, as established, the sector is a potent motivator of the national economy, providing the driving force necessary for either sustaining a buoyant economy or reviving a depressed one. Finally, the study will enhance the competitiveness and survival of Nigerian construction industry in the global market and ultimately improve the contribution of the construction sector to the national economy.

2. Aim and Objectives of the Study

The aim of the study is to analyze the trends of FDI inflows in the Nigerian construction industry with a view to studying the pattern of flow and assessing the resultant effect or impact of increased flow of FDI on construction projects in Nigeria. The following objectives were the premise for achieving this aim:

- i. To study and assess the flow of foreign direct investment into the construction sector in Nigeria.
- ii. To examine the effect of flow of foreign direct investment on the Nigerian construction sector.

3. Hypotheses

The following hypotheses are postulated for the study:

- (i) There is no significant flow of foreign direct investment into the construction sector in Nigeria.
- (ii) There is no significant effect of foreign direct investment on the construction sector in Nigeria.

4. Scope of the Study

To best explain the Nigerian experience in Foreign Direct Investment (FDI), the study considered two different dispensations or eras: Pre-1999 and Post-1999. The scope of the archival data for this research is within the span of 1989 – 2008, obtained from Central Bank of Nigeria (CBN) Statistical Bulletin 2010. This is because as at December, 2010, published Statistical Bulletin shows that data for 2009 is still reflected as provisional. The study time span is 20years, which is far above the typical norm of 10 to 15 years for time series study (Ogbonmwan, 2006). The choice of 1999 as a central or focal era for this study is due to the country's restoration to civil and democratic rule after about Sixteen (16) years of military reign on May 29, 1999.

5. Relevance of the Construction Industry and the Nigerian Scenario

Some refer to it as the built environment industry while many others call it the construction industry (Akindoyeni, 2011). The construction industry has the responsibility for physical infrastructure development which is required by all sectors of the economy. It is therefore, a critical factor or variable of progress in the drive for economic advancement of nations, especially Less Developed Countries (LDCs) such as Nigeria (Ekpo, 2010).

The industry has a 3% contribution to the national Gross Domestic Product (GDP), compared to manufacturing of 4% (Anyanwu, 2007). According to Dutse (2008), in the developed world, the construction industry is the highest employer of labour, but in a developing country such as Nigeria, it is expected to be the second highest employer of labour after the agriculture industry. Akindoyeni (2011) also asserted that in the conduct of economic activities, construction industry is always used by government as the stimulus for the buoyancy of the economy

6. Overview of Infrastructural Development Issues in Nigeria

Infrastructure development has been identified as critical to the achievement of national development goals (Efem, 2009). In recognition of this, the Nigerian government is proposing to source for resources worth Nine Billion Dollars (\$9b) annually into the development of infrastructure. World Bank (2010) opines that U.S.\$31Billion is needed by Africa from foreign investors to develop infrastructure needed for development. To corroborate this view, Kolapo (2010) asserted that infrastructural facilities is the pillar of development, the government should therefore evolve a policy to induce foreign investment into Nigeria's economy; because foreign investment is desperately needed for essential infrastructure.

Despite all lofty initiatives and programmes by government and private sector, actual physical achievements in infrastructural development in Nigeria still remain a mirage. A survey of households by World Bank (2010) revealed that:

- The vast majority of Nigerians have little access to basic public services.
- In urban areas, there is lack of pipe borne water, irregular electricity supply and lack of good roads.

According to Mogbo (2004), the infrastructure in Nigeria is generally inadequate and of poor quality when compared to Europe, North America and Japan. The infrastructural base of the Nigerian economy has remained weak in the past decades, and further characterized by uneven distribution, unreliability and decay, arising from several years of neglect. In 1999, Nigerian government responded to the problem by expressing determination to improve basic infrastructure as a means of promoting economic development (Orji, 2004).

A number of studies corroborate this. For instance, Power supply in the country has been grossly inadequate as only 30 percent of the population had access to electricity (Ekpo, 2010). World Bank (2010) assessment showed that more than one hundred million Nigerian's do not have access to electricity supply. Mustapha (2009) and Makunike (2008) also asserted that the state of transport infrastructure has been generally poor, as road, rail, air and water transport systems have for several years been characterized by deplorable conditions, such that most rural areas cannot link up with the rest of the country. In addition to this, communication infrastructure before now remained government monopoly, and the cost of providing services is one of the highest in the world, due to inefficiency. This has however changed with the influx of private communications investors.

Dutse (2008) opined that there is currently a serious need for a sustained planned approach towards the development of the nation's water resources. Despite the abundant latent water resources, about 30% of Nigerians have access to safe water. This problem can easily be traced to inadequate budgetary provision. Experts reckon that the country currently needs 16 million homes. In a report by Shelter Rights Initiative (SRI) submitted to the United Nations Committee on Economic, Social and Cultural Rights, there is need for the production of over 8 million housing units in Nigeria between now and year 2015 at a minimum rate of 800,000 units annually (Okomoh, 2004).

Manufacturing and processing facilities in the construction sector on the other hand, has been characterized by low capacity utilization that averaged 30 percent in the last decade. Low and declining contribution to national output that averaged 6 percent in 1997 – 1999 (Toderro, 2001). These features clearly identify Nigeria as a country characterized by the phenomenon of de-industrialization. According to Omagbeme (2010), despite the high level of investment in petroleum industry by government and private enterprises, its performance in the last eight years been unimpressive and characterized by product shortages occasioned mainly by communal strife, pipeline vandalization, and failure to carryout proper Turn-Around-Maintenance (TAM) of refineries and pipeline systems as and when due.

According to Oyinloye (2011) Nigeria's infrastructural deficit is estimated to be in excess of \$200billion (more than ₦30trillion). It is essential for infrastructural investors to access the nation's ₦2trillion plus pension fund pot. Therefore, it is no longer news that the extent of financing required to bridge the country's infrastructure deficit surpasses the supply of capital available from government.

7. Foreign Direct Investment (FDI)

The United Nations defined foreign direct investment (FDI) as investment in enterprise located in one country but "effectively controlled" by residents of another country (UNCTAD, 2009). Foreign direct investment is the distinctive feature of multinational enterprise hence; a theory of foreign direct investment is also a theory of the multinational enterprise as an actor in the world economy (Ekpo, 2010). Based on this theory, foreign direct investment is not simply (or even primarily) an international transfer of capital but rather, the extension of an enterprise from its home country into foreign host country. The extension of enterprise involves flows of capital, technology, and entrepreneurial skills and, in more recent cases, management practices to the host economy, where they are combined with the local factors in the production of goods and services (Chenery & Stout, 2006). In total, net direct investment abroad by UK in 2008 was almost half the value recorded the previous year. The 2008 figure of £85.8 billion was £73.4 billion lower than the investment of £159.1 billion reported in 2007 although the value remains higher than in other recent years (£46.9 billion in 2006; £44.5 billion in 2005; £49.7 billion in 2004) (UNCTAD, 2009). Nigeria's share of FDI inflow to Africa averaged around 10%, from 24.19% in 1990 to a low level of 5.88% in 2001 up to 11.65% in 2002 (UNCTAD, 2009). It showed Nigeria as the continent's second top FDI recipient after Angola in 2001 and 2002 (Efem, 2009).

