

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/342957046>

"Taxation, exchange rate and foreign direct investment in Nigeria"

Article · September 2019

DOI: 10.21511/bbs.14/3

CITATIONS

4

READS

94

3 authors:



Opeyemi Ajetunmobi

Covenant University Ota Ogun State, Nigeria

13 PUBLICATIONS 46 CITATIONS

[SEE PROFILE](#)



Uwalomwa Uwuigbe

Covenant University Ota, Ogun State, Nigeria

59 PUBLICATIONS 706 CITATIONS

[SEE PROFILE](#)



Olubukunola Ranti Uwuigbe

Covenant University Ota Ogun State, Nigeria

42 PUBLICATIONS 434 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:









Ownership structure and corporate performance of multinational banks: Evidence from Nigeria [View project](#)



Corporate social environmental reporting and stock prices: An analysis of listed firms in Nigeria [View project](#)

“Taxation, exchange rate and foreign direct investment in Nigeria”

AUTHORS	Olubukola Ranti Uwuigbe  https://orcid.org/0000-0002-6566-1083  http://www.researcherid.com/rid/G-2929-2018 Ayomide Omoyiola Uwalomwa Uwuigbe  https://orcid.org/0000-0001-8769-3492  http://www.researcherid.com/rid/G-2903-2018 Nassar Lanre Opeyemi Ajetunmobi  https://orcid.org/0000-0003-0127-2879
ARTICLE INFO	Olubukola Ranti Uwuigbe, Ayomide Omoyiola, Uwalomwa Uwuigbe, Nassar Lanre and Opeyemi Ajetunmobi (2019). Taxation, exchange rate and foreign direct investment in Nigeria. <i>Banks and Bank Systems</i> , 14(3), 76-85. doi: 10.21511/bbs.14(3).2019.07
DOI	http://dx.doi.org/10.21511/bbs.14(3).2019.07
RELEASED ON	Friday, 06 September 2019
RECEIVED ON	Wednesday, 27 February 2019
ACCEPTED ON	Thursday, 30 May 2019
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Banks and Bank Systems"
ISSN PRINT	1816-7403
ISSN ONLINE	1991-7074
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES

28

NUMBER OF FIGURES

0

NUMBER OF TABLES

8

© The author(s) 2020. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

Received on: 27th of February, 2019

Accepted on: 30th of May, 2019

© Olubukola Ranti Uwuigbe,
Ayomide Omoyiola, Uwalomwa
Uwuigbe, Nassar Lanre, Opeyemi
Ajetunmobi, 2019

Olubukola Ranti Uwuigbe,
Department of Accounting, Covenant
University, Ota-Ogun State, Nigeria.

Ayomide Omoyiola, Department of
Accounting, Covenant University,
Ota-Ogun State, Nigeria.

Uwalomwa Uwuigbe, Department
of Accounting, Covenant University,
Ota-Ogun State, Nigeria.

Nassar Lanre, Department of
Management Accounting, Faculty of
Administration, Obafemi Awolowo
University, Ile-Ife, Osun State,
Nigeria.

Opeyemi Ajetunmobi, Department
of Accounting, Covenant University,
Ota-Ogun State, Nigeria.



This is an Open Access article,
distributed under the terms of the
[Creative Commons Attribution 4.0
International license](https://creativecommons.org/licenses/by/4.0/), which permits
unrestricted re-use, distribution,
and reproduction in any medium,
provided the original work is properly
cited.

Olubukola Ranti Uwuigbe (Nigeria), Ayomide Omoyiola (Nigeria),
Uwalomwa Uwuigbe (Nigeria), Nassar Lanre (Nigeria), Opeyemi Ajetunmobi (Nigeria)

TAXATION, EXCHANGE RATE AND FOREIGN DIRECT INVESTMENT IN NIGERIA

Abstract

This paper investigates factors that may impact foreign direct investment in Nigeria. It seeks to establish the role of taxation (corporate tax) for foreign direct investment in Nigeria. Annual time series data derived from the Central Bank of Nigeria statistical bulletin and the United Nations Conference on Trade and Development covering a period of 31 years (1985–2015) were used for this study. The variables considered in the study include FDI, corporate tax, exchange rate, inflation rate, real gross domestic product (RGDP). They were analyzed using Ordinary Least Squares (OLS), Johansen Co-Integration model and Unit Root Test. Findings from this research observed that a negative relationship exists between corporate taxation and FDI. Also, the study observed that corporate tax have a significant impact on FDI and there exists a long-run relationship between the two variables.

