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FOREIGN DIRECT INVESTMENT AND INFRASTRCTURE GROWTH IN NIGERIA

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Abstract

Between 2004 and 2021, the study looked into the relationship between foreign direct investment and infrastructure growth in Nigeria. Its specific goal was to determine the relationship between FDI inflow and the Internet connectivity component of Nigeria's information and communication technology infrastructure. The study used an explanatory, historical, and correlational design, with secondary data as the primary source. Data was gathered from the Central Bank of Nigeria's Statistical Bulletin, the National Bureau of Statistics' yearly reports (spanning several years), and the African Development Bank Group's website. The information was gathered during the years 2004 and 2021. For data analysis and hypothesis testing, regression was used. When tested on the Internet usage component of ICT infrastructure, the study's findings reveal that FDI inflow has a strong and favorable association with infrastructure growth. The report concludes that, among other things, there is a need to advocate for more FDI inflow by enacting regulations and providing an enabling environment that will encourage more foreign investors to participate in Nigeria's infrastructure development efforts. The government should work to secure political stability as well as increased security. Because FDI inflow is a major source of government funding for economic growth and development efforts, it is inhibited by political instability and insecurity. As a result, actualizing economic growth objectives may be jeopardized.

Keywords: Foreign Direct Investment; ICT infrastructure growth, Internet Infrastructure; Infrastructure Growth; Nigeria

Introduction

The Nigerian economy offers a positive prospect for infrastructure development. Nigeria has abundant oil resources, rich land vegetation, and a large population with the potential for substantial personnel availability as well as relative political stability (Schunnaman & Porter, 2017), therefore it might profit from good infrastructure expansion and development. It is impossible to overstate the importance of infrastructure development for any country. The availability of infrastructure that impacts the lives of its residents is one of the characteristics of developed or developing countries. Infrastructures such as good roads, housing, telecommunications, healthcare, schools, and reliable and consistent electrical supplies, among others, contribute to citizens' well-being, job creation, economic growth, and attractiveness to international investors and partners.

Despite how important this is, Nigeria's infrastructure progress has been disappointing. It has been diminishing for years and has continued to do so in recent years. A comparison of the performance of critical facilities such as power, road networks, ICT, and other areas of the Nigerian economy shows that the country is performing poorly in comparison to other African countries. While reliable and cost-effective power is universally recognized as critical to any country's economic development, Nigeria's power infrastructure lags behind other African countries (Balogun, 2016). According to PWC reports, one of Nigeria's biggest infrastructure concerns is the power sector, which has extremely limited electrical access across the country. In 2016, Nigeria generated approximately 3,879MW of power in a country with a population of about 177 million people, while South Africa generated approximately 45,645MW in a country with a population of 54 million people. Even as the power sector is privatized, the situation has not improved; the growth of power infrastructure has not kept pace with privatization aspirations. Transportation infrastructure is also deteriorating. In Nigeria, for example, road transport is the most common means of transportation, accounting for 80% of all goods traffic, although only 20% of the country's road network is paved. There are also substantial gaps in both rural and urban ecosystems across Nigeria, ranging from fundamental infrastructure such as housing, healthcare, water, and waste management to facilitator infrastructure such as ICT, hospitality, and industrial/commercial real estate (PWC, 2016). Even though Nigeria failed to create infrastructure during the oil boom, it is believed that the country has not learned its lessons and has continued to spend in infrastructure development in recent years (Balogun, 2016).

Nigeria would not be able to maintain its present levels of population and economic growth without improving its infrastructure, according to PWC (2016). 'Nigeria's basic physical infrastructure deficiency seriously affects the country's potential for economic growth and

human development,' asserted by Schunnaman and Porter. And that access to basic infrastructure such as power, roads, clean water, and improved sanitation facilities in Nigeria has not kept pace with the country's fast population expansion" (Schunnaman & Porter, 2017, p1). PWC (2014) said in a related research that Nigeria offers an opportunity-filled future for infrastructure development, with infrastructure spending expected to rise from $23 billion in 2013 to $77 billion in 2025, but that these potential have yet to be realized. This is despite the fact that investing in infrastructure will spur economic growth, create jobs, and provide essential services to the country's population (PWC, 2016).

According to the World Economic Forum, every dollar invested on capital projects (in utilities, energy, transportation, waste management, flood, defense, and telecommunications) generates a 5 percent to 25% economic return. Sponsors or investors interested in creating infrastructure projects in Nigeria will be able to take advantage of these chances. In other words, Nigeria now has more options for foreign direct investment. Furthermore, opportunities abound in Nigeria's core and social infrastructure sectors, including energy, transportation, and urban development / real estate, as well as healthcare, water, agriculture, waste management, and information communication technology (ICT) (PWC, 2016). Given the numerous potential, soliciting foreign direct investment has been proposed as a significant solution to Nigeria's infrastructure growth deficit (Danmola, Olateju, & Aminu, 2017).

