

Nexus between Telecommunications FDI and Economic Growth: Evidence from Nigeria (2008 – 2018)

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Abstract. This research work studied the impact of Telecommunications Sector Foreign Direct Investment on the Performance of the Nigerian Economy. It focuses on the role played by the flow of Foreign Direct Investment (FDI) by the Telecommunications sector of Nigeria on the growth of the economy. The Error Correction Mechanism (ECM) econometric method was used to examine the regression model. The results of the empirical analysis showed that Foreign Direct Investment has contributed significantly to the performance of the Telecommunications Sector in terms of its contribution to the Gross Domestic Product of Nigeria. Some of the recommendations made in the research project are that: the government should initiate policies that will promote the long-run growth of the Telecommunications sector and the economy at large; infrastructural facilities such as power supply should be efficiently provided; government should focus on maintaining political stability which should serve as key to sustainable growth and development of the telecommunications sector of the Nigerian economy etc.

Keywords: Telecommunications, Economic Growth, Foreign Direct Investment, GDP, Error Correction Model.

1. Introduction

The continuous availability of information in the 21st century world has become a necessary condition for rapidly growing an economy both in developed and developing countries. Recent progresses in telecommunications technology have been an important avenue for information exchange to develop as a valuable commodity. Countries and

sectors equipped with the requisite telecommunications systems are rapidly moving into information-based economic growth. Telecommunication sector across the world has been identified as one with composite effect on almost all other sectors of the economy. Its function in any economy is described as a strategic one aimed at promoting economic growth and as one that has the linkages with other sectors (Osotimehin, Akinkoye and Olasanmi, 2007). For the developing world, like Nigeria, a modern telecommunications infrastructure is not only essential for domestic economic growth, but also necessary for participation in increasingly competitive world markets and for attracting new investments (Awoleye, Okogun, Ojuloje, Atoyebi and Ojo, 2012).

The level of development in the telecommunications industry all over the world is very rapid as one innovation replaces another in a matter of weeks. A major breakthrough is the wireless telephone system, which comes in either fixed wireless lines or the global system for mobile communication (GSM). Telecommunication had played a significant role in communication and encourages investment. In respect of employment, Manuaka (2008) and Okereocha (2008) found that, over 1,000,000 Nigerians have been directly and indirectly employed by the telecommunication operators. While supportive enterprises and service organizations like banking, haulage, consultancies, insurance etc. have themselves blossomed. According to Soyinka (2008), mobile phone has empowered the poor by opening up veritable windows of wealth generation for them to get out of the scourge of poverty. Also, the introduction of mobile telecoms has the potential for reducing the cost of doing business and increasing output. It has also improved entertainment and

networking among Nigerians, using short message service, SMS, and the signal calls. Accordingly, the telecommunication sector has become a major tool for empowering Nigerians, and with the continued inflow of massive investments and doggedness of the industry regulator, the future looks bright.

The role of telecommunication infrastructure in enhancing economic growth has recently become a subject for discourse in the economic literature. According to economists, the development of a modern nation to its full potential in contemporary world can never be attained without adequate telecommunications infrastructure (Osotimehin, Akinkoye and Olasanmi, 2007). This implies that the development of telecommunication infrastructure will significantly enhance economic growth and development. Nigeria like most developing countries lacks the requisite capital to finance the telecommunications sector because of the fact that it is capital intensive; and as a result of low saving. The most viable alternative is to attract foreign capital which is readily available when high returns on investment can be guaranteed. The relative advantage(s) of Foreign Direct Investment (FDI) as a productivity-enhancing package is now widely acknowledged in the literature. Fosu and Magnus (2006) stressed that foreign capital investment can stimulate local investment by increasing domestic investment through links in the production chain. As a result of the recent giant strides in the sector, so far, no proper assessment has been made as to the volume and impact of new job creation and extent of growth in national output due to the growth in the Nigerian telecommunication sector. This study therefore examined the impact of Telecommunication FDI on economic growth in Nigeria for the periods of 2008 to 2018.

2. Literature Review

2.1. Conceptual Literature

According to IMF (2003), FDI refers to the capital flows from abroad that is invested in the productive sector of the economy and are usually preferred over other forms of finances because they are non-debt creating, non-volatile and their returns depend on the performance of the projects financed by the investors. FDI also facilitates international trade and transfer of knowledge, skills and technology. It is also described by UNCTAD (2004) as the source of economic development, modernization and employment generation, whereby the overall benefits triggers technology spillover, assists human capital formation, contributes to international trade integration and

particularly exports; helps to create a more competitive business environment, enhances enterprise development, increases total factor productivity and improves efficiency of resource use (Chatterjee, 2009).

