INTRODUCTION

One of the major economic problems in less developed countries (LCD) is low capital formation to finance the necessary investment for economic growth. Capital was one regarded by most economists as the principal obstacle to economic development and this is where a lot of attention was paid to capital formation. The role of capital in economic growth is still regarded as very crucial both the theory of ‘big push’ and the concept of ‘vicious cycle’ all attest to the crucial role of capital in the growth process. The theory of ‘big push’ simply state that the stagnant and undeveloped economies need huge and sudden injection of large capital from foreign direct investment.

However in the literature, FDI is found to be related to export growth while human capacity building is found to be related to FDI flow. Most studies on FDI and growth are country specific. Among Nigeria studies like those by Otepola [1] Oyeyide [2], Akinlo [3] examined the importance of FDI on growth for several period and the channel through which it may be benefiting the economy.

In the literature there exist a direct positive link between export growth and the growth of an economy. This growth in export can further be traced down to the level of investment which in most cases can be domestic or foreign investment. This is so given that foreign capital remains the sure best option of filling the saving investment gap where it exists. Given this fact, assessment will be based on the existing link among investment, export, exchange rate and economic growth.

In recent times, the government of Nigeria has embarked on economic policies to check the flow of foreign private investment in certain sectors of the economy. Admittedly, how to achieve rapid economic development through foreign investment has proved to be one of the economic problems facing Nigeria.

Again, a relationship between infrastructural facilities and FDI is proposed because infrastructural facilities are vital to the development of every society in the world. The level of development of a society is dependent on how perfect the natural resources are used to enhance the infrastructures and other factors to economic development. The word infrastructure has been referred to as resource systems that have been harnessed for the development of a society according to Frischmann [4]. He further itemized these systems to be; telecommunication, energy, transportation, governance, and other public utilities. This can also be understood from the fact that, Nigeria is blessed with abundant of natural resources which if properly utilized; it would facilitate greater development in the country.

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Therefore, this work tends to critically analyze the impact of the levels of infrastructure facilities on the flow of foreign Direct Investment in the Nigerian economy.

**RESEARCH OBJECTIVES**

This paper sets out to achieve the following aims;
1. To discuss the current state of infrastructural facilities relevant to foreign direct investment in Nigeria.
2. To examine the effect of infrastructure on the inflow of foreign direct investment in Nigeria.
3. To show the trend of growth in the Nigerian economy caused by foreign direct investment.

**RESEARCH HYPOTHESIS**

This paper formulates one hypothesis for testing:
Ho: The level infrastructural facilities in a country does not determine the inflow of foreign direct investment

**SIGNIFICANCE OF THE STUDY**

The purpose of this study is to elucidate the most salient features of Foreign Direct Investment in Nigeria. On the other hand, it sought to highlight its presence in the economy. It is thereby hoped this work and its findings, provide policy makers, economic planners and entrepreneur who wish to invest in Nigeria, a tool of appraisal of the implication of foreign direct investment in Nigeria. The work also provides an analytical data base for future research work to students and others alike.

The study is significant because it differs from all other studies in scope (1980-2010). This gives the study an edge because it examines the FDI-growth relation in the near- contemporary context, taking account of past trends and recent developments in the global financial market for capital flows.

**ORGANIZATION OF THE STUDY**

The rest of the paper is organized in four sections. The theoretical framework as well as review of relevant literature and empirical reviews on the subject matter is contained in section two, section three identifies the research methodology, and section four represents data presentation, analysis and discussion of finding while conclusion and recommendations are stated in section five.

**FDI – GROWTH RELATIONS WITH NIGERIAN ECONOMY**

Different analysis had been made by different authors to create a linkage and relationship between FDI and economic-growth of the country. Some authors like Aluko 1961 also discuss this, Brown 1962, Obinna 1983 and some authors concluded that there are positive linkages between FDI and Nigerian economic growth and some are of negative linkages between them. Ogioio reports negative contributions of public investment to GDP growth in Nigeria for reasons of distortions. Aluko [5], Brown [6] and Obinna [7] cited in Adeolu [8] report positive linkages between Foreign Direct Investment (FDI) and economic growth in Nigeria. Endozen [9] cited into Adeolu [8] discusses the linkages effects of Foreign Direct Investment (FDI) on the Nigerian economy and submits that these have not been considerable and that the broad linkage effects were lower than the Chenery-Watanaba average [10]. Oseghale and Amonkhienam [11] found that Foreign Direct Investment (FDI) is positively associated with Gross Domestic Product (GDP), concluding that greater inflow of Foreign Direct Investment (FDI) will spell a better economic performance for the country.