International capital flows which provide some of these infrastructure had recently been marked by a sharp expansion in net and gross capital flows and a substantial increase in the participation of foreign investors and Multilateral Financial Institutions (MFIs) in the financial markets of developing countries (World Bank, 2010). The MFIs conditionalities attached to such assistance often cut budgets in the social sectors, thus accentuating poverty, leading to exchange rate crisis, massive devaluation of local currency and terms of trade determination (Toderro, 2001).

Since domestic savings cannot solely finance a country's infrastructure, there is therefore, the need for foreign direct investment (FDI) and foreign portfolio investment (FPI) because of these advantages; managerial skills, marketing connection, technical knowledge, training of local work force, transmits hard currency into the country, it carries with it financial resources, do not create debts to the government.

Nigerian needs substantial amounts of foreign investment to speed up her economy growth most especially in the area of building and construction investment and to promote infrastructural development. Foreign direct investment is known for improving economic efficiency through gains resulting from increases in international trade, international competitiveness and improved access to foreign markets for domestic products and training of labour force. Considering the fact that domestic capital formation (i.e. Domestic Investment Resources (DIR) is still at its infancy and is relatively low in developing nations, like Nigeria (Wakil, 2004).

Foreign direct investment would emerge to be the alternative for capital formation for construction investment purposes, but due to the awfully meager export potentials, franchising is about the most practical way of attracting foreign investment in order to diversify the economy, which bring technology, ideas and access to industrial countries markets as well as hard currencies, reduces borrower's exposure to changes in foreign interest rates and encourages growth oriented economic liberalization. Urging the government to pay attention to the construction sector in order to attract the necessary huge amount of FDI into the sector, Nigeria needed large quantum of FDI and the country has the potential to even attract more in spite of her numerous challenges to finance developmental projects (Orji, 2004).

Records have it that many studies have been conducted in relation to the impact of foreign direct investment on various sectors of the economy in Nigeria with the exemption of construction sector. Communication, manufacturing, oil and gas, mining and quarry and power sector have now taken the centre stage of FDI inflow in Nigeria. Onwuemenyi (2008) conducted a study on the impact of FDI on lives of Nigerians. The negative impact of this is a neglect of a sector that is expected to be the second highest employer of labour after the agriculture industry in the developing world such as Nigeria (Dutse, 2008).

There have been a number of researches in this area but mainly in other parts of the world. These include the work of Fleshman (2009) who investigated the challenges of FDI in the construction sector in South Africa. The study conclusively identified six factors responsible for hindrances facing FDI in construction sector in South Africa as: discrimination, policy framework, market, cost consideration, corruption and insecurity of investment. Also, Topku (2010) conducted a study on an assessment of the response of construction sector to foreign direct investment in India. This was as a result of India Government acceded to a long pending demand and permitted 100 percent FDI in construction and development projects in year 2005. Jerome and Ogunkola (2004) assessed the magnitude, direction and prospects of FDI in Nigeria with emphasis on the prospects of FDI in Nigeria.

7.1 Foreign Direct Investment and the Enabling Laws

Orji (2004) and Wakil (2004) identified the principal laws regulating foreign direct investment in Nigeria among others include the Nigerian Investment and Promotion Commission Act. No. 16 of 1995, the Foreign Exchange (monitoring and miscellaneous provisions) Act No. 17 of 1995, The Investment and Securities Act of 1999.

7.2 Impact of FDI on Economic Growth and Development in Nigeria

Odozi (2003) observed the linkage effects of FDI on the Nigerian economy and submitted that they it has been inadequate. Oyinlola (2005) also asserted that there has being negative contributions of public investment to GDP growth in Nigeria. Adelegan (2008) further explored the seemingly unrelated regression model to examine the impact of FDI on economic growth in Nigeria and found out that FDI is pro-consumption and pro-import and negatively related to gross domestic investment.

The authors observed that, there is no reliable evidence that all the investment variables included in his analysis have any perceptible influence on economic growth. Akinlo (2004) found out that foreign capital has a small and not statistically significant effect on economic growth in Nigeria. Nigeria being a developing economy has not been different from other developing economies in using foreign direct investment (FDI) as a strategy for achieving economic growth and development. However, unlike countries like Malaysia, Nigeria in spite of its huge deposit of human, natural and material resources has failed to achieve rapid economic growth due to several factors, the principal of which is an unstable political environment occasioned by long periods of military rule.

Under the military rule, Nigeria witnessed a decline in the influx of foreign investments as a result of various economic sanctions imposed on the country by the international community. Oseghale and Amonkhienan (2008) opined that FDI is positively associated with GDP, concluding that greater inflow of FDI will spell a better economic performance for the country. Ariyo (2008) studied the investment trend and its impact on Nigeria's economic growth over the years. He found that only private domestic investment consistently contributed to raising GDP growth rates during the period considered (1970–1995).

A number of studies have been carried out on investment and growth in Nigeria with varying results and submissions Anyanwu (2007). Omagbeme (2010) further noted that there is a vast literature establishing the relationship between foreign direct investment (FDI) and economic growth especially in transitional societies, it implies an “array of investments made to acquire lasting interest in enterprises operating outside the economy of the investor”, that is, FDI is a form of lending or finance in the area of equity participation, which involves the transfer of resources, including, capital, technology, management and marketing expertise.

To examine the contributions of foreign capital to the prosperity or poverty of LDCs, Oyinlola (2005) conceptualized foreign capital to include foreign loans, direct foreign investments and export earnings. Furthermore, on the basis of time series data, Ekpo (2010) reports that political regime, real income per capita, rate of inflation, world interest rate, credit rating and debt service were the key factors explaining the variability of FDI into Nigeria. Akinlo (2004) also established that foreign capital has a small and not statistically significant effect on economic growth in Nigeria.

On firms' level productivity spillover, Anyanwu and Bamisile (2001) assessed the influence of FDI on firms' level productivity in Nigeria and reported a positive spillover of foreign firms on domestic firm's productivity. Much of the other empirical work on FDI in Nigeria centered on examination of its nature, determinants and potentials. For example, Odozi (2003) noted that foreign investment in Nigeria was made up of mostly “green-field” investment. Aremu (2003) categorized the various types of foreign investment in Nigeria into five: wholly foreign owned; joint ventures; special contract arrangements; technology management and marketing arrangements; and subcontract co-production and specialization (Efem, 2009).

In their study of the determinants of FDI in Nigeria, Anyanwu (2004) and Adelegan (2008) identified change in domestic investment, change in domestic output or market size, indigenization policy, and change in openness of the economy as major determinants of FDI. Abrogation of the indigenization policy in 1995 encouraged FDI inflow into Nigeria. Jerome and Ogunkola (2004) assessed the magnitude, direction and prospects of FDI in Nigeria and noted that while FDI regime in Nigeria was generally improving, some serious deficiencies remain. These deficiencies are mainly in the area of the corporate environment (such as corporate law, bankruptcy, labour law, etc.) and institutional uncertainty, as well as the rule of law. The establishment and the activities of the Economic and Financial Crimes Commission (EFCC), Independent Corrupt Practices Commission (ICPC), and the Nigerian Investment Promotion Commission (NIPC) are efforts to improve the corporate environment and uphold the rule of law.

8. Methodology

8.1. Data Collection

Evidence from literature served as the basis for data generation. Sequel to this, archival materials from the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS) – Annual Abstract of Statistics from 1989 to 2008 were used. This is because as at December, 2010, published Statistical Bulletin shows that data for 2009 is still reflected as provisional.