Keywords

foreign direct investment, corporate tax, exchange rate,
inflation rate, real gross domestic product

JEL Classification

G32, G38, M48

INTRODUCTION

Almost all authorities and institutions in different countries, both developed and developing ones, are interested in enticing foreign direct investment. This is particularly common among African countries. Attracting foreign direct investment can spawn into the creation of new jobs, new technical know-how (technologies) and, most importantly, stimulate economic growth, development and employment. The consequence or economic benefits will result in an increased net domestic income, which can be dispersed via wage taxation and foreign-owned companies' profits. With the influx of new technologies and the improvement of human capital, FDI may also bring about spillover effect on domestic income. Noting these likely benefits the FDI may bring, policy makers has continually restructured their tax policies to ensure that they are good enough to attract investment.

Taxation is a very important tool in any country, whether developing or developed. It is a macroeconomic tool that is very necessary for a state to function in terms of providing revenue to access amenities and infrastructure for the citizens of the state, for regulations, to encourage or discourage investment, etc. According to Anyafor (1996) and Uwuigbe et al. (2016), the term taxation has been described as a macro-economic instrument that governments use to generate revenue. It is alluded to as a mandatory levy, by which people, companies and associations must adhere to or face the music, because administrative officials at the state or federal government levels have been empowered to prosecute defaulters. Thus, Anyanwu (1997) opined that charges are

demanding to manage the creation of specific products and ventures, secure infant enterprises, control business and check swelling, decrease pay disparities and so on. According to Stacie and Alexis (2012), tax policy is usually considered as one of the principal topics in deliberations on basis that can either pull in or head out outside international direct investment. Among the five methods, for which tax can influence economic growth (Tosun & Abizadeh, 2005), the first one was that duty can suppress investment rate through expenses such as organization pay charge, individual pay assessment, and capital additions charge. This means a relationship between that taxation and investment. This is not to say that other factors that affect investment are irrelevant or that they should be given lesser consideration. It is rather to say that taxation laws and policies are very pivotal to the decision of an investor or investment destination.

Foreign direct investment has been described in a simple term as the purchase by citizens of a country of real assets in a foreign country. This is done by dispatching fund or money overseas to be expended in procuring land, developing structures, mines or apparatus, or notwithstanding purchasing existing remote organizations. It is additionally characterized as the immediate venture value streams in an economy. It is the total value capital, value of profit reinvested, and other capital. Over the years, FDI from developing economies has varied invariably. This proposition has been observed by a plethora of researchers since the early 1980s (Lall, 1983; Kumar, 1995; Page, 1998; Aykut & Ratha, 2003, and UNCTAD, 2004). Predominantly, Asian firms have dominated or contributed highest amount of inflow establishing footholds in other Asian countries. Among the many countries in Africa, Nigeria is seen as a focus point for outside capital or Foreign Direct Investment (See Appendix A). The UNCTAD World Investment Report (2009) indicates West Africa FDI inflow was essentially to Nigeria who got 70 percent of the sub-provincial and 11 percent of Africa's aggregate. Likewise, Nigeria is described as one of the economies with an implausible concern for products and ventures and has heaved in some FDI over the years. An assessment of FDI in Nigeria has shown the FDI inflow in the country increased from USD 2.23 billion in 2003 to USD 5.31 billion out of 2004 (indicating about 138% expansion). This observed FDI inflow in the country (Nigeria) also increased again to USD 9.92 billion in 2005 (indicating an 87% expansion). The figure, however, declined in 2006 to USD 9.44 billion (LOCOmonitor.com). On the average, FDI in the country stood at an average value of USD 1,261.83 million from 2007 until 2018. Currently, despite the early decline observed in the early periods, FDI into Nigeria in the third quarter of 2018 stood at USD 438.84 million. This demonstrates outside speculation and assumes a critical job in quickening the modern improvement of many creating countries since it prompts innovative progression, more employment, upgrade of human capital (aptitudes), expanded efficiency, etc.

There is no doubt that Nigeria is blessed with a lot of natural resources and that these resources cut across mineral resources, arable land for sustainable agriculture, etc. As a result of these resources, an increase in the inflow of foreign direct investment in the country has been observed. According to the Dartmouth Business Journal (2012), Nigeria receives about USD 10-12 billion per year from FDI. Among all the 54 countries in Africa, Nigeria remains a choice location for among the top five destinations for FDI with USD 11 billion following Egypt and Angola. Also, the inflow of foreign direct investment to Nigeria from countries like the United States, China, India, etc., has led to significant development of various sectors of the economy, such as the oil sector, manufacturing sector, textile and many more. However, it is ironic that even though Nigeria attracts a lot of foreign direct investment compared to other countries, it is still not enough to match the abundant opportunities that it has. Even with the launch of Nigerian Investment Promotion Council in 1995 to liberalize the investment environment of the country, which has been of great help to the country, this measure is still not enough to propel FDI in the country.