According to Jhingan [12] direct investment is the formation of a concern (business) in which company of the investing country has a majority holding. The formation of the business concern may be financed exclusively from foreign source lending to the creation of fixed assets. In the same vein, the World Bank [13] conceptualized Foreign Direct Investment (FDI) as investment that is made to acquire a lasting management interest (usually 10% of voting stock) in an enterprise and operating in a country other than that of the investors (define according to residency) the investors purpose being an effective voice in the management of earning either long term capital or short term capital as shown in the nations balance of payments account statement.

Jerome and Ogunkola [14] assessed the magnitude, direction and prospects of Foreign Direct Investment (FDI) in Nigeria. They noted that while the Foreign Direct Investment (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 uncertainly, as well as the rule of law. The establishment and the activities of the economic and financial crimes commission (EFCC), the independent corrupt practices commission, and the Nigerian investment promotion commission are efforts to improve the corporate environment and uphold the rule of law. Has there been any discernible change in the relationship between Foreign Direct Investment (FDI) and economic growth in Nigeria in spite of these policy interventions?

Edozien [9] discussed the linkage effect of FDI on the Nigerian economy and submits that these have not been considerable and that the broad linkage effects

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were lower than the Chenery-Watanabe average. Oseghale and Amonkhienan [11] found that FDI is positively associated with GDP, concluding that greater inflows of FDI will spell a better economic performance for the country.

Adelegan [15] explored the Seemingly Unrelated Regression model (SUR) to examine the impact of FDI on economic growth in Nigeria and found out that FDI is pro-consumption, pro-import and negatively related to gross domestic investment. In another paper, Ekpo[27] reported that political regime, real income per capita, inflation rate, world interest rate, credit rating and debt service were the key factors explaining the variability of FDI inflows into Nigeria. Similarly, Ayanwale and Bamire [16] assessed the influence of FDI on firm level productivity in Nigeria and reported positive spill over of foreign firms on domestic firm productivity.

Ariyo [17] 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). Furthermore, there is no reliable evidence that all the investment variables included in his analysis have any perceptible influence on economic growth. He therefore suggested the need for an institutional rearrangement that recognizes and protects the interest of major partners in the development of the economy.

Odozi [18] placed special emphasis on the factors affecting FDI flows into Nigeria in both pre and post Structural Adjustment Programme (SAP) eras and found that the macro policies in place before SAP where discouraging investors. This policy environment led to the proliferation and growth of parallel markets and sustained capital flight. Akinlo [3] specifically controlled for the oil, - non-oil FDI dichotomy in Nigeria. He investigated the impact of foreign direct investment (FDI) on economic growth in Nigeria, using an error correction model (ECM). He found that both private capital and lagged foreign capital have small and not a statistically significant effect on economic growth. Further, his results support the argument that extractive FDI might not be growth enhancing as much as manufacturing FDI.

**NIGERIA INFRASTRUCTURE AND FDI SYSTEM**

There is a strong relationship between infrastructural facilities and vital development in every society in the world. The level of development of a society is dependent on how perfect the natural resources are used to enhance the infrastructures and other factors to economic development. The word infrastructure has been referred to as resource systems that have been harnessed for the development of a society according to Frischmann [4].

And he further itemized these systems to be; telecommunication, energy, transportation, governance, and other public utilities. This can also be understood from the fact that, Nigeria is blessed with abundant of natural resources which if properly utilized; it would facilitate greater development in the country.

According to American Heritage Dictionary, defines the term —infrastructural as The basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools, post offices, and prisons. Many authors have reviewed the concept of infrastructure but basically the whole definitions are always base on the same issues, which are roads, telecommunications, educations, water supply, energy, power grids and hospitals. [19] identifies infrastructure as having both direct and indirect impact on the growth of an economy. Infrastructure is said to add to economic growth and development by raising efficiency and providing facilities, which enhance the quality of life. Akinyosoye [28] defined infrastructure as the —unpaid factor of production! which tends to raise productivity of other factors while serving as intermediate inputs to production. The services engendered as a result of an adequate infrastructure base will translate to an increase in aggregate output. Canning and Fay [20] also found that the developing countries demonstrated a high rate of return on transport infrastructure, which compared favorably with those of developed countries.