Foreign investments have been recognized as feasible sources of finance for economic growth and development activities for countries, particularly those in developing economies, that have the necessary environment and appeal. Despite rising investment flows, particularly to emerging countries, Sub-Saharan Africa (SSA) countries continue to lag behind other regions in attracting foreign direct investment. Because FDI is a major source of growth for developing nations, its uneven distribution is concerning. Not only may FDI boost investment and capital formation, but it can also act as a catalyst for technical advancement, with many of the advantages accruing as a result of positive spillover effects. Transfers of production technology, skills, innovative capacity, and organizational and managerial practices are examples of positive spillovers. Amaghwedovede and Osinubi (2009).

FDI is seen as the most efficient source of investment for economic growth in developing countries like Nigeria because it stimulates more investment in the recipient country. The success or failure of previous and current governments in attracting sufficient investment for growth, as well as the success or failure of FDI to achieve the desired level of economic growth in terms of infrastructure growth, is dependent on the country's current political and economic circumstances. As a result, foreign investors must master the circumstances that characterize the Nigerian government in attracting foreign investment with little or no significance. According to studies, there is a close link between emerging countries' economic progress and their ability to attract foreign direct investment (Danmola et al, 2017).

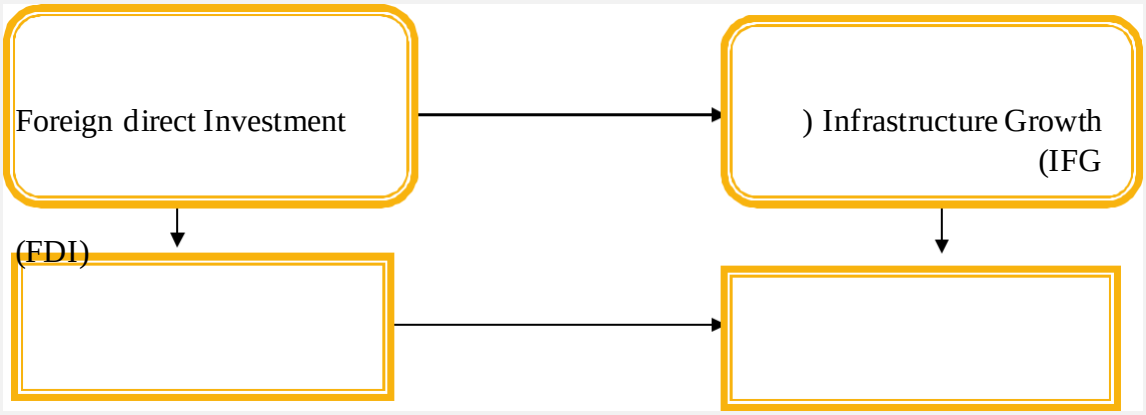
Foreign investment, according to several researchers, is one of the essential variables that triggers economic development in terms of infrastructural growth in Nigeria (FI). Because foreign investment encourages and drives globalization, multinational and transnational businesses and firms (TNCs) are emerging in many countries, including Nigeria (Nwankwo, 2007; Onyeali & Okafor, 2014). A subset of international investments is foreign direct investment. Foreign Investments (FI) is a type of investment that can be made in real assets (physical assets such as properties and businesses) or financial assets (funds investments in stocks, shares, and bonds) across national borders with the goal of realizing the goals of the individual, government, or firm investors (Onyeali & Okafor, 2014). Furthermore, FI can be classified into two categories: portfolio investment and direct investment (Nwankwo, 2007). In addition, FDI differs from other types of foreign investment in that it entails not just foreign investment ownership but also foreign control. In another sense, FDI occurs only when a foreign individual or group becomes sufficiently interested in a business to seize control (Onyeali & Okafor, 2014). A direct investment can be defined as an incorporated or unincorporated enterprise in which a single foreign investor controls 10% or more of the ordinary shares of voting powers of an incorporated enterprise or the equivalent of an unincorporated enterprise, or controls less than 10% /or none of the enterprise but has an effective voice in its management. As a result, having an effective voice in management means that a foreign investor can influence or participate in the management of a company. This does not imply that he or she must have total control. The value of foreign direct investment (FDI) cannot be overstated, according to several studies. It is a key part of the country's economic development strategy. This is most likely because, as Onyeali and Okafor (2014) pointed out, FDI is seen as an aggregation of assets, both human and material management, and as a result, Sub-Saharan Africa as a region (including Nigeria) now relies heavily on FDI for a variety of reasons, as several scholars have pointed out (Sjoholm, 1999; Aremu, 2000; Obwona, 2004).