Adepeju (2012) asserts that Nigeria is in a quandary, as the need for foreign capital increases to cater for the continuing internal adjustment, yet there are fears that other facets of the Nigerian economy may lose control of the economy. However, the need for foreign capital has become crucial if the economy

must come out from her current state (depression). Despite the opportunities imbedded in FDI, empirical evidence shows that tax assessment approaches may likewise bolster remote direct interest in different nations, as an outbound venture provides a proficient access to outside business sectors and generation scale economies, stimulating a prolonged net residential salary. In the interim, however, governments may constantly balance the craving to offer a focused assessment for FDI, with the essential to assurance for a suitable offer of household charge is gathered from multinationals. Nonetheless, considering the Nigerian context, a critical examination of the inflow of foreign investment in Nigeria from the World Bank report shows that while the net streams into the third world nations have been developing relentlessly since 1989, the same cannot be said for Nigeria as the offer of the expanding stream pulled in the Nigerian economy kept up a reliable decay to less created by 1993 (USD 900.00 million). In practice, the report expressed that China pulled in USD 26 billion worth of outside private speculation (FPI) in 1993 speaking to 39.0 percent of the absolute stream in the whole less created nations disregarding her long prohibitive approaches and her solitary ongoing progression strategies. This study thus focuses on the impact of corporate tax on foreign direct investment in Nigeria, considering inflationary and interest rate trends in the country.

The remaining part of the paper has been structured to include the review of related literature and hypotheses development. This is closely followed by the research methods adopted for the study, discussion of findings and the conclusions.

1. LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

1.1. Conceptual framework on tax and foreign direct investment

Taxation can be characterized as a corresponding commitment from people and property, demanded by the state, by the ethicalness of its sway for the help of the legislature and every single open need. Taxes are levied by the government so that citizens are taken care of and provided with the basic needs, most of which can only be provided by the government. Not only that, but taxation is seen as a two-way relationship between the government and its citizens, which means that for the government to be able to make or provide the necessary goods and services for its people, they have to fulfill their own patriotic responsibilities by paying their taxes (Ekpung & Wilfred, 2014).

Nevertheless, taxation is only looked upon most times as a tool for generating revenue while ignoring the other functions it can perform. For instance, taxation can be used to encourage investment, regulate businesses, restrict importation of certain goods whilst encouraging the exportation of certain goods, etc. For a country like Nigeria

with unwarranted and unending dependence on crude oil, revenue has become detrimental to other sectors of the economy. Efforts put in place towards the diversification of the economy have to meet series of bottlenecks. Agbaez, Udeh, and Onwuka (2015) and Uwuigbe et al. (2018) opined that even with 160 million people and being the third largest economy in Africa, Nigeria still remains one of the poorest oil producing countries in the world compared to other oil producing countries like Saudi Arabia. With a consistently declining per capita salary, similarly troublesome social markers, dynamic world economy and the way that nations are searching for elective well-spring of vitality, the time has come to start to take a gander at elective approaches to create income and that can just stop by putting resources into different parts – non-oil areas.

1.1.1. Concept of foreign direct investment

The concept of FDI, according to the World Bank (1996), is seen as the venture that is made to secure enduring administration (which is typically 10% of casting a ballot stock) in an endeavor and working in a nation other than that of the financial specialist defined according to residency. Any investment less than a 10% investment is regarded as a portfolio investment. FDI is becoming very popular these days in developing countries, because they

do not have enough savings or money to finance their investment. The reason why a lot of countries are clamoring for FDI is that it is a better and more stable way of getting money into the country without any increase in debt. FDI is regarded as a tool for development by many scholars and also an instrument, which can be used in achieving financial sustainability in various industries and sectors of an economy. FDI is pivotal in the development of a country in the long run, because it not only acts as a source of capital but as a measure to ameliorate competitiveness in the domestic economy of the host country and creating new employment opportunities via the technology transfer, building more infrastructure, increasing productivity, etc. (Desai, Foley, & Hines, 2004).

FDI can come in the form of inflow and outflow. The value of inflow is the value of inward investment into a country (host country) from another country described as FDI inflow; while FDI outflow is the value of the outward investment by a country (country of origin) to another country. As indicated by Organization for Economic Cooperation and Development (OECD, 2006). Through FDI, many countries have been able to establish a common ground, make favorable trade agreements and received help and support from other countries. FDI is known to any country as the lifeblood of economic development, particularly for the developing and underdeveloped countries (Shylajan, 2011).