Information and communications technology (ICT) is often used as an extended synonym for information technology (IT), but is a more specific term that stresses the role of unified communications. ICT provides access to information through telecommunications. It is similar to Information Technology (IT), but concentrates mostly on communication technologies such as the Internet, wireless networks, cell phones, and other communication mediums. ICT includes any communication device or application, encompassing: radio, television, cell phones, computer, laptops, tablets, and network hardware and software, so on. ICT also provides the various services online and applications associated with them (Awolaye, Okogun, Ojuloge, Atoyebi and Ojo, 2012).

2.2 Theoretical Framework

The endogenous growth models theory (Barro, 1991; Romer, 1990; Helpman, 1991) will be the theoretical framework for the study; while neoclassical theory assumes the notion that long term investment is a great determinant of the economic growth of the country, endogenous growth model theory explained that physical investment is not a measure of economic growth of a country but the effectiveness and efficiency in the use of these investments. Economic models of endogenous growth have been applied to examine the effects of FDI on economic growth through the diffusion of technology (Barro, 1991). Romer (1990) argues that FDI propels economic growth through strengthening human capital, the most essential factor in R&D effort; while Grossman and Helpman (1991) emphasize that an increase in competition and innovation will result in technological progress and increase productivity and, thus, promote economic growth in the long run. From the analyses made under this theory, it can be discovered that the theory suggests a better relationship between the FDI and economic growth of the developing countries. Several economic theories attempted to evaluate the role of FDI in the country both from positive and negative point of view. Neoclassical perspective is based on a basic principle in economics, which suggests that economic growth requires capital investment in the form of long-term commitment (Adams, 2002).

Furthermore, comparing endogenous growth model with neoclassical model; while neoclassical theory assumes the notion that long term investment is a great determinant of the economic growth of a country; endogenous growth theory explained that physical investment is not a measure of economic growth of a country but the effectiveness and efficiency in the use of these investments. Economic models of endogenous growth have been applied to examine the effects of FDI on economic growth through the diffusion of technology. Romer (1990) argues that FDI propels economic growth through strengthening human capital, the most essential factor in R&D effort; while emphasizing that an increase in competition and innovation will result in technological progress and increase productivity and, thus, promote economic growth in the long run.

2.3. Empirical Literature

Okonkwo, Asika and Ofurum, (2019) evaluated the extent to which Foreign Direct Investment (FDI) has contributed to the Gross Domestic Product (GDP) in Nigeria from 2000 to 2017. The study with the aid of OLS revealed that foreign direct investment has positive and significant effect on financial sector Gross Domestic Product in Nigeria. It also showed that Foreign Direct Investment on oil sector has positive and significant effect on Gross Domestic Product in Nigeria. Based on findings, the research recommended among other things that Policy makers should devise strategies to increase the FDI on financial sector and offer incentive for long investing and listing on the stock market so that the main objective of the government to stimulate growth will be fulfilled. Also, Mobosi and Madueme (2016) examined the effect of FDI inflows into Nigeria on real gross domestic product (RGDP) growth and how these external inflows can bring about achieving Goal-17.3 of mobilizing additional financial resources for developing countries from multiple sources. The model constructed was estimated using the GMM estimation technique. The study found that labour quality has a positive and significant effect on RGDP in line with theory. Equally, they noted that capital intensity displayed a significant negative effect on RGDP in Nigeria. The study therefore recommends that policy makers in Nigeria should incorporate into her broad policy, improvement in capital intensity as bedrock to growing the economy through FDI spillover effects.

Some earlier studies had queried the robustness of models that ignored the possible interaction between foreign direct investment and other capital inflows. For instance Odhiambo (2011) and Khaddraoui

(2012), introduced financial development to a model that examined the effects of foreign direct investment on output growth. The conclusion from the papers was that the effect of foreign direct investment could depend on the level of financial development in developing country. In many instances there are capital flights especially in developing countries and also some of the capital inflow are either misappropriated or invested in less productive ventures (Saibu and Keke, 2014). Also, Justin and Feliciano-Cesterob, (2021) observed that despite the significance attached to foreign direct investment (FDI) by Multinational enterprises (MNEs) and all countries around the world, there are no comprehensive review of the FDI literature. Moreover, those that have been published, focus on subsets of FDI. Their study systematically examines the empirical as well as theoretical research on FDI through an analysis of 500 articles published during the last five decades. Theoretical models, methods, context, and contributions to scholarship were reviewed. They concluded that FDI has evolved as the most significant area of international business that has impacted the world economic growth positively.