8.2. Data Presentation and Analysis

Data for the study were presented in tabulated format and graphs to ensure pictorial elucidation. The impact or extent of effect of FDI on construction sector was established with the aid of regression analysis. The archival data collected were analyzed electronically with the use of statistical software (Microsoft excel and SPSS Version 16.0). The Microsoft excel conducted the trend analysis and charts. The Duncan Multiple Range Test of the Post Hoc Analysis was used to compute and arrange mean foreign investment to the various sectors. Also, statistical software Gretl Version 9.1.1 was employed to perform the Granger Test. The reliability of the research data was conducted descriptively via SPSS Version 16.0 to determine the coefficient of the reliability of the data.

8.2.1 Regression Models

Yamane (1967) defined regression analysis as a technique that finds a formula or mathematical model which best describes a set of data collected. It may also be said to be a technique that will formulate a mathematical model which best describes the data collected. While simple linear regression models quantify the relationship between two variables, one shall be dependent while the other is independent variable(s). The factor whose value is being estimated (e.g. aggregate score) is referred to as the dependent variable and is denoted by Y (construction sector), the factor from which these estimate is made is called the independent variable and is denoted by X (foreign direct investment).

Granger Test

A question that frequently arises in time series analysis is whether or not one economic variable can help forecast another economic variable. For instance, it has been well documented that nearly all developed nations, there is a boost in construction sector as a result of large increases of the inflow of foreign direct investment (FDI) (Wikipedia, 2007). Does this imply that FDI cause construction activity or construction activities cause FDI or both? One way to address this question was proposed by Granger (1969) and popularized by Sims (1972). Testing causality in the Granger sense involves using F-Tests to test whether lagged information on a variable Y provides any statistically significant information about a variable X in the presence of lagged X. If not, then 'Y does not Granger-Cause X' (Eviews User's Guide, 1994-1997).

The data obtained from Table 3 were inputted into the computer spreadsheet Gretl Version 9.1.1 which is the statistical software employed to achieve the desired results based on the following econometric techniques:

i) *Test for Stationary (Unit Root Test)*:- This is the first procedure to test for unit root or to check if the data are stationary. A series is said to be stationary if it displays the tendency of returning to its mean value and fluctuates around it within a more-or-less constant range i.e. it has a finite variance (Harris, 1995). This step is very important because if non-stationary variables are not identified and used in the model, it will lead to a problem of spurious regression, whereby the results suggest that there are statistical relationships between the variables in the regression model when in fact all that is evident of contemporaneous correlation rather than meaningful causal relations (Granger & Newbold, 1995). The number of times the data have to be differenced to become stationary is in the order of integration. If a series is differenced 'd' times to become stationary, it is said to be integrated of order (d). Several tests are available for testing the order of integration. The study adopted the most common procedures of Dickey Fuller (DF) and Augmented Dickey Fuller (ADF) (Gujarati, 2003).

For theoretical and practical reasons, the Dickey-Fuller test is applied to regressions run in the following forms:

$$\Delta Y_t = \beta_1 + \delta Y_{t-1} + U_t \dots \dots \dots (1)$$

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + U_t \dots \dots \dots (2)$$

If the error term U_t is autocorrelated, one modifies (equation 3) as follows:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \alpha_i \sum \Delta Y_{t-i} + \varepsilon_t \dots \dots \dots (3)$$

The number of lagged difference terms to include is often determined empirically, the idea being to include enough terms so that the error term in (equation 3) is serially independent. The null hypothesis is still that $\delta = 0$ or $P = 1$, that is, a unit root exists in Y (i.e., Y is non-stationary). When the DF test is applied to models like (equation 3), it is called '**Augmented Dickey Fuller**' (ADF) test. The ADF test statistics has the same asymptotic distribution as the DF statistic, so the same critical values can be used.

ii) *Test for Cointegration*: The new cointegration technique is a breakthrough in the field of econometrics, and it changes the way that analysts handle and model time series data. Johansen Cointegration test is normally conducted to check if there was a long-run equilibrium relationship between these variables. If cointegration existed, then it could be inferred that there is a long-term equilibrium relationship between the variables and they all have a common trend. With the establishment of cointegration, this also ruled out the possibility of a fake relationship between the variables, and also it suggested that a causal relationship must exist in at least one direction (Sargan, 1984). Thus, if a series Y is 1(1) and another series X is also 1(1), they can be cointegrated. In general, if Y is 1(d) and X is also 1(d), where d is the same value, these two series can be cointegrated.

iii) *Test for Granger Causality*:- This is a term for a specific notion of causality in time-series analysis. A variable X Granger-Causes Y if Y can be better predicted using the history of Y alone. Conceptually, the idea has several components:

- **Temporality**: only past values of X can ‘cause’ Y.
- **Exogeneity**: Sims (1972) points out that a necessary condition for X to be exogenous of Y is that X fails to Granger-Cause Y.
- **Independence**: similarly, variables X and Y are only independent if both fail to Granger-Cause the other.

Sargan (1984) discussed two sets of tests for determining Granger Causality. There are ARIMA Models/Cross Correlation and the ‘Direct Granger Method’. For the purpose of this study, the Direct Granger Method was adopted. This involves regressing each variable on lagged values of itself and the other. The Granger Causality test performs pair-wise causality tests between (all possible) pairs of the listed series or a group of series. If cointegration exists between the two variables, i.e. they exhibit a long run equilibrium relationship, if they share a common trend; causality (in the Granger sense, not in the structural sense) must exist in at least one direction, either unidirectional or bi-directional (Granger & Newbold, 1995). With the establishment of cointegration, this also ruled out the possibility of a spurious relationship between the variables, and also it suggested that a causal relationship must exist in at least one direction. The hypotheses are normally rejected at 10%, 5% and 1% levels. However, TSP, SHAZAM, and several other softwares now publish these critical values.

9. Research Data

Tables 1 and 2 shows the sectoral composition of FDI and FDI inflow into construction sector in Nigeria respectively, from 1989-2008 in -N-Millions

Table 1: Sectoral composition of FDI in Nigeria, 1989–2008 (-N-Millions)

Year	Mining & Quarrying	Manufacturing & processing	Agriculture	Transport & communication	Building & Construction	Trading & Business	Miscellaneous
1989	636.7	5,406.4	134.8	158.2	481.8	3,497.2	584.7
1990	1,091.6	6,339.0	334.7	240.5	743.6	1,710.4	23.7
1991	810.0	8,692.4	382.8	373.2	1,471.6	1,452.2	682.0
1992	6,417.2	9,746.3	386.4	391.5	1,406.6	1,482.5	682.2
1993	27,686.9	13,885.1	1,214.9	426.4	71.2	1,864.5	22,638.0
1994	26,680.0	14,059.9	1,208.5	429.6	1,707.0	2,247.6	24,381.1
1995	56,747.3	27,668.8	1,209.0	374.8	1,553.0	2,990.7	28,848.0
1996	56,792.3	29,814.3	1,209.0	485.6	1,864.3	3,668.7	28,766.7
1997	59,221.4	31,297.2	1,209.0	672.6	1,259.8	3,625.7	31,046.2
1998	59,970.5	34,503.9	1,209.0	689.2	3,888.3	10,460.5	41,689.5
1999	58,855.4	36,282.1	1,209.0	820.3	3,995.9	10,927.3	42,100.4
2000	60,710.9	37,333.6	1,209.0	820.3	3,995.9	11,201.3	42,237.6
2001	61,611.9	37,779.6	1,209.0	955.3	4,211.9	12,016.3	43,657.6
2002	61,611.9	39,953.6	1,209.0	1,736.3	4,293.9	12,317.3	45,509.6
2003	61,809.1	45,719.4	1,209.0	2,890.5	4,545.8	14,457.3	49,056.5
2004	62,145.7	102,995.8	1,209.0	4,281.1	5,194.1	20,242.4	53,571.2
2005	80,789.4	133,894.5	1,209.0	5,565.4	6,713.3	26,315.1	69,642.6
2006	105,668.4	212,729.0	1,209.0	8,291.0	10,461.1	41,309.3	102,780.0
2007	132,085.5	219,512.0	1,329.9	10,758.2	47,505.7	47,505.7	129,277.1
2008	140,497.1	229,764.6	1,397.2	11,383.3	12,702.5	50,194.9	140,370.1

Source: CBN Statistical Bulletin (2010).