Ugochukwu, Okore, and Onoh (2013) opined that the determinants of FDI can be divided into social (human capital and level of development of the country), economic (market size, GDP per capita, exchange rate, trade openness), political (political stability, frequent change of government, the degree of administrative effectiveness and efficiency) and policy (issues of taxation, legislative restrictiveness, etc.) determinants. OECD (2007) stressed the fact that the determinants of FDI can be divided into non-tax and tax ones. The non-tax determinants incorporate market estimate, access to crude materials, political solidness, accessibility and cost of gifted work, access to foundation, financing cost and large scale monetary soundness; while the tax determinants incorporate assessment rates,

charge motivations and straightforwardness, effortlessness, security and assurance in the use of the expense laws in the expense organization of a nation.

1.2. Related empirical literature

Saidu (2015) examined corporate taxation and FDI in Nigeria from 1970–2013 and revealed the impact of the autonomous variable on the ward by utilizing distinct insights of connection and relapse. The reliant variable was FDI net stream as a level of GDP and the autonomous variable was Corporate expense (CTR), and it was deduced in the paper that there is a negative huge connection between these factors. In a related report, Ekpung and Wilfred (2014) took a gander at the effect of tax assessment on speculation and monetary improvement for 1980–2010 utilizing the Ordinary Least Squares (OLS) strategy for different relapses to break down their information. They saw in their discoveries that tax collection negatively affected interest in Nigeria.

In a similar vein, Egger and Radulescu (2008) inspect tax impacts on the area of outside property and find that the capital salary tax rate and the developed work pay tax rate have a negative association with the rate of backups or parts of remote possessed enterprises. Albeit most examinations in Nigeria concentrated on the immediate impacts of the expense on remote direct venture, not many have explored into the long-run impacts of assessment and different factors on outside direct speculation. To this end, this study combines other variables (inflation rate, exchange rate, real gross domestic product) with tax to find out how they affect foreign direct investment during the selected period of study.

1.3. Development of hypotheses

Based on the gap identified in prior studies, the following hypotheses in their null forms were developed and tested:

H_{01} *Taxation negatively affects the inflow of foreign direct investment in Nigeria.*

H_{02} *There is no long-run relationship between taxation and foreign direct investment.*

2. METHODOLOGY

In analyzing the impact of taxation, exchange rate on foreign direct investment, this study covered the period of 1985–2015. Similarly, the same period was covered for foreign direct investment inflow in Nigeria (1985–2015). The data used for this study was gathered from the Nigerian Bureau of Statistics (NBS), CBN statistical bulletin, and the Federal Inland Revenue Service (FIRS). The study was restricted to Nigeria but reference will be made to other countries whilst focusing on the role of taxation in attracting FDI in an economy. Data obtained from secondary sources were analyzed using the ordinary regression analysis method. This analytical tool was utilized to determine the relationship between one dependent variable and several independent variables.

2.1. Model specification

The model is based on the reasoning that FDI is a function of exchange rate and taxation and some macroeconomic variables such as inflation rate and Gross Domestic Product. Previous studies such as Egger and Radulescu (2008), Omankhanlen (2011), Mokuolu (2018) used exchange rate, taxation and inflation as proxies to determine the growth of FDI. For this research, the dependent variable is FDI inflow, while the independent variables are taxation, inflation rate, exchange rate, and real gross domestic product. This study adopts the economic model of Omankhanlen (2011):

$$FDI = \beta_0 + \beta_1 TAX + \beta_2 EXR + \beta_3 INF + \beta_4 RGDP + \mu, \quad (1)$$

where *FDI* – Foreign Direct Investment net inflow (% of GDP), *TAX* – Company Income Tax (CIT), *EXR* – Exchange Rate, *INF* – Inflation Rate, *RGDP* – Real Gross Domestic Product, and μ – stochastic term used to capture random observation.

β_0 represents the constant term, while $\beta_1, \beta_2, \beta_3$ and β_4 represent the coefficient of the variable, which shows changes in *FDI* with respect to explanatory variables, namely, *TAX*, *EXR*, *INF*, *RGDP*; and μ stands for the error term. Also, the model is estimated using annual time series 1980–2015 and the variables would be examined in the rate/percentage forms to help in achieving linearity.