Feldstein (2000), for example, described one of the benefits of FDI as the provision of diversification opportunities in other climes through international capital flows to minimize the risk faced by capital owners in their home nations. Others argue that overseas investment, in addition to promoting competitiveness in the domestic input market, allows for global knowledge transfer and human capacity development (Onyeali & Okafor, 2014). Not to mention that, despite the contributions to corporate tax revenues in the host country where a multinational corporation operates from FDI earnings, the highly capital intensive technologies engendered might increase unemployment in labor surplus host countries. Considering this context, empirical research into the impact of FDI on infrastructure growth in Nigeria becomes critical.

Conceptual Framework

For this study two variables are identified. They are foreign direct investment which constitutes the independent variable and infrastructure Growth which is dependent variable. The researcher used the diagram in figure 1.1 to illustrate the interaction of independent

variables (Foreign direct investment (FDI) and the dependent variables infrastructure Growth (IFG).



Foreign direct Investment

- ICT Infrastructure

inflow (FDIN)

(ICI)

Figure 1.1: Conceptual framework of foreign direct investment and Infrastructure Growth

The primary goal of this research is to estimate the influence of foreign direct investment on Nigerian infrastructure expansion from 2000 to 2017. Its specific goal is to look into the relationship between inflows of foreign direct investment and the expansion of information and communication technology in Nigeria.

HO : There is no significant relationship between foreign direct investment inflow and **1**

Information and Communication Technology growth in Nigeria.

Literature Review

Concept of infrastructure

Infrastructural facilities are those basic services without which primary, secondary, and tertiary productive activities cannot function. All public services, from law and order to education and public health, to transportation, communication, and water supply, are covered by infrastructure facilities (Mabogunje, 1974, & Kahn, 1979). In other words, infrastructure facilities are part of the package of basic needs that a community would like to acquire in order to live better. According to Kahn (1979), rural infrastructure can be divided into three categories: physical infrastructure (roads, water, rural electrification, storage, telecommunications, and processing facilities) and social infrastructure (health and educational facilities, community centers, fire and security services). Credit and financial institutions, agricultural research facilities, and social infrastructure are examples of institutional infrastructure (Brown & Chikagbulam, 2015). This research focuses on one of the information and communication technology's physical infrastructures.

Overview of Nigerian Infrastructure State

Nigeria's low performance in terms of infrastructure growth has been a source of concern that has dominated recent debates. As a result, there have been calls for the government to do everything it takes to address the infrastructure deficit, which is limiting the country's economic progress. The acting Director General, Infrastructure Concession Regulatory Commission (ICRC), Mr. Chidi Izuwah, puts the total amount of funds required to provide quality infrastructure in Nigeria over the next six years at around $100 billion, according to a recent report by the Nigerian Infrastructure Concession Regulatory Commission. According to him, the oil and gas industry would require $60 billion, the power sector $20 billion, the road sector $14 billion, and rail tracks between $8 and $17 billion. (Aderinokun, Chima, and Ekeghe, September 28, 2017). Furthermore, when compared to its rivals, Nigeria does poorly in terms of domestic savings, investments, and government spending. As a result, Nigeria's massive infrastructural gap has hampered economic growth and competitiveness over time. Nigeria's infrastructure is currently worth roughly 35% of GDP, compared to 70% for larger economies." Unfortunately, between 2009 and 2013, Nigeria invested only $664 per capita per year in infrastructure, or 3% of GDP, compared to an average of $3,060 or 5% of GDP in industrialized countries. Furthermore, just about 56% of Nigerians have access to power, compared to 80% in wealthy countries. This level of access equates to around 24 hours per week (Aderinokun, et al, 2017). With this perilous condition depicted, foreign involvement is required immediately, necessitating FDI to bridge the infrastructure deficit. There is some positive news for Nigeria's infrastructure landscape in the middle of this bad news. The World Economic Forum's recent study gives Nigeria reason to be optimistic. According to the Global Competitive Index report, Nigeria was placed 115th out of 140 nations evaluated. According to Proshare (2018), the current ranking indicates that Nigeria has improved in four of the twelve ranking pillars, as well as in terms of infrastructure expansion, over the previous year's ranking and performance. Nigeria dropped three places from its 2017/2018 ranking of 112 out of 135 countries, according to the report. Infrastructure, health, business dynamism, and innovation capability are among the areas where it has improved. The GCI rates countries based on their performance in these key areas: 1. Institutions; ICT Adoption; Macroeconomic environment ; Skill; Product .Market; Labour Market; Financial System; Market Size; Business Dynamism and Innovation capability. However, the report stated that while Nigeria has progressed in the lower pillars in order to raise its scores, it is still ranked low

overall. As a result, it requires improvement in a number of areas, including Institutions; ICT Adoption; Macroeconomic environment; Skill; Product Market; Labour Market and Financial System (Proshare, 2018).