Furthermore, Imoughele (2020) examined the nexus between external financing and the Nigeria industrial sector output from 1986-2018. The study employed the Auto Regressive Distributed Lag (ARDL) bounds testing approach to co-integration analysis to establish the long run relationship between the relevant time series data. The result revealed that the industrial sector output and selected external financing variables included in the models have a long run relationship. The result also shows that in the short-run, the external financing has significant impact on Nigeria industrial output while on the long run foreign direct investment, remittance and official development assistance have direct and significant effect on Nigeria's industrial output. The study recommends that short run deregulation policies should be tailored towards the attraction of foreign finances to augment domestic capital needs for the expansion of and improve the Nigerian industrial sector output, observing that there is need to spend large amount of remittance on productive investment in the industrial sector instead of consumption.

In a survey of African countries Dupasquier and Osakwe (2006) identified poor corporate governance, unstable political and economic policies, weak infrastructure, unwelcoming regulatory environments and global competition for FDI flows as impediments standing in the way of attracting significant FDI flows. This corroborates the findings of Jerome and Ogunkola (2004) which assessed the magnitude,

direction and prospect of FDI in Nigeria. The authors ascribed the low level of FDI in Nigeria to deficiency in the country's legal framework concerning corporate law, bankruptcy and labour law, in addition to institutional uncertainty. The investigation of the empirical relationship between non-extractive FDI and economic growth in Nigeria was the focus of Ayanwale (2007) who reported that the determinants of FDI in Nigeria are market size, infrastructure development and stable macroeconomic policy. In his study of the determinants of FDI in Nigeria, Anyanwu (2011) 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 the FDI. He further noted that the abrogation of the indigenization policy in 1995 encouraged FDI inflow into Nigerian and that effort must be made to raise the nation's economic growth so as to be able to attract more FDI.

Accordingly, studies such as Ayanwale (2007) and Akinlo (2004) focused on the oil and non-oil sector. These studies assessed the impacts of FDI inflows to the extractive industry on Nigeria's economic growth. Akinlo (2004) specifically controlled for the non-oil FDI dichotomy in Nigeria. Using error correction model, he investigated the impact of foreign direct investment (FDI) on economic growth in Nigeria. 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. Egwaikhide (2012) also investigates the relationship between foreign direct investment (FDI) and economic growth in Nigeria, using Johansen Cointegration technique and Vector Error Correction Method in which FDI is disaggregated into various components. The Johansen Cointegration result establishes that the impact of the disaggregated FDI on real growth in Nigeria namely: agriculture, mining, manufacturing and petroleum sectors is very little with the exception of the telecom sector which has a good and promising future, especially in the long run. Furthermore, past level of FDI and level of infrastructures are FDI enhancing.

The exploration of the possibility of the existence of causality between FDI and economic growth in

Nigeria in the pre and post deregulation era was conducted by Ogundipe and Aworinde, (2011) using Granger causality analysis. The result shows one-way causality relationship from economic growth (GDP) to FDI in the pre deregulation era (1970-1985) and the absence of casual relationship during the post-deregulation era (1986-2007).

3. Methodology

3.1. Model Specification

Employing a model developed by Awoloye, Okogun, Ojuloge, Atoyebi and Ojo (2012), with little modifications, our definitional econometric models for this study can be specified as follows:

$$G = f(FPi, TCy) \dots\dots\dots (i)$$

Where G = Gross Domestic Product (GDP) FPi = Foreign Private Investment in telecommunication TCy = Telecommunication contribution to GDP. While the equation (i) served as the main model, the equation (ii) is in linear form.

$$G = \alpha_0 + \alpha_1 FPi + \alpha_2 TCy + \epsilon \dots\dots\dots (ii)$$

In equation (ii), the dependent variable is GDP (G), while the independent variables are private investment in Telecommunications measured as total value of foreign capital spent in telecommunication (FPi) and telecommunications contribution to GDP (TCy). This study showed the effect of telecommunications investment on economic growth α_0 , α_1 and α_2 are the magnitude while ϵ is the error term.