Table 2: FDI Inflow into Construction and GDP Sector of the Nigerian Economy (-N-MILLIONS)

Year	Total FDI inflows	FDI into the construction sector	Percentage contribution of FDI flow in construction	Total GDP	Contribution of construction to total GDP
1989	10,899.90	481.80	4.40	236,729.6	4,143.60
1990	10,436.10	743.60	7.10	267,550.00	4,350.80
1991	12,244.20	1,471.60	12.00	265,379.10	4,524.80
1992	20,512.70	1,406.60	6.90	271,365.50	4,701.30
1993	67,787.00	71.20	0.10	274,833.30	4,936.30
1994	70,713.70	1,707.00	2.40	274,450.60	5,084.40
1995	119,391.60	1,553.00	1.30	281,407.40	5,221.70
1996	122,600.90	1,864.30	1.50	293,745.40	5,284.30
1997	128,331.90	1,259.80	1.00	302,022.50	5,622.50
1998	152,410.90	3,888.30	2.60	310,890.10	5,959.90
1999	154,190.40	3,995.90	2.60	312,183.50	6,184.40
2000	157,508.60	3,995.90	2.50	329,178.70	6,433.80
2001	161,441.60	4,211.90	2.60	356,994.30	7,205.90
2002	166,631.60	4,293.90	2.60	433,203.50	7,518.90
2003	179,687.60	4,545.80	2.50	477,533.00	8,176.80
2004	249,639.30	5,194.10	2.10	527,576.00	7,622.50
2005	324,129.30	6,713.30	2.10	561,931.40	8,544.50
2006	482,447.80	10,461.10	2.20	595,821.60	9,654.80
2007	552,498.60	12,030.20	2.10	634,251.10	10,912.60
2008	586,309.70	12,702.50	2.20	674,889.00	12,337.50

Source: Central Bank of Nigeria (CBN) Statistical Bulletin (2010).

10. Results of Analysis and Discussions

10.1. Flow of Foreign Direct Investment into the Nigerian Construction Sector

To assess the flow of foreign direct investment into construction sector in Nigeria. An analysis of the extract from tables 1 and 2 yielded table 3, which also addressed the first objective of the study.

Table 3: Sectoral Analysis of FDI (-N- Million) in Nigeria from 1989 – 2008

Sectors	N	Minimum	Maximum	Mean
Manufacturing and Processing	20	5,406.4	229,764.6	63,868.9
Mining and Quarrying	20	-810.0	140,497.1	56,011.0
Agric, Forestry and Fishing	20	134.8	1,397.2	1,044.9
Transport and Communication	20	158.2	11,383.3	2,587.2
Building and Construction	20	71.2	12,702.5	4,129.6
Trading and Business Services	20	1,452.2	50,194.9	13,974.3
Miscellaneous	20	-23.7	140,370.1	44,873.7

N= Number of years span

Table 4: Duncan Multiple Range Test

Sectors	N	Mean
Manufacturing and Processing	20	63,868.9
Mining and Quarrying	20	56,011.0
Miscellaneous	20	44,873.7
Trading and Business Services	20	13,974.3
Building and Construction	20	4,129.6
Transport and Communication	20	2,587.2
Agric, Forestry and Fishing	20	1,044.9

Tables 3 and 4 indicate that the manufacturing and processing sector was the most highly favoured by the net flow of foreign investment. The minimum foreign investment of FDI to the manufacturing sector is N5,406.4, the maximum was N229,764.6 and the mean was N63,868.9. This result is in conformity with Fabayo (2003) that the manufacturing sector attracts more FDI than other sectors of the economy. The minimum foreign investment of FDI to the mining and quarrying sector is N-810.0, the maximum was N140,497.1 and the mean was N56,011.0. These statistics place the mining sector as the second highest beneficiary of the FDI within the period under review. Similarly, agricultural sector got the least average of FDI followed by the construction sector, while the manufacturing and processing sector topped the table among the sectors as shown. In other words, construction sector is the third least preferred of the sectors under review. The investments in these sectors: manufacturing and processing, mining and quarrying, and miscellaneous were significantly greater than that of the construction sector. The investment in trading and business services was also greater than that of the construction sector but insignificantly. The minimum foreign investment of FDI to construction sector is N71.2, the maximum was N12,702.5 and the mean was N4,129.6. Although, the investment in construction sector was greater than that of the transport and communication and the agriculture sector.

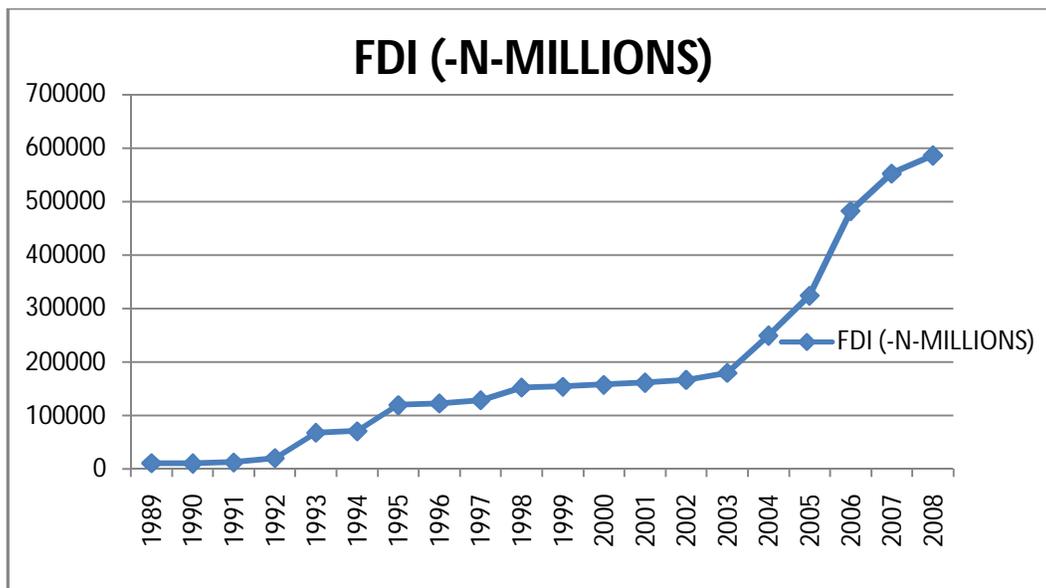


Figure 1: Chart of FDI Inflow of the Nigerian Economy from 1989 to 2008

Figure 1 reveals a sharp increase of the graph from 1999 to date. This is an indication that political stability is a major factor that determines the inflow of FDI in Nigeria. What this implies is that if the political atmosphere is sustained, there is high probability that FDI inflow multiplier effect would increase more than expected in the economy. Therefore, the stability of increase flow of FDI actually started 1999 to 2008.