Information and Communication Technology Infrastructure

The introduction of ICT has brought many benefits to society and nations that have adopted it at all levels. Nigeria is not excluded. Since embracing the digital and ICT worlds, it has reaped numerous benefits, including a positive economic impact. Consider the scenario of broadband internet access. According to recent government reports, high-speed broadband networks that would offer every Nigerian with fast, dependable, and affordable internet access are a vital necessity for Nigeria to become one of the world's leading economies by 2020. Broadband has been defined as a disruptive technology that levels the playing field and allows enterprises to access regional, national, and international markets regardless of location. The enormous success of digital mobile services provides an excellent foundation for developing a national broadband strategy. The Federal Government is thought to be committed to overcoming highlighted problems in Nigeria's desire for increased broadband penetration and will work with state governments, the private sector, and other stakeholders to accomplish this aim. The government also recognizes that some incentives may be needed to encourage service providers to expand into areas where they are judged less commercially feasible. The federal government believes that ubiquitous broadband services are in the national interest and that no effort should be spared to reach all of the country's currently unserved or underserved areas. To improve access to infrastructure, the private sector has committed to open up existing infrastructure, including as transmission networks and fiber ducts, to allow for faster cross-country service delivery. This must be done using transparent cost-based pricing that can be established immediately and will be applied to all future network deployments. Mobile broadband is the principal mode of nationwide distribution due to the scarcity of wired last mile access infrastructure. Wherever possible, efforts shall be made to encourage the deployment of fiber to the home or premises. Other critical and urgent requirements will include: declaring ICT/telecoms infrastructure as critical national infrastructure that requires special protection; obtaining ROW fee waivers from state governments interested in developing digital havens of highly connected communities; launching awareness-raising campaigns to achieve widespread acceptance of broadband's transformative impact on society; and conducting digital literacy programs at all levels.

Similarly, the economic benefits of investing in broadband are substantial and widespread. Broadband penetration is universally acknowledged to have a beneficial impact on GDP growth. According to a 2009 World Bank study, a 10% increase in broadband penetration results in a 1.38 percent rise in GDP growth for low- and middle-income nations. The FMCT performed a test pilot for a 'micro-work' initiative in the first half of 2013, giving 3500 otherwise unemployed youngsters access to freelance crowdsourcing via the internet. Over USD 121,163 in revenue was generated by a little over 2000 active registrants serving

42 clients globally in only two months. The exercise was a tremendous success, demonstrating how broadband access improves productivity and accelerates innovation, resulting in job creation and economic growth. In 2010, the Nollywood film business in Nigeria ranked third in terms of global income. In the three years from 2010 to 2012, it generated close to N126.4 billion (about $800 million). Hollywood in the United States and Bollywood in India are the two film industries that are ahead of Nigeria's. In 2010, the global film and entertainment sector brought in N14.5 trillion (USD $90.6 billion). In 2012, the figure was expected to rise to N16.2 trillion (USD102.7 billion).

Online media services such as YouTube, NetFlix, iTunes, and other media streaming or video-on-demand digital entertainment services are becoming increasingly popular around the world, but contemporary online entertainment would not exist without broadband. Music, movies, videos, TV series, and radio material downloads account for the majority of consumer bandwidth requirements. The demand for fast video material downloads, such as a movie or TV show, necessitates a large amount of bandwidth. To assure speedy delivery of less than twenty-five seconds to the end user, a single video download (usually 400MB) over the internet will likely require at least 20Mbps in data transmission rates. Narrowband dial-up users are no better off than those without internet access in terms of their ability to use (or not use) the internet for high-quality, high-definition entertainment in such circumstances. The global phenomenon of the movie industry has increased demand for video traffic among mobile TV, desktop TV, cable TV, and HDTV viewers. As more people use the internet for pleasure, demand on internet access infrastructure grows around the world, driving a massive global transition toward high-capacity broadband networks.

According to a report published by Premium Time on June 18, 2018, Nigeria's Internet users increased to 103 million in 2018, up from 40 million in 2012.