3.2 Sources of Data and Techniques of Analysis

The study used secondary data that characterizes the aggregate economy and telecommunication sector sourced from World Bank Development Indicator Database and Central Bank of Nigeria (CBN) Statistical Bulletin. The study uses the Augmented Dickey-Fuller and test for stationarity of the data, the Johansen co-integration test and test for equilibrium relationship that exists between the variables. The method of analysis used is the Error Correction Mechanism (ECM) with E-views 7 as medium of estimation and the granger causality test.

4. Data Presentation and Analysis of Results

4.1. Unit Root Test Result

Table 1: Unit Root Test of Stationarity; H0: All series have a unit Root

Variables	ADF Levels	ADF Difference	Remarks
G	-2.2810[1]	-3.213252[1]**	1(1)
FPI	-1.5272[1]	-3.482820[1]**	1(1)
TCY	-2.7151[1]	-3.27463[1]**	1(1)

ADF Critical Value at 5% = 3.098896

** indicates significant at 5%, [1] indicates that a maximum lag length of 1 was included in the test

Table 1 shows the result of Augmented Dickey-Fuller (ADF) test carried out to determine the stationarity of the data. The result indicates that all the variables are non-stationary at levels as all their calculated values are less than the critical values at 5% in absolute terms. The variables are subjected to stationarity test at first difference and all are stationary at the same level and are integrated of the same order of one 1(1). Therefore a test for co-integration is necessary as the presence of a unit root in the series suggested.

4.2. Co-integration Test Result

Table 2: Johansen Co-integration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.887311	42.36013	29.79707	0.0011
At most 1	0.610072	13.97949	15.49471	0.0835
At most 2	0.125019	1.736189	3.841466	0.1876

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

Source: E-views 7.0

Having tested for unit root on all the variables under investigation, the study proceed to test for co-integration between the variables with the aim of estimating the long-run equilibrium relationship that exist between the variables. The result of trace statistics shows that there is 1 co-integrating equation. The trace statistic value is greater than the critical value at 5% level of significance for at least 1 equation; this indicates a rejection of the null hypothesis of no co-integration in favour of one co-integration relationship between the variables

4.3. Error Correction Mechanism (ECM)

Table 3: Parsimonious Error Correction Model Result

Dependent Variable D(G)			
Variable	Coefficient	Std. Error	t-Statistic
C	0.421998	122.718	-2.69252
D(FPI(-1))	0.591951	5.52894	2.45833
D(TCY(-1))	0.468117	3.98102	4.89023
ECM(-1)	-0.612914	0.32818	2.79282
R-squared	0.845914		
Adjusted R-squared	0.717510		
F-statistic	6.587883		

Source: E-views 7, 2020

Table 3 shows the result of the error correction model used to relate co-integrated variables in the short-run. The result indicated that 1% increase in foreign private investment in telecommunication (FPI) would lead to an increase in economic growth (G) by 59%. This means that foreign private investment in telecommunication has a positive impact on economic growth in Nigeria during the period under study. Telecommunication contribution to GDP (TCy) also has a positive impact on economic growth in Nigeria as the coefficient of Telecommunication contribution to GDP (TCy) is 0.47. This indicates that 1% increase in Telecommunication contribution to GDP (TCy) would lead to 47% increase in economic growth (G) during the period under review.

The ECM measures the speed of adjustment of a model that deviates from the equilibrium in a short-run and restored to equilibrium. The coefficient of ECM responded to the speed of adjustment towards the long-run equilibrium condition of the model. The result shows the speed of adjustment of -0.61 which means that about 61% of the deviation of variables captured in the study from equilibrium can be restored in 6 years. The F-statistics which measure the overall significance of the model show that the combined parameter is statistically significant.

The coefficient of determination R² is 0.85 which means that 85% of the total variation in economic growth (G) is explained by the explanatory variables captured in the model: foreign private investment in telecommunication (FPI) and Telecommunication contribution to GDP (TCy) while the remaining 15% unexplained is captured by the error term.