FDI (-N-MILLIONS)

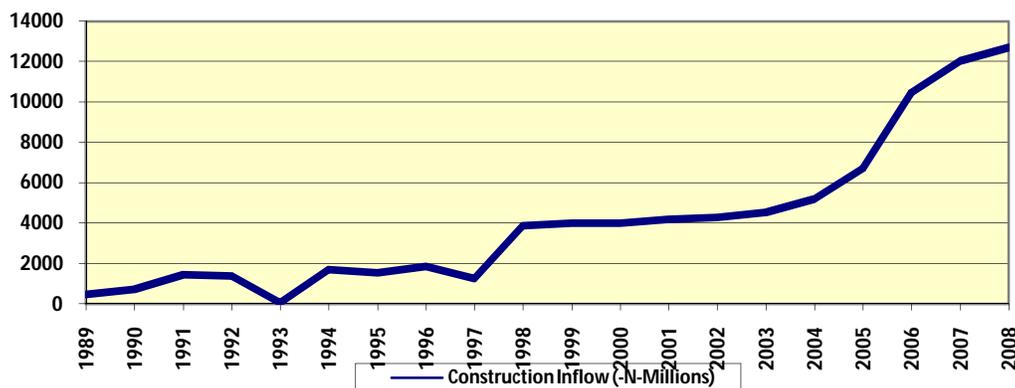


Figure 2: FDI inflow into the Nigerian Construction Sector

Figure 2 reveals a high increase of foreign direct investment into the construction sector from 1999 to 1998 date as shown in the graph. Even at that, the degree or rate of increase is not encouraging in view of the fact that for investors to be present, there should be evidence of infrastructural facilities which cannot be provided only by the government. This can be appreciated better if one compares what goes into the construction sector and other sectors like manufacturing, mining and miscellaneous sectors respectively. From figures 1 and 2, there seem to be a relationship because of the shape of both graphs. The implication of this is that, an increase inflow of FDI into the Nigerian economy will also lead to increase in the flow of FDI into the Nigerian construction sector directly or indirectly.

FDI (-N-MILLIONS)

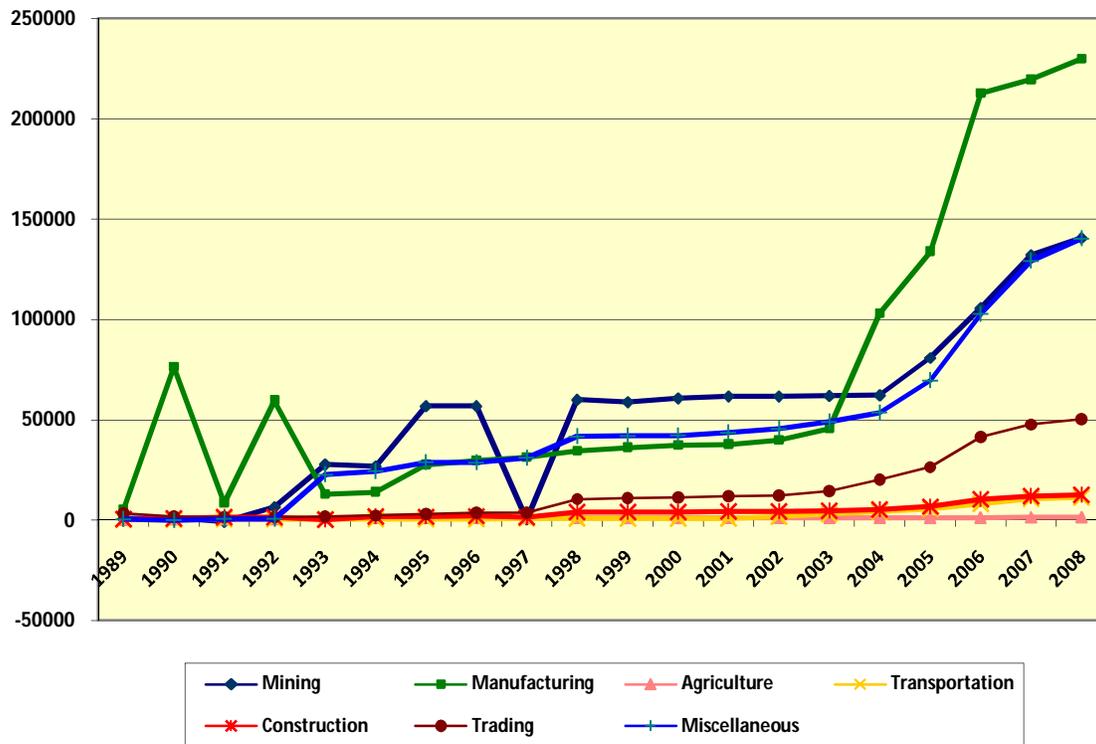


Figure 3: FDI Inflow into Major Sectors of the Nigerian Economy

Figure 3 reveals that three major sectors: manufacturing & processing, mining & quarrying and miscellaneous sectors have a significant smooth inflow as shown on the graph. This is not in favour of construction sector. For example, in 2005 mining sector received 80,789.4, manufacturing sector received N133,894.5 while construction sector received N6,713.38 all in million naira. Also, in 2008 mining sector received N140,497.1, manufacturing sector received N229,764.6 while construction sector received N12,702.5. From these two analyses, it is clear that FDI inflow into the construction sector is poor taking into consideration the uniqueness of the sector to other sectors of the economy.

10.2. Effect of Foreign Direct Investment on the Nigerian Construction Sector

This objective was achieved through the various stages of Granger Tests earlier explained from which findings about the will be drawn. The results are as indicated in table 5. The statistical software Gretl Version 9.1.1 was employed to analyze the data from Table 2. In order to achieve the Granger Test, the following tests were conducted:

Step 1: Testing for a unit root in construction sector

Interpretation:

At lag2 and lag 4, for T = 20 (span of time), the unit root in construction sector shows the trend

$$(1-L) y = b_0 + b_1 * t + (a-1) * y (-1) + \dots + e$$

For the $e = -0.046$, which indicate very insignificant noise (random occurrence), strike and other economic factors affecting foreign direct investment (FDI) into construction. Also, $(a - 1) : -0.175783$, which show that the unit root co-integration of construction via FDI inflow is accept as P-Value of 0.0015 and 0.0008, which means it is significant in the construction sector, at lag 2 and lag 4 respectively in their level form. This indicates that the data were stationary at level.

Step 2: Testing for a unit root in foreign direct investment (FDI).

Interpretation:

At lag2 and lag 4, for $T = 20$ (span of time), the unit root in FDI shows the trend

$$(1-L)y = b_0 + b_1 * t + (a-1) * y (-1) + \dots + e$$

For the $e = -0.002$, which indicate very insignificant noise (random occurrence), strike and other economic factors affecting construction sector into FDI. Also, $(a - 1) : -0.106394$, which show that the unit root co-integration of FDI via Construction sector is accepted as P-Value of 0.0019 and 0.0010, which means it is significant in the FDI, at lag 2 and lag 4 respectively in their level form. This indicates that the data were stationary at level.