Furthermore, Oxford Business Group publications (2018) offered a concise picture of Nigeria's ICT and internet growth prospects and contributions to the economy. Nigeria's ICT sector has risen to become a major non-oil development engine, according to the report, thanks to strong mobile uptake and rapid expansion of mobile internet services. However, the National Bureau of Statistics indicated that the telecoms and information services sector's contribution to GDP declined from N6.1 trillion ($19.7 billion) in 2018 to N5.9 trillion ($19.1 billion) in 2021, or 8.7% of GDP. BudgIT Nigeria, a local think tank and NGO, stated in April 2022 that the ICT sector contributed N8.6 trillion ($27.8 billion) to the economy in 2021, owing to the increased adoption of smartphones and mobile internet. However, with 51.4 percent of the population residing in rural regions and poor ICT infrastructure outside of large cities, there is still opportunity for improvement, according to BudgIT. The ICT industry's contribution to GDP reached an eight-year high of 9.2 percent in the first quarter of 2018, with N1.5 trillion ($4.8 billion), according to the commission. The ICT sector grew by 13.1 percent year on year in the next quarter, accounting for 8.2 percent of GDP (Oxford Business Group, 2018).

According to reports, investment in next-generation mobile broadband networks has aided rapid internet penetration, with the NCC reporting that the total number of mobile internet subscribers in Nigeria nearly tripled between January 2013 and January 2016, reaching 92.2 million, before rising to 100.2 million in January 2018 and 104.6 million in August 2018. Furthermore, in Nigeria, mobile internet users account for the bulk of internet users. There were 66,144 CDMA subscribers, 12,602 fixed-internet subscribers, and 359,501 VoIP subscribers in August 2018. Multilinks and Visafone provide CDMA services, while ipNX, MTN Fixed, 21st Century Technology, and Globacom Fixed provide fixed services. VoIP services are available via Smile Communications and Ntel (Oxford Business Group, 2018). Despite the high adoption of customers, the report stated, there is still plenty of room for expansion, particularly outside of the country's big cities. In light of this, it is critical for businesses and governments to invest in Internet infrastructure development in order to spur growth and job creation. As a result, infrastructure businesses have a big role to play in this. The NCC revealed plans to license at least one business in each of Nigeria's six geographical zones in late 2013, arguing that entities entrusted with delivering new fiber-optic infrastructure were part of the government's telecoms policy. According to the NCC's "Open Access Next Generation Fibre Optics Broadband Network" study issued in November 2013, these businesses are tasked with providing fiber access to network operators in order to meet NNBP broadband penetration targets. While progress has been made on the issue, more has to be done. According to a related NCC report from 2017, infrastructure company progress was moderate until December 2017, when the NCC announced it had licensed two additional firms: Zinox Technologies, which will deploy broadband infrastructure in the country's south-east region, and Brinks Integrated Solutions, which will operate in the north-east region. However, local media reported in March 2018 that, more than two years after infrastructure company licensure was rolled out, Nigerians have yet to benefit from broadband expansion, with penetration remaining at 22 percent as of late October 2018. (Oxford Business Group, 2018).

Foreign Direct Investment, infrastructure growth and Economic Growth

Foreign Direct Investment (FDI), which has been explained as a source of injecting greenfield investment, capital technology transfer, technical skills, entrepreneurship, and investment funds, among other things, into developing countries, mostly comes from developed countries. This is predicated on the assumption that FDI externalities benefit indigenous or emerging countries greatly by increasing productivity, employment, exports, and international integration (Danmola et al, 2017). However, several earlier researchers, such as Chakrabortly and Basil, (2002); Love and Chandra, (2004), have claimed that the theory of trade and foreign direct investment work as growth catalysts, and that this is achieved through the government's trade and FDI liberalization policies. According to Tian, Lin, and Lo (2014), an increase in the FDI ratio is expected to contribute to rapid economic growth. However, it is important to remember that FDI does not always help a host country's economy flourish, and this is aided by the development of infrastructure that can generate jobs and money for the government. This is because FDI can have a negative impact on the economy when multinational corporations' actions result in a significant reverse of flows in the form of profits, dividends, and considerable concessions from the host country (Akinlo, 2004). This is supported by the assertion of Okonnkwo et al, (2015)

that FDI in many cases has undermined rather than increased development in countries. For example, a lack of tax income, considerable profit repatriation, capital flight, and detrimental impact on local enterprises, tax incentive regimes intended at aiding the economic growth of a country or countries' rural or underdeveloped sectors.

Theoretical Framework

Social exchange theory and social theory of development are the theories adopted for this study.

Social Exchange Theory

Social exchange theory is a social psychological and sociological perspective that explains social change and stability as a process of negotiated exchanges between parties. According to social exchange theory, human relationships are formed through the use of a subjective cost-benefit analysis and the comparison of alternatives (Homans, 1961). Homans, on the other hand, summarizes the system in which social exchange occurs in three propositions: success, stimulus, and deprivation–satiation. Success proposition entails the situation in which a person is rewarded for their actions and tends to repeat the action; Stimulus proposition entails the situation in which the more frequently a particular stimulus has resulted in a reward in the past, the more likely it is that a person will respond to it; and deprivation–satiation proposition entails the situation in which the more frequently in the recent past a person has received a particular reward, the less valuable any further unit of that reward becomes. Furthermore, Blau (1964) defined social exchange as the exchange of activity between at least two people, whether tangible or intangible, rewarding or costly. As a result, when this situation arises in an organizational setting, there will be an exchange. In exchange for their commitment to fully invest directly into the economy and thus increase capital importation and inflow into the nation, the government should provide public goods and services as well as incentives that will create the right environment for investors. However, this relationship must be framed in a broader context, going beyond simple exchanges of investments and capital inflows to the construction of infrastructures that will have a long-term impact on the economy.