The problems with low level of infrastructural facilities in the country had been related with different factors but the most crucial source of the problem is the leadership problem. Sanusi [21] identified the poor level of infrastructure in Nigeria as the major constraint towards achieving the nation’s vision of becoming one of the 20 largest economies in 2020.

He further analyzed that about 70 percent of the 193,000 kilometres of roads in the country is in poor condition, power outages in the nation experiences amount to over 320 lost days a year, with over 60 percent of the population lacking access to electricity with over $13 billion spent annually to fuel generators and that Nigeria, which once had one of the most extensive railway systems in Africa, could now barely boast of a functional route either for passengers or freight.

Nigeria has the basic needed things to develop her infrastructure but the country is characterized with different cases of inadequate
Infrastructures ranging from shortage power supply, poor health care services, fluctuating education, irregular power supply, scarcity of fuel, bad roads and poor telecommunication services. These various inadequacies have been discussed and supported by various findings. The under-development level of infrastructure in the country has so much affected every nook and cranny of the society starting from educational institutions, industries, hospitals and both private and public enterprises. This has also resulted into many crises in the country and even during these crises the little remaining infrastructures were destroyed. Inadequate infrastructure was cited as a major cause of several crises including the 1967-70 civil war, general industrial strikes, students’ demonstrations in Nigerian higher institutions, and the state of militancy in the Niger Delta of Nigeria [22].

There is strong relationship between infrastructural facilities and vital development in every society in the world. The level of development of a society is dependent on how perfect the natural resources are used to enhance the infrastructures and other factors to economic development. The word infrastructure has been referred to as resource systems that have been harnessed for the development of a society according to Frischmann, 2007; Pendse, 1980. And they further itemized these systems to be; telecommunication, energy, transportation, governance, and other public utilities. This can also be understood from the fact that, Nigeria is blessed with abundant of natural resources which if properly utilized; it would facilitate greater development in the country. From Frischmann’s infrastructural theory, the abundant resources in Nigeria can be utilized to ensure adequate infrastructure for Nigerians.

In the overview of the U.S. public policy, the definition of infrastructure has been so ambiguous and evolutionary. About twenty (20) years ago, infrastructure was defined primarly in debates about the adequacy of the nation’s public works which were viewed by many as deteriorating, obsolete, and of insufficient capacity. In a 1983 report, the Congressional Budget Office (CBO) defined infrastructure as facilities with the common characteristics of capital intensiveness and high public investment at all levels of government.

Many authors have reviewed the concept of infrastructure but basically the whole definitions always base on the same issues, which are roads, telecommunications, educations, water supply, energy, power grids and hospitals. Udjo et al. [19] identifies infrastructure as having both direct and indirect impact on the growth of an economy. Infrastructure is said to add to economic growth and development by raising efficiency and providing facilities, which enhance the quality of life. Akinyosoye[28] defined infrastructure as the unpaid factor of production which tends to raise productivity of other factors while serving as intermediate inputs to production. The services engendered as a result of an adequate infrastructure base will translate to an increase in aggregate output. Canning and Fay [20] also found that the developing countries demonstrated a high rate of return on transport infrastructure, which compared favorably with those of developed countries.

Furthermore, the poor performance of public utility services in Nigeria has been a subject of considerable discussion [17]. The problems with low level of infrastructural facilities in the country had been related with different factors but the most crucial source of the problem is the leadership problem. It is of great significance to government, business, and the public at large that the flow of services provided by nation’s infrastructure continues unimpeded in the face of a broad range of natural and manmade hazards. United State could be regarded as one of the most developed countries in the world today majorly because the country understood the need for best infrastructural facilities. The United States has acutely aware of the importance of civil infrastructures and their criticality to the nation’s economy and quality of life [23].

Sanusi [21] identified the deficit level of infrastructure in Nigeria as the major constraint towards achieving the nation’s vision of becoming one of the 20 largest economies in 2020. He further analyzed that about 70 percent of the 193,000 Kilometres of roads in the country are in poor condition; that enterprise surveys show that the power outages the nation experiences amount to over 320 lost days a year, with over 60 percent of the population lacking access to electricity with over $13 billion spent annually to fuel generators and that that Nigeria, which once had one of the most extensive railway systems in Africa, could now barely boast of a functional route either for passengers or freight.