Step 3: Cointegrating regression trend analysis

Cointegrating regression – OLS, using observations 1989-2008 ($T = 20$)

Dependent variable: Construction sector.

Interpretation:

$$\text{Construction}_{inflow} = \alpha_0 + \alpha_1 \text{FDI}_{inflow} + e$$

$$\text{Construction} = -254.524 + 0.04012 \text{FDI}_{inflow}$$

SE (β)	(673.338)	(0.00912)
t-test	(-0.3780)	(4.397)
P-value	(0.7101)	(0.0004)***
R-Squared = 0.901085		DW-test = 1.212.

R^2 is the co-efficient of variability of model analysis which helps to determine the level of accuracy of analysis.

Therefore, the co-integration regression analysis is given as 0.9011 which implies, the FDI inflows explained 90.1% construction sector while 9.9% is unexplainable in FDI inflow as a result of random error. It established that the model is good. This model will be used in establishing the relationship, significance of variables and for prediction. From the co-integration regression analysis, FDI inflow into construction indicates a significant relationship at 5%. The co-integration regression Durbin Watson Test was used to test whether construction sector and FDI inflows are co-integrated. The DW Test value is 1.2127, which is greater than the D_{tab} value (0.5112) constant from Sargan (1984), this shows that the study do not reject unit root hypothesis for individual variable.

Then, there is high presence of co-integration, thus reinforcing the finding on the basis of the Granger Test.

Step 4: Test for Granger Causality

Table 5: Summary of Granger Causality Test

Direction of causality	F Statistics	P	F Statistics	P
In Level form	2-Lags		4-Lags	
FDI→Const	12.9*	0.0019	8.92*	0.0010
Const.→FDI	11.52*	0.0015	5.90*	0.0008
In 1 st Differences				
FDI→Const	10.79**	0.025	5.40*	0.009
Const.→FDI	9.98**	0.022	4.90**	0.028

Note: FDI stands for foreign direct investment, Const. stands for construction sector while *, ** and *** denote the rejection of the null hypothesis of unit roots at 10%, 5% and 1% significance levels respectively. Also, the null hypothesis of no causality is rejected if the F Statistic exceeds the critical values, or if P is less than 0.1. * and ** indicate respectively that ‘Granger-Causality’ is significant at the 0.01 and 0.05 levels; that is 10% and 5% respectively.

Table 5 shows the summary of the Granger Causality Tests results of the study. However, from this Granger causality test results, the regression was run twice by setting lag = 2 and 4. For comparisons, the causality tests were carried out in level form and then in first differences of the data. Therefore, according to Granger sense, it is evident from table 5 in the level form, that FDI cause construction sector at second and fourth lag at 10% respectively while construction sector cause FDI at second and fourth lag at 10% respectively. Also, in their first differences, FDI cause construction sector at second lag at 5% and fourth lag at 10%, while construction sector cause FDI at second and fourth lag at 5% respectively.

The results suggest that FDI is ‘Granger causing’ the construction sector as well as construction sector is ‘Granger causing FDI (BI-DIRECTIONAL)’. The fact that FDI Granger-Cause construction sector goes to show that FDI is an important prerequisite and catalyst for sustainable growth and development as opined by Yakub (2005). Similarly, the fact that construction sector Granger-cause FDI goes also to show that the level of infrastructural facilities available on ground is also a prerequisite for attractiveness of foreign investors as opined by Todero (2001).

11. Test of Hypotheses

Both hypotheses earlier postulated, were tested using appropriate statistical tools with a view to accepting or rejecting them. They were tested with the aid of f-test. The statistical level of significance for the acceptance of each hypothesis where appropriate and was set at 0.05. The decision rule therefore depends on whether the calculated values of f are greater than or less than the critical values of f for (n-1) degree of freedom. Thus the null hypothesis (H₀) is rejected if $f_{cal} > f_{tab}$. Also, the alternate hypothesis (H_i) is rejected if $f_{cal} < f_{tab}$, at a level of significance of 5%.

Hypothesis One

H₀: There is no significant flow of foreign direct investment into construction sector in Nigeria.

H_i: There is significant flow of foreign direct investment into construction sector in Nigeria.

In testing this hypothesis, the data obtained in Table 3 were subjected to f-test to determine the f-value and the corresponding p-value as shown in Table 6.

Table 6: Test of Flow of FDI into Construction Sector in Nigeria

Variables	R	RS	f_{cal}	f_{tab}	Reject H ₀ ?	P-Value
FDI flow in construction sector	0.781	0.610	13.200	21.91	NO	Not Sig > 0.05

Where: RS=Spearman’s rank correlation co-efficient, f_{cal} =f-calculated, f_{tab} =f-statistical tables, P-Value=Probability that rejects the null hypothesis wrongly, H₀=Null hypothesis.

The result of the f-test on hypothesis one is as detailed in table 6. It is observed that R=0.781, meaning there is highly positive correlation between FDI and construction sector, this indicates 78.1% correlation between variables. Also, R²=0.610, it reveals an accurate analysis of FDI inflow and construction sector at 61.0%, and the P-Value is not significant. This also agrees with the Duncan Multiple Range Test that the foreign direct investment in these sectors: manufacturing and processing, mining and quarrying, and miscellaneous were significantly greater than that of the construction sector. From the decision rule of Ogbonmwan (2006):

If $f_{cal} < f_{tab}$, accept null hypothesis (H₀)

If $f_{cal} > f_{tab}$, accept alternate hypothesis (H_i)

Since f_{cal} (13.200) < f_{tab} (21.91), and the P-Value is not significant, hence the null hypothesis that there is no significant flow of FDI into construction sector in Nigeria is accepted, while the alternate hypothesis that there is significant flow of FDI into construction sector in Nigeria is rejected.

This result actually agreed with the regression model that was developed in hypothesis no.2. In that regression model, it was established that a unit increase change in the FDI inflow into construction sector of the economy will bring 3.1% increase in construction sector. This is an indication that there is actually a poor flow of FDI into construction sector, hence a confirmation of the fact that other sectors like manufacturing, mining, to mention a few have higher inflow than the construction sector.

Hypothesis Two

H₀: There is no significant effect of foreign direct investment on construction sector in Nigeria.

H_i: There is significant effect of foreign direct investment on construction sector in Nigeria.

Table 7 shows the results of the f-test and corresponding p-value for hypothesis No.2.

Table 7: Test of Effect of FDI on Construction Sector in Nigeria

Variables	R	RS	f _{cal}	f _{tab}	Reject H ₀ ?	P-Value
Foreign direct investment (FDI) and construction sector	0.947	0.896	155.133	8.29	YES	Sig<0.05

Where: RS=Spearman's rank correlation co-efficient, f_{cal}=f-calculated, f_{tab}=f-statistical tables, P-Value=Probability that rejects the null hypothesis wrongly, H₀=Null hypothesis.

It can be seen that R=0.947, meaning there is highly positive correlation between FDI and construction sector, this indicates 94.7% correlation between variables. Also, R²=0.896, it reveals an accurate analysis of FDI and construction sector at 89.6%, and the P-Value is 0.000 i.e. it is therefore significant. This also agrees with the co-integration regression analysis of the Granger Test, which indicates a significant relationship at 0.05 or 5%.