Social exchange theory can be traced back to Thibaut and Kelley (1959), Homans (1961), Kelley and Thibaut (1978), and Rusbult (1983), according to Kendra (2018, February 11). "Social Behavior as Exchange," by sociologist George Homans, was published (Homans, 1961). He defined social exchange as the exchange of action between at least two people, whether material or intangible, rewarding or costly. Other theorists continued to write about Homans' theory after he developed it, particularly Peter M. Blau and Richard M. Emerson, who, along with Homans, is often regarded as the key developers of the exchange viewpoint in sociology (Emmerson, 1976). Homans' work focused on the individual behaviour of actors in their interactions. Despite the fact that there are numerous modalities of communication, Homans focused his research on dyadic exchange (Homans 1961).

John Thibaut and Harold Kelley are known for concentrating their research on psychological concepts such as the dyad and small group (Emmerson, 1976). From his work on anthropology focusing on systems of generalized trade, such as family systems and gift exchange, Lévi-Strauss is credited with contributing to the creation of this theoretical paradigm (Cook & Rice, 2006). Social exchange has continued to be used in a variety of settings, including taxation and tax incentives, where exchange and relationship formation and maintenance are essential. Surprisingly, this hypothesis has its detractors. It has been critiqued for assuming that people make rational judgments all of the time, and critics argue that this theoretical model fails to highlight the importance of emotions in our personal lives and interactions with others. This theory also diminishes the influence of social structures and forces, which unconsciously alter people's perceptions of the world and their experiences within it, as well as our interactions with others (Crossman, 2016). Despite its flaws, it is significant and valuable in describing the interaction between the government and foreign investors since, in the correct atmosphere, foreign direct investment inflows will increase and more commitment will be observed.

Social Theories of Development

Schumacher and other proponents of this approach emphasize the importance of human capital in development. In the early 1950s and 1960s, economic crises threatened both industrialized and developing countries, prompting the development of social theory. Schumacher attacked the modern belief that "larger is better" and replaced it with "little is beautiful" in order to diagnose the dilemma and propose a solution (1973, p150). He claimed that bigness is impersonal, insensitive, and obsessed with power, whereas smallness is free, efficient, creative, pleasant, and long-lasting. Technology was the most crucial area in which he wanted to adopt smallness, primarily because it has shaped the modern world (Varma, 2003). Less developed countries, according to Schumacher, should not imitate Western technological development based on the trickle-down approach; instead, they should embrace an alternative path of development that is less expensive and thus more accessible to ordinary people, but more productive than indigenous technology. Economic progress could be seen with the presence of these, more productive aspects of the economy orchestrated by the availability of technology breakthroughs and pursuit. The philosophical concepts woven around low-cost, small-scale technology as an alternative to high-cost, large-scale technology are said to be what distinguish Schumacher's work (Varma, 2003).

The key to economic progress, which can subsequently lead to development, was the presence of education, health, fertility, and other better standards of living, according to the social theories. Second, attention has switched away from total economic development and onto poverty, inequality, urbanization, and other social evils. When social problems and inequality, as well as the poverty rate, are at a minimal, development is said to have been achieved. And, according to the proponents of this theory, the availability of revenue that is wisely used for the same objective will bring forth these development indicators. The

source of the funds for economic growth and development in Nigeria and most other countries is foreign direct investment revenue.

Review of Empirical Literature

Obwona (2011) investigated the factors that influence FDI in Uganda and their impact on growth, finding that macroeconomic and political stability, as well as policy consistency, were major factors in determining FDI inflows, and that the impact of FDI was positive but small. He also mentioned that foreign direct investment had a favorable impact on technology transfer economic growth.

The empirical relationship between foreign direct investment and Nigerian economic growth was explored by Solomon and Eka (2013). The research encompassed the years 1981 to 2009, and panel data from the Central Bank of Nigeria's Statistical Bulletin was used. The statistical approach used to determine the association between FDI and economic growth in Nigeria was ordinary least square. Their findings demonstrated that foreign direct investment had a favorable but minor impact on Nigeria's economic growth over the time period investigated.