Nigeria has the basic needed things to develop her infrastructure but the country is characterized with different cases of inadequate infrastructures ranging from shortage power supply, poor health care services, fluctuating education, and irregular power supply, scarcity of fuel, bad roads and poor telecommunication services. These various inadequacies have been discussed and supported by various findings. The under-development level of infrastructure in the country has so much affected every nook and cranny of the society starting from educational institutions, industries, hospitals and...
both private and public enterprises. This has also resulted into many crises in the country and even during these crises the little remaining infrastructures were destroyed. Inadequate infrastructure was cited as a major cause of several crises including the 1967-70 civil war, general industrial strikes, students ‘demonstrations in Nigerian higher institutions, and the spate of militancy in the Niger Delta of Nigeria [22]. According to World Bank [13] explained that poor infrastructure would make a country a less attractive destination for investors. This is in relation with the failure of Nigerian government to attract the foreign investors.

Infrastructure has been discussed in differs of ways within the body of this work, it has been discussed as one of the main determinants and one of the major obstacles of FDI inflow in the host country. The importance of FDI and infrastructure of the host country is one of the main backbone of this research work and this necessitate the reason to lay much emphasis on it using the view of different authors. The success of FDI operation in economic growth of the host countries is said to have depended majorly on the good infrastructure.

Attempt shall be made to review the ideas of different authors on the significant effect of infrastructure on foreign direct investment and the various relationships between them. Coughlin et. al [24] found a statistically significative correlation between FDI in the United States and several measures of infrastructure. And Head and Ries [29] also found similar results for Chinese cities. Kumar [25] found that infrastructure availability does contribute to the relative attractiveness of a country as a location site for FDI inflows.

Some findings made it known that developing countries have not been enjoying the merits of FDI because of the poor nature of their infrastructures. It was found out that developed economies enjoyed more of FDI inflows than developing economies and this is the reason why Xu [26] shows that a country needs to reach a minimum human capital threshold level in order to benefit from the technology transfer of MNEs. And he further observes that most LDCs do not benefit from FDI flows because they fail to meet this threshold requirement. Coughlin et al [24] discovers that more modern and extensive transportation infrastructures have better relationship with the increased FDI. They also found out that quality infrastructure is an important variable for developing countries with the aim of attracting FDI from the United States, but not as much paramount for developed countries with already high quality infrastructures. They are of the fact that infrastructure enhances FDI’s contributions by reducing their operating costs and increasing the productivity of investments. This simply correlate with the fact that the successful impact of FDI in any host country is not by magic but depends on the certain levels of the nation’s economic performance and infrastructural facilities.

RESEARCH METHODOLOGY

This section discusses the preliminary survey to determine the feasibility and validity of the study, the method and instruments used in data collection, the population description and procedures used for the selection of sample size from the population. The survey research design is used in this study. From a population which stands at 167 million (from the 2006 census projection), 120 respondents were randomly selected and administered questionnaire out of which 100 were completed and returned. Data collection was done via questionnaires.

The Analyses of Variance (ANOVA) was used in testing formulated hypothesis. The formula for Anova is given as follows:

\[
F - \text{Ratio} = \frac{\text{Mean of Squares between (MSb)}}{\text{Mean of Squares within (MSw)}}
\]

Where: \(\text{MSb} = \frac{(SS_b)}{(SS_b \ DF)}\)
\(\text{MSw} = \frac{(SS_w)}{(SS_w \ DF)}\)

If F-calculated is greater than the F-tabulated, reject the null hypothesis (Ho) and accept the alternative hypothesis (Hi) at 0.05 level of significance. If F-calculated is less than the F-tabulated, accept the null hypothesis (Ho) at 0.05 level of significance.

DATA PRESENTATION AND ANALYSIS

Data Presentation

Table 1: The level infrastructural facilities in a country determine the inflow of foreign direct investment

<table>
<thead>
<tr>
<th>Response</th>
<th>Economists</th>
<th>Policy Makers</th>
<th>Public</th>
<th>TOTAL</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>11</td>
<td>6</td>
<td>14</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>A</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>SD</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>U</td>
<td>5</td>
<td>2</td>
<td>10</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>20</td>
<td>50</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field work, 2015.