Since f_{cal} (155.133) > f_{tab} (8.29), and the P-Value is significant, hence the null hypothesis that there is no significant effect of FDI on construction sector in Nigeria is rejected, while the alternate hypothesis that there is significant effect of FDI on the construction sector in Nigeria is accepted.

From this hypothesis, a regression model based on archival data relating to inflow of FDI to the construction sector from 1989 – 2008 was developed. The model would drive the need for relevant authorities to appreciate the need to encourage investors to invest in the construction sector of the economy instead of other sectors like: mining, manufacturing, and miscellaneous sectors which is the order of the day. The final regression model for FDI impact on construction sector is thus presented as:

$$\text{Construction}_{\text{inflow}} = \alpha_0 + \alpha_1 \text{FDI} + e \quad \text{Where } e = \text{Error}$$

$$\text{Construction}_{\text{inflow}} = -726.998 + 0.0031\text{FDI}$$

The model shows a positive relationship, which implies that a change in one variable will certainly result in correspondent change in the other. The model established the fact that a unit increase change in the FDI inflow into the construction sector of the economy will bring about 3.1% increases in construction sector. This is a confirmation of Todero (2001), describing infrastructural facilities as the pillar of growth in Africa.

This result also agrees with the result in Table 2 which also attested to the fact that an increase in FDI leads to an increase on investment in construction sector except for 1991-1992, 1992-1993, 1994-1995 and 1996-1997 (four years out of the twenty years span). That is, high or average flow of FDI should be encouraged in the Nigerian economy. It also suggests that any unit increase in FDI inflow may result in subsequent increase in construction sector.

12. Summary of Findings

This study analysed foreign direct investment inflows in the Nigerian economy and its construction industry. Sequel to this, it explored the trends of this flow and the impact of FDI on the construction sector in Nigeria within the years under review. Based on the analysis and the hypotheses tested, the major findings of the study are summarized as follows:

The Nigerian construction sector has a poor flow compared to manufacturing and processing, mining and quarrying and other miscellaneous sectors of the economy. This is not good for a country like Nigeria, knowing full well that the pillar of any economy is the presence of infrastructural facilities. This sector ought to be the second largest employer of labour in any developing country, such as Nigeria.

Moreover, investments in these sectors: manufacturing and processing, mining and quarrying, and miscellaneous were significantly greater than that of the construction sector. The investment in trading and business services was also greater than that of the construction sector but insignificantly. The minimum foreign investment of FDI to construction sector is N71.2, the maximum was N12,702.5 and the mean was N4,129.6. Although, the investment in construction sector was greater than that of the transport and communication and agriculture sector, but comparatively insignificant to them.

The study also succeeded in establishing, from the 'Johansen Cointegration Test' conducted, that FDI and construction sector are significantly cointegrated, indicating a valid relationship at 0.05 or 5%. The study also revealed that according to Granger sense, the Granger Causality Test at lagged of 2 and 4 (both in level form and first differences), indicated that the causality is bi-directional, that is $FDI < = >$ construction sector. Hence, construction sector Granger-Cause FDI inflow as well as FDI inflow Granger-Cause construction sector in Nigeria. The implication of this is that infrastructural facilities on ground through construction activities can attract FDI inflow according to Granger sense. Also, FDI inflow to any sector of the economy, not necessary construction sector, can lead to more activities in the construction sector. This is because, directly or indirectly, these sectors would need construction facilities such as buildings and access roads to commence full activity.

The study further established that there is significant effect of FDI on the construction sector. That is why there is need to encourage the inflow of FDI into the economy in order to boost the construction sector, knowing full well that this sector is a potent motivator of other sectors. It also reveals a highly positive correlation of 94.7% between FDI and construction sector. This finding agrees with the cointegration model (Granger Test) that indicated a significant relationship of FDI and construction sector at 5%.

A regression model was developed to establish the relationship. The model is:

$$\begin{aligned} \text{Construction}_{\text{inflow}} &= \alpha_0 + \alpha_1 \text{FDI} + e_1 \\ \text{Construction}_{\text{inflow}} &= -726.998 + 0.0311638\text{FDI}. \end{aligned}$$

The interpretation of the above model is that a unit change in the FDI inflow into the construction sector will result to 3.1% increase in the construction sector. This result actually indicated a poor flow of FDI into the construction sector, hence it suggest that any unit increase in FDI inflow may result to subsequent increase in construction sector. This model agrees with the cointegration model (Granger Test) that indicated a significant relationship of FDI and construction sector at 5%. The cointegration regression trend analysis model (Granger Test) is:

$$\begin{aligned} \text{Construction}_{\text{inflow}} &= \alpha_0 + \alpha_1 \text{FDI} + e_1 \\ \text{Construction}_{\text{inflow}} &= -254.524 + 0.04012\text{FDI}. \end{aligned}$$

This is a little deviation from regression model, showing 4.0% increase in the construction sector from the FDI inflow with a unit change from FDI inflow. This is less than 5%, indicating a valid model.

13. Conclusions, Implications and Recommendations

13.1. Conclusions and Implications of the Study

With the high positive correlation of the regression model developed to establish the relationship between FDI and construction sector, it is believed that this model will significantly act as indicator to monitor whether there is increase or decrease from FDI inflow to construction sector. Also, even though FDI impacted significantly on construction sector as shown according to Granger Causality Test, it also shown that construction sector can Granger-Cause FDI. It is therefore hoped that the result of this research will provide early warning signs to policy makers of the economy to either enhance their strategy or change it entirely if there was no improvement or positive increase within a span of two to three years. This study will also assist the construction industry, by urging policy makers to appreciate that this sector is the prime and potent motivator of the national economy.

Moreover, the study has revealed that the extent of financing required to bridge the country's infrastructure deficit surpasses the supply of capital available from government. Therefore, there is urgent need for increased private and public sector participation alongside the foreign investors in arresting the nation's infrastructural decay. Finally, the study will enhance the competitiveness and survival of Nigerian construction industry in the global market and ultimately improve the contribution of the construction sector to the national economy with the enhancement of flow of foreign direct investment to the construction sector in Nigeria.

13.2. Recommendations

Based on the findings of the study, the following policy recommendations are proposed:

- The Nigerian Government should build a strong institutional framework, mainly in areas of investor protection and investment facilitation. Investors should be convinced of the efforts being made regarding tackling political, security risks and the environment of uncertainty.

- Policy makers should put all machinery in place to encourage FDI inflow in the Nigerian construction sector. They should examine the existing laws, remove bottlenecks and devise ways of increasing foreign investment flow in construction investment. This could be achieved in the form of public private partnership to encourage investors to build infrastructure such as roads, dams, airports and seaports to operate for defined period. All these builds investor confidence needed to tap the global pool of capital.
- The interest of major partners in the development of the economy should be recognized and protected. Support institutions should also be provided, as well as a dynamic domestic entrepreneurial class as a key success factor for attracting foreign direct investment. For instance, the Government should encourage and empower the relevant investment and monitoring institutions or agencies like the Nigerian Investment Promotion Council (NIPC), to evolve strategies aimed at assessing progress, and adopting measures to create an investor-friendly environment. Proper funding of these agencies is also necessary.