Between 2003 and 2012, Owolabi and Ayanakin (2015) evaluated the influence of insecurity on foreign direct investment in Nigeria. Vote on security and defense (VSD) secondary data was proxied for insecurity and FDI inflow for FDI. Ordinary least square regression was used to examine the data. Foreign Direct Investment (FDI) and insecurity have a negative link, according to the findings. The report closes by advocating that strong policy measures be adopted to address Nigeria's state of insecurity in order to attract more foreign direct investment, which is critical for the country's economic development.

Okonwkwo, Egbunike, and Udeh (2015) looked at the impact of foreign direct investment on Nigerian economic growth from 1990 to 2012. Ordinary least squares (OLS) estimate techniques were used to analyze secondary data in this study. The secondary data was mostly gathered from the CBN's statistical bulletin, annual report, and statement of accounts. The result indicates that Export is positive, implying that there is a positive association between economic growth and export; in conclusion, FDI has resulted in a rise in export in Nigeria.

Akanegbu and Chizea (2017) tested whether FDI has a positive and significant impact on output growth in the Nigerian economy using a model based on a modified neoclassical production function with FDI as an input in the production process. The influence of FDI on economic growth in Nigeria was determined using E-Views and the unit root test and Granger-Causality test. The findings of the estimation analysis revealed that FDI and output growth in the Nigerian economy had a favorable association. According to the study, policies that support FDI should be advocated.

Similarly, Ezefule (2018) contends that Nigeria's current spate of insecurity not only poses serious challenges and threats to the country's macroeconomic stability, but also contributes to the loss of infrastructures, properties, and human as well as economic disruption, pushing out the impact of foreign direct investment. In a recent study, Ezefule (2018) looked at the relationship between insecurity and foreign direct investment in Nigeria. He found that between 2000 and 2012, over 7000 Nigerians were killed in political, religious, and ethnic conflicts during post-election violence, which had serious implications for foreign direct investment and economic growth in the country. Domestic terrorism and social unrest, the study found, not only breed uncertainty in the investment and financial climates, but also increase security costs, reduce output and productive capacity, reduce tourism, damage infrastructure, harm the nation's image, and displace foreign direct investment, all of which have implications for economic growth and development in developing economies.

Onyeabuchi (2018) investigated the influence of insurgency in Nigeria on foreign direct investment. The study found that the rising incidence of insurgency in Nigeria has hampered foreign direct investment in the country, using content analysis and literature review methods. Furthermore, the insurgency is a roadblock to the country's real socioeconomic growth and prevents investors from pursuing business opportunities. Insurgency is a threat to Nigeria's economic development and growth, according to the report, and it is caused by years of leadership corruption and misrule, economic marginalization, high unemployment, poverty, and environmental degradation. It was suggested that the government match words with deeds in dealing with security concerns by adequately equipping security officials to deal with insurgency and other threats. According to the findings of this research, security is required for the nation to realize the benefits of FDI.

The majority of studies in the reviewed literature indicate that when the correct environment is provided for FDI to thrive, the foreign direct investment will expand and, as a result, affect the economy.

Methodology

This study uses an explanatory, historical, and correlational research design. The goal of an explanatory research design is to effectively explain demographic or social phenomena features (Saunders, Lewis & Thornhill, 2007). When a quantitative framework is used for the research, it is usually easy to establish the relationship or influence of one variable on the other. In the sense that historical data is used, such as foreign direct investment inflows and infrastructure growth measurements (Information & Technology Infrastructure) during an 18-year period. However, the goal of historical research design is to gather, verify, and synthesize information from the past in order to establish facts that either support or reject the hypothesis under consideration. Furthermore, the correlational method employs

regression analysis, which aids in the measurement of the relationship between two variables. It assists in determining whether one variable effects the other. Unlike in experiments, the link is observed in a more realistic setting, making it appropriate for this research.

The study's population spans 57 years (1964 to 2021), from after Nigeria's independence to the year 2021, when the economy is beginning to recover from the 2015 recession and 2020 shut down of economy as result of Covid 19. Although foreign investments existed prior to Nigeria's independence, the preparation of economic growth indicators to measure the country's economic standing in the larger scheme of things began when it earned independence from colonial authority. As a result, the study was limited to the eighteen (18) year period (2004-2021) for which composite data records were accessible, as this provided a reasonable time frame for the research. Data on infrastructure growth from the same period span (2004-2021) was also used. The convenience sampling strategy was utilized in this study. It's a sample chosen only for the sake of convenience, as the name implies (Baridam, 2008). The variables in this sample were chosen for their accessibility and ease of measurement. As a result, statistics for both FDI inflow and infrastructure growth were purposefully picked for this analysis for eighteen years. FDI inflow and ICI for infrastructure growth are the variables. The data for the study were collected from Central bank of Nigeria (CBN) statistical bulletin, National Bureau of Statistics, and African Development Bank Group website.