4.4. Granger Causality Test Result

Table 4: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
FPI does not Granger Cause G	13	4.09379	0.0597
G does not Granger Cause FPI		1.93861	0.2058
TCY does not Granger Cause G	13	0.05874	0.9434
G does not Granger Cause TCY		0.34032	0.7214
TCY does not Granger Cause FPI	13	1.03618	0.3980
FPI does not Granger Cause TCY		1.02975	0.4000

Source: E-views 7.0

Table 4 shows the result of granger-causality test. As indicated by the result, foreign private investment in telecommunication (FPI) granger cause Economic growth (G) but that economic growth (G) does not granger cause foreign private investment in telecommunication (FPI). This suggests that foreign private investment in telecommunication (FPI) contributes significantly to economic growth in Nigeria. This is consistent with many studies that foreign private investment in telecommunication (FPI) is a source of economic growth (G) (Awolaye, Okogun, Ojuloje, Atoyebi and Ojo (2012). However, there is no evidence of reverse causality from economic growth (G) to foreign private investment in telecommunication (FPI). The result also shows that Telecommunication contribution to GDP (TCy) does not granger cause economic growth (G) and also economic growth (G) does not granger cause Telecommunication contribution to GDP (TCy).

5. Conclusion and Recommendations

This study used national level data to analyze empirically the effect of telecommunication FDI on economic growth in Nigeria. Data for the analyses are sampled between 2008 and 2018 from World Bank Development Indicator Database and Central Bank of Nigeria (CBN) statistical bulletin. The method of analysis used is the Error Correction Mechanism (ECM) with E-views 7 as medium of estimation. The results of this work provided evidence to support the earlier work that foreign telecommunication investments have positive effects on economic performances. Though most studies had focused exclusively on developed countries and the few in developing countries focused on cross-country studies but interestingly, the conclusion drawn from

these wealthy countries using cross-countries data are directly relevant and similar to Nigeria case. The results confirmed the hypothesis that foreign telecommunication investment drives growth. The primary assumption was that foreign telecommunication investments are necessary but not sufficient condition for economic growth. Many factors other than telephone investment were critical to growth, but the lack of this investment hinders growth no matter what resources are dedicated in other areas of the economy. Based on the findings of this study, the following recommendations are thereby suggested in order for Nigeria to attract more foreign direct investment in the Telecommunications sector and harness its benefits better:

- (i) Since the regression analysis revealed that Foreign Direct Investment in the Telecommunication sector impact positively and significantly on the performance of the sector, the government should initiate policies that will promote the long-run growth of the Telecommunication sector and the economy at large. This will go a long way in attracting long-term fund that will be available for productive purposes.
- (ii) A stable political environment was found to be fundamental in attracting foreign investment to an economy. Therefore, the government should focus on maintaining political stability before formulating favourable policies that will attract long-term funds into the country.
- (iii) The government must create a conducive business environment by improving its infrastructural facilities assuring security of life and property and maintains policy consistency in order to boost local investment in the country. It should also set machinery in motion to improve the quality of the labour force through improved educational system, and qualitative and continuous manpower training.

(iv) The capital market should be further deepened through the introduction of derivatives as stock index future, interest and currency future as well as options on individual stock. Furthermore, the regulators of the capital market must continue to strengthen the transparency of the market through effective oversight, professionalism and improved operational facilities so as to boost the confidence of both local and foreign investors in the market.

(v) Since the exchange rate is also a significant determinants of Foreign Direct Investment, the government must endeavour to stabilize the exchange rate so that investible funds will be cheap and yield high returns in the country especially to foreign investors.