Table 2: Does Good infrastructure increase the productivity of investment which stimulate FDI inflow?

<table>
<thead>
<tr>
<th>Response</th>
<th>Economists</th>
<th>Policy Makers</th>
<th>Public</th>
<th>TOTAL</th>
<th>Percentage (%)</th>
</tr>
</thead>
</table>
| Source: Field work, 2015.

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From table 1, a total of 51 percent of the respondents agreed, a total of 33 percent disagreed while 16 percent were undecided that the level infrastructural facilities in a country determine the inflow of foreign direct investment.

From table 2, a total of 40 percent of the respondents agreed, a total of 35 percent disagreed while 25 percent were undecided that good infrastructure increase the productivity of investment which stimulate FDI inflow.

**Test of Hypothesis**

Ho: The level infrastructural facilities in a country does not determine the inflow of foreign direct investment

<table>
<thead>
<tr>
<th>Table 3: The significant relationship between the level of infrastructural facilities and the inflow of FDI</th>
<th>Response</th>
<th>Economists</th>
<th>Policy Makers</th>
<th>Public</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>11</td>
<td>6</td>
<td>14</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>20</td>
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<tr>
<td>D</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>18</td>
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<tr>
<td>SD</td>
<td>5</td>
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<tr>
<td>U</td>
<td>5</td>
<td>2</td>
<td>10</td>
<td>16</td>
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<tr>
<td>∑X</td>
<td>30</td>
<td>20</td>
<td>50</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>∑X²</td>
<td>216</td>
<td>88</td>
<td>532</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Computation from responses to Question 1

<table>
<thead>
<tr>
<th>Table 4: ANOVA analysis of the significant relationship between the level of infrastructural facilities and the inflow of FDI</th>
<th>Source of Variation</th>
<th>DF</th>
<th>SS</th>
<th>MS</th>
<th>F-Ratio</th>
<th>F- Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Group Treatment</td>
<td>2</td>
<td>93.33</td>
<td>46.665</td>
<td>7.34</td>
<td>3.89</td>
<td></td>
</tr>
<tr>
<td>Within Groups Treatment</td>
<td>12</td>
<td>76</td>
<td>6.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>169.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F- Critical value of 5% level of significance with degree of freedom 2 to 12 is 3.89

Source: Researcher’s computation.

**Decision/ Inference**

Since the calculated value of 7.34 is greater than the critical value of 3.89, we reject the Null hypothesis (Ho) and accept the Alternative Hypothesis (Hi). It is thus concluded that the level infrastructural facilities in a country determine the inflow of foreign direct investment

**CONCLUSION AND RECOMMENDATIONS**

Empirical evidence suggests that in order to induce more foreign direct investment to Nigeria, the country should focus on improving the investment climate for the foreign investors by paying special attention to measures that facilitate foreign direct investment. These measures that tend to increase a country’s attractiveness to multinationals engaging in foreign direct investment include creating an attractive domestic policy environment and hospitable regulatory framework for foreign investment (such as open trade regimes and continued progress in privatization programmes), expansion of market size (indicated by a country’s gross domestic product), and favorable economic environment (which increases the prospect for growth) in the foreign direct investment recipient countries. Indeed, experience suggests that Nigeria can increase its attractiveness to foreign direct investors by reducing the impediments to capital movements.

Beyond macro economic and political stability, countries focused on infrastructural development attract the inflow of foreign investment as foreign investors are...
assured of a profitable platform that supports the viability of their investment. It is thus concluded that for a nation like Nigeria to take advantage of the potentials of FDI, infrastructural investment cannot be over emphasized.

The following recommendations are made:

Government should ensure that adequate infrastructural facilities are put in place to serve as a ‘seduction strategy’ through which foreign direct investment is attracted.

There is need for proper financial market development. The financial sector should be deregulated. This would enable the sector to function properly, thus rising up to the challenge of building a strong, virile and competitive sector that would be able to meet the saving/investment needs of the surging business world.

Finally, the Nigerian government should ensure the transparency of the operations of foreign investors within the economy by government of Nigeria and to encourage in-flows of FDI. This will be achieved when adequate machinery is set up by the government to arrest corruption and penalize those perpetrate it.

It is thus suggested that a further study be conducted on combating the threat to infrastructural development as a panacea to declining FDI in Nigeria.

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