The data was evaluated using Regression Analysis, which was led by a regression model, to determine the relationship between the variables discovered and if they influenced one another. This assisted in the testing of hypotheses.

We create a model as a framework for testing based on the study's conceptual framework. Infrastructure Growth (IFG) is the dependent variable, whereas FDI (foreign direct investment) is the independent variable (FDI). Infrastructure growth is also proxied by the Information and Communication Technology Infrastructure (ICI). In the same way, FDI inflow is a dimension (FDIN)

Using the Ordinary Least Square multiple regression formula which states:

Y = b + b x + b x + ……..+b x + e where y is the dependent variable from the population of the interest, b b b are the population partial regression coefficients and X X X are

0, 1….. k 1j 2j …… kj

observed values of the independent variables X X X respectively.

1, 2…… k,

In view of the above, the following models are developed for this study:

IFG = f(FDI) ---------- (1)

ICI = f (FDIN) --------- (2)

In the linear form, Equation (2) converts to:

ICI = b +b (FDIN) + e --------- (3)

0 1

Using Statistical Package for Social Sciences (SPSS) software, the variables were subjected to complementary statistical test and the results will be used for analysis and for hypothesis verification.

Results and Analysis

Table 1: Regression result for hypothesis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin - Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.475[a]	.225	.177	32426442.4 5436	.225	4.658	1	16	.046	.362

a. Predictors: (Constant), FDI Source: SPSS version 21.0 output of data)

b. Dependent Variable: INFRS

The table 1 showed that calculated F value of 4.658 was significant at0.046 level which is lower than 0.05 chosen level of probability, hence the null hypothesis is rejected and alternate accepted which means there is a significant relationship between foreign direct investment inflow and Information & Communication Technology Infrastructure in Nigeria.

Based on the results obtained, the hull hypothesis was rejected and the alternate accepted that foreign direct investment inflow has a significant and positive relationship with infrastructure growth when measured on the Internet connectivity (information and communication technology) measures of Infrastructure growth. Furthermore, with the results obtained R value of 0.475(46%), R squared value of 0.225(22.5%) of FDI inflow and INFRS in Nigeria shows that 46 % of the total variation of infrastructure growth in Nigeria in terms of Internet connectivity aspect of information and communication technology infrastructure was due to the effect of foreign direct investment inflow in Nigeria within the period of study. On adjusted bases, 0.177 (18%) ICI was 18% relative to the foreign direct investment inflow in Nigeria within the period. The Durbin Watson (DW) is 0.362 and it is less than 2. This however shows that there is an evidence of positive serial correlation between foreign direct investment inflow and Information and communication Technology infrastructure in Nigeria.

To summarize, the significant and positive relationship discovered to exist between foreign direct investment and infrastructure growth in terms of the internet connectivity aspect of ICT implies that FDI orchestrated by the provision of infrastructure and the creation of industries will result in the creation of jobs, an increase in citizens' income levels, and thus economic growth, which will lead to more developmental activities in place for the citizens. The result of this study is in tandem with the findings of earlier studies such as Okonkwo, Egbunike and Udeh (2015) and Akanagbu and Chizea (2017) as reviewed. The study of Okonwkwo, Egbunike and Udeh (2015) indicated that export assumes a positive sign which implies that there is a positive relationship between Economic growth seen in terms of infrastructure growth and capital formation and Export, thus FDI has led to increase in Export in Nigeria. That of Akanegbu and Chizea (2017) showed that there exists a positive relationship between FDI and output growth in the Nigerian economy.

Conclusion and Recommendation

The significant impact of FDI on infrastructure expansion implies that FDI inflow is a critical part of government sources for attaining economic growth objectives such as infrastructure development and transformation of indigenes' lifestyles and places. In other words, FDI has a favourable and significant association with the Internet connectivity aspect of infrastructure growth in the information and communication technology sector. This also indicates that FDI revenue, when properly utilized in terms of infrastructure, employment creation due to the construction of industries, and thus the creation of goods and services, exportation would be achieved, citizens' income levels would likely rise, and overall economic growth could be achieved, resulting in increased nation-wide development.

The following suggestions are made based on the findings and conclusions:

1. There is a need to push for a boost in FDI inflow by enacting policies and providing an enabling environment that would encourage more foreign investors to participate in Nigeria's economic progress.

2. The government should work to secure political stability as well as better security. Because FDI inflow is a major source of government funding for economic growth and development efforts, it is inhibited by political instability and insecurity. As a result, actualizing economic growth objectives may be jeopardized.

3. Furthermore, the significant impact of FDI on infrastructure growth can be seen sooner when corruption, evasion, and tax avoidance are curtailed and offenders

punished, resulting in an increase in government revenue base and prudent use of that cash for economic growth and development.

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