References

- Adam, Z. (2002). "Fine-tuning Foreign Investment: Differentiating FDI and Portfolio Investment in Post-communist East Central Europe", Paper presented at the Second EPIC Workshop in Florence, May 16-22.
- Adelegan, J.O. (2000) "Foreign direct investment and Economic Growth in Nigeria: A Seemingly Unrelated Model" *African Review of Money, Finance and Banking*, Supplementary Issue of "Savings and Development. 5-25 Milan, Italy.
- Akinlo, A. E. (2003). "Foreign Direct Investment and Economic Growth in Sub-Saharan Africa". *International Review of Economics and Business*, 50(3): 569–580.
- Anyanwu, J. C. (2011), "Determinants of Foreign Direct Investment Inflows to Africa, 1980-2007", *Working Paper Series N° 136*, African Development Bank, Tunis, Tunisia.
- Awoloye O.M, Okogun O. A, Ojuloge B.A, Atoyebi M. K, Ojo B. F (2012) "Socio-Economic Effect of Telecommunication Growth in Nigeria: An Exploratory Study" *Interdisciplinary Journal of Contemporary Research in Business* (4) 2: 256 – 262.
- Ayanwale, A. B. (2007), "FDI and Economic Growth: Evidence from Nigeria". *AERC Research Paper 165*, African Economic Research Consortium, Nairobi.
- Bello, A. and Adeniyi, O. (2010). "FDI and the Environment in Developing Economies: Evidence from Nigeria". *Environmental Research Journal*, 4(4): 291-297 DOI: 10.3923/erj.2010.291.297
- Chatterjee, S. (2009) "An Economic Analysis of Foreign Direct Investment in India" PhD Thesis submitted to the Department of Economics Maharaja University, India.
- Dupasquier, C. & Osakwe, P.N. (2006). "Foreign Direct Investment in Africa: Performance, Challenges, and Responsibilities". *Journal of Asian Economics* 17(6): 241–260.
- Egwaikhide, C. I. (2012), "The Impact of Foreign Direct Investment on Nigeria's Economic Growth; 1980 – 2009: Evidence from Johansen's Co integration Approach". *Journal of Business and Social Sciences*. 3 (6): 75 – 89.
- Fosu, O. E. and Magnus, F. J. (2006). "Bounds Testing Approach to Cointegration: An Examination of Foreign Direct Investment, Trade and Growth Relationships", *American Journal of Applied Sciences*, (3)11: 2079-2085
- Helpman, G.H.E. (1991). "Innovation and Growth in the Global Economy". Cambridge: MIT Press.
- IMF (2003). *Balance of Payments Manual*, 15th Edition, IMF, Washington.
- Imoughele, L. E (2020) "External Financing and Industrial Sector Output in a Deregulated Economy: Econometric Evidence from Nigeria" *Journal of Economics and Allied Research* 4 (2): 141 – 160.
- Jerome A. and J. Ogunkola (2004). "Foreign Direct Investment in Nigeria: Magnitude Direction and Prospects"; Paper Presented to the *African Economic Research Consortium Special Seminar Series*, Nairobi.
- Justin, P. M and Feliciano-Cesterob, M., (2021) "Five Decades of Research on Foreign Direct Investment by Multinational Enterprises: An Overview And Research". *Agenda Journal of Business Research*. 124(1): 1- 27. <https://doi.org/10.1016/j.jbusres.2020.04.017>
- Khaddraoui N. (2012) "Capital Movements and Economic Fluctuations: The Threshold Effects of Financial Development" *International Journal of Economics and Finance*. 4(4): 16 – 30.
- Li and Liu (2005), "Foreign Direct Investment and Growth: An Increasingly Endogenous Relationship." *World Development*, 33, 393 – 407.
- Mobosi, I. A and Madueme, S. I (2016) "The Impact of Macroeconomic Uncertainty on Foreign Investment Inflows in Nigeria" *Journal of Economics and Allied Research*, 1 (1): 19 – 41.
- Manuaka T. (2008). "Seven Years of Telecoms Revolution: The Prime Investors' Destination. *Tell Magazine of Nigeria*".

- Odhiambo N.M (2011) "Financial Deepening, Capital Flows and Economic Growth Nexus in Tanzania: A Multivariate Model". *Journal of Social Sciences* 28(1): 65-71.
- Ogundipe, M. A. and Aworinde, O. B. (2011). "An Analysis of Causality between Economic Growth and Foreign Direct Investment in Pre- and Post-Deregulated Nigerian Economy (1970-2007)". *European Journal of Scientific Research*, 53(3): 317-325
- Okereocha C (2008). "Seven Years of Telecoms Revolution – One Revolution, a Thousand Gains" *Tell Magazine of Nigeria*.
- Osoimehin K.O, Akinkoye E.Y Olanmi O.O (2007). "The Effects of Investment in Telecommunication Infrastructure on Economic Growth in Nigeria" *Interdisciplinary Journal of Contemporary Research in Business*: 4 (2)
- Soyinka, A. (2008). "Seven Years of Telecoms Revolution – Breeding Jobs for the Masses". *Tell Magazine of Nigeria*.
- UNCTAD (2004), "FDI and Development", *World Investment Report*: Geneva.
- Uxanda, C. and Muraru, A. (2010). FDI and Economic Growth; Evidence from Simultaneous Equation Models. *Romanian Journal of Economic Forecasting*
- Vu, T. B. Gangnes, B. and Noy, I. (2007), "Is Foreign Direct Investment Good for Growth? Evidence from Sectoral Analysis of China and Vietnam". *Santa Cruz Centre for International Economics (Working Paper No 07 – 17)*