References

- Adelegan, J. O. (2008). Foreign direct investment and economic growth in Nigeria. *Journal of African Review of Money, Finance and Banking*, 7, 5 – 25.
- Aje, O.I. (2008). An evaluation of contractors prequalification and criteria of award for construction projects in Lagos and Abuja, Nigeria (Doctoral dissertation), Federal University of Technology, Akure.
- Akindoyeni, A. (2011). Sustainable development in the midst of poverty in Nigeria: The options. A paper delivered at the 5th Annual Lecture of Faculty of Environmental Sciences, Nnamdi Azikiwe University, Awka, Anambra State.
- Akinlo, A. E. (2004). Foreign direct investment and growth in Nigeria: An empirical investigation. *Journal of Policy Modeling*, 26, 627 – 639.
- Aremu, J. A. (2003). Foreign direct investment and performance .A Paper delivered at a workshop on foreign investment policy and practice organized by the Nigerian Institute of Advanced Legal Studies, Lagos.
- Ariyo, A. (2008). Investment and Nigeria's economic growth- an investment in the growth process. Proceedings of the annual conference of the Nigerian Economic Society.
- Anyanwu, A. B. (2007). Foreign direct investment and economic growth: Evidence from Nigeria. Research paper 165 presented at African Economic Research Consortium, Nairobi, Kenya.
- Anyanwu, A. B., & Bamisile, 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, Kenya.
- Ayo, E. J. (2008). *Development planning in Nigeria* (4th ed.). Ibadan:University Press Ltd.
- Central Bank of Nigeria. (2010). *Statistical bulletin*, Vol.19. Abuja: Author.
- Chenery, H. B., & Stout, A. (2006). Foreign assistance and economic development. *Journal of Development American Economic Review*, 55, 679 – 733.
- Dutse, A. Y. (2008). Nigeria's economic growth: Emphasizing the role of FDI in transfer of technology. *Journal of communications of the IBIMA*, 3, 12-14.
- Eboh, M. (2011, July 15). Systematic planning, marketing will attract FDI to Nigeria. *Vanguard*, p.14.
- Efem, N. (2009, December 15). Federal Government plan to promote foreign direct investment in Nigeria. *Thisday*, pp.1 – 4.
- Egolum, C. C. (2011). Sustainable development in the midst of poverty in Nigeria: The options. Preface to the topic, delivered at the 5th Annual Lecture of Faculty of Environmental Sciences, Nnamdi Azikiwe University, Awka, Anambra State.
- Ekpo, A. H. (2010, January 6). Government policy and foreign private investment in Nigeria. *The Guardian*, p.21.
- EvIEWS User's Guide. (1994 – 1997). *Quantitative micro software*. United States of America.
- Fabayo, J. (2003). FDI in Nigeria's manufacturing sector. In: O. J. Nnamani, C.M. Okafor, & F.O. Odoko (Eds.), *FDI in Nigeria* (pp.177 -192). Proceedings of the 12th Annual Conference of the Regional Research units of the CBN, Kaduna, Nigeria: CBN.
- Fleishman, M. (2009). Laying Africa's roads to prosperity. *Africa Renewal* vol.22. Retrieved from <http://www.un.org/.224-infrastructure.html>.
- Granger, C. W. J. (1969). *Investigating causal relations by econometric methods and cross-spectral methods*, *econometrica* (1st ed.). New York: Academic press.

- Granger, C. W. J., & Newbold, P. (1986). *Forecasting economic time series* (2nd ed.). New York: Academic press.
- Gujarati, N. D. (2003). *Basic econometrics* (4th ed.). New York: McGraw-Hill.
- Harris, R. (1995). *Using cointegration analysis in econometric modelling* (3rd ed.). Englewood Cliffs: Prentice-Hall.
- Jerome, F., & Ogunkola, A. (2004). Nigeria and FDI. Retrieved from <http://www.allafrica.com/stories/2010011401123.html>.
- Kolapo, Y. (2010, December 13). Unveiling real economic pests. *The Punch*, p. 12.
- Makunike, C. (2008). Nigeria targets \$600 billion in foreign direct investment by 2020 Trade Africa. Retrieved from <http://www.tradeafricablog.com>.
- Mogbo, C. T. (2004). The quantity surveyor as a cost engineer. A Paper presented at the 21st biennial conference general meeting of the Nigerian Institute of Quantity Surveyors (NIQS), Ibadan, Nigeria.
- Mustapha, B. (2009). Nigeria ranks 19th in the world in attracting FDI. Retrieved from <http://www.untad-export.by.htm>.
- Odozi, V. A. (2003). An overview of foreign investment in Nigeria, 1960 – 2000. *Occasional paper*, 11 (5), 3-4.
- OECD. (2002). *Foreign direct investment for development and maximising benefits*. Office for national statistics. Retrieved from <http://www.ons.gov.uk/statbulletin>.
- Ogbonmwan, E. P. (2006). *Statistics theory*. Onitsha, Nigeria: Africana-Feb Publishers Limited.
- Okomoh, F. P. (2004). The role of business in society: FDI and their impact on sustainable development in Nigeria. A paper presented at the World Bank Institute (WBI)/Wharton Business School International research/Essay contest on CSR for future leaders.
- Omagbeme, R. (2010). Nigeria: Bayelsa and FDI. Retrieved from <http://www.allafrica.com/stories/201001140387.html>.
- Onwueanyi, O. (2008, March 2). Impact of FDI on the lives of Nigerians. *Punch*, p.11.
- Orji, O. H. (2004). Foreign direct and portfolio investment in Nigeria and selected African countries from 1980 to 2004. A Paper presented at the senior executive course No.26 of The National Institute for Policy and Strategic Studies, Jos, Nigeria: NIPSS.
- Oyinlola, O. (2005). External capital and economic development in Nigeria (1970 – 2000). *The Nigerian Journal of Economic and Social Studies*, 37, 2 - 3.
- Oyinloye, A. (2011, July 20). Nigeria's infrastructural deficit, at over \$200 billion. *Vanguard*, p.10.
- Sargan, J. D. (1984). Wages and prices in the United Kingdom: A study in econometric methodology, in K. F. Wallis & D. F. Hendry, (Eds.), *Quantitative economics and econometric analysis* (pp. 29 – 33). Oxford: Blackwell.
- Shaib, I. O. (2007b). *Time series analysis: Concepts and theory for application*. Akure, Nigeria. Concept 3 IT.
- Sims, C. (1972). *Money, income and causality*, *American economic review*. New York: Academic Press.
- Todero, R. (2001). Infrastructure and economic development. The Nigerian experience. *Journal of the Central Bank of Nigeria (CBN) Economic and Financial Review*, 14 (3), 4 - 6.
- Topku, C. Y. (2010, March 12). FDI in the Indian construction industry. *The Times*, pp.7 – 8.
- UNCTAD. (2009). Nigeria ranks 19th in the world in attracting FDI. Retrieved from <http://www.UNCTAD-export.by.htm>.
- Wakil, G. H. (2004). The role of FDI in sustainable economic growth: Challenges for Nigeria. *Journal of Investment Facilitator*, 14 (3), 4-6.
- Wikipedia. (2007). The free encyclopedia-economy of Nigeria. Retrieved February 19th 2010, from <http://www.enwikipedia.org/wiki/economy-of-nigeria.htm>.
- World Bank. (2010). *World Bank history*. Retrieved from <http://www.worldbank.org/website/external/history>.
- Yakub, M. U. (2005). Foreign direct investment (FDI) flows to Nigeria: Issues, challenges and prospects. *Bulletin Publication of CBN*, 4 (29), 54 – 64.
- Yamane, T. (1967). *Statistics: An introductory analysis* (2nd Ed.). New York: Harper and Row.