Apriori expectation

$$\beta_0 > 0, \beta_1 > 0, \beta_2 > 0, \beta_3 < 0, \beta_4 > 0.$$

3. EMPIRICAL RESULT

The OLS was used to test the influence of the explanatory variables on the controlled variables. The result is subjected to econometrics test as presented in the next sub-section.

3.1. Unit root test

The Unit Root Test using Augmented Dickey-Fuller (ADF) test is used to check the stationarity of each variable. The rule of thumb of the test is such that if the absolute value of the ADF test statistics is greater than the critical value at 5%, then the null hypothesis is rejected that says the variable is non-stationary. This implies that the variable is stationary when the absolute value of ADF statistics test is greater than the critical value at 5%.

Table 1. Unit root test

Source: Computed by the researchers using E-Views 9.

Variables	Lag length	ADF test statistics at levels	Critical value (5%)	Order of integrating	Remarks
LFDI	0	-10.35553	-2.967767	I(1)	Stationary
LTAX	0	-3.014235	-2.852729	I(1)	Stationary
LEXR	0	-4.939078	-2.967767	I(1)	Stationary
LINF	4	-3.539429	-2.967767	I(1)	Stationary
LRGDP	0	-3.101662	-2.967767	I(1)	Stationary

From Table 1, the variables *LFDI*, *LTAX*, *LEXR*, *LINGF* and *LRGDP* are stationary at first order (1). In absolute terms, the ADF statistics is greater than the critical value at 5%. The study adopts the unit root at first difference because all variables are stationary at first order (at first difference).

3.2. Test for autocorrelation

The test is carried out to determine the error terms are correlated in the regression. The OLS analysis assumes that there is no autocorrelation. The Breush-Godfrey serial correlation test is used to detect for autocorrelation in this

study. The rule of thumb states that to accept the null hypothesis one must have a probability Chi-square less than 5%. According to Table 2, the null hypothesis that there is an autocorrelation is accepted.

Table 2. Breusch-Godfrey serial correlation LM test

Source: Computed using E-Views 9.

F-statistic	1.096389	Prob. F(2,24)	0.3502
Obs*R-squared	2.595223	Prob. Chi-square (2)	0.2732

3.3. Test for heteroskedasticity

The test is carried out to determine if the error term has a constant variance. The null hypothesis is that there is constant or equal variance (homoskedasticity) and to accept the null hypothesis one must have a p-value of less than 0.05 or 5%.

Table 3. Heteroskedasticity test: Breusch-Pagan-Godfrey

F-statistic	0.726631	Prob. F(4,26)	0.5818
Obs*R-squared	3.117021	Prob. Chi-square (4)	0.5384
Scaled explained SS	1.752053	Prob. Chi-square (4)	0.7812

The null hypothesis is rejected and it is concluded there is heteroskedasticity (see Table 3).

3.4. Co-integration test

The co-integration test can be carried out as it has been established that all variables are stationary of order 2. To carry out this test, the Johansen co-integration technique is used to find out the long-run relationship between the dependent variable (*LFDI*) and the independent variables (*LTAX*, *LEXR*, *LINF* and *LRGDP*). The decision rule states that if the values of trace statistics or eigenvalue are greater than the critical values at 5%, then the null hypothesis of no co-integration is rejected. The alternative hypothesis is accepted, which depicts co-integration among variables implying a long-run equilibrium relationship.

Table 4. Unrestricted cointegration rank test (trace)

Source: Computed by researchers using E-Views 9.

Hypothesized no. of CE(s)	Eigenvalue	Trace statistics	0.05 Critical value	Prob**
None	0.659921	69.433401	69.81889	0.0536
At most 1	0.470943	38.154702	47.85613	0.2953
At most 2	0.398965	19.69158	29.79707	0.4441
At most 3	0.155443	4.927613	15.49471	0.8165
At most 4	0.000975	0.028281	3.841466	0.8661

Table 5. Unrestricted cointegration rank test (maximum eigenvalue)

Source: Computed by researchers using E-Views 9.

Hypothesized no. of CE(s)	Eigenvalue	Trace statistics	0.05 Critical value	Prob**
None	0.659920	31.27870	33.87687	0.0990
At most 1	0.470943	18.46312	27.58434	0.4571
At most 2	0.398965	14.76397	21.13162	0.3058
At most 3	0.155443	4.899332	14.26460	0.7545
At most 4	0.000975	0.028281	3.841466	0.8664

Note: Max-eigenvalue test indicates no cointegration at the 0.05 level.

Table 4 shows that under the hypothesized number of CE(s) at most 1, the value of the trace statistics is less than the critical value at 5%. Therefore, one can conclude that there is only one co-integration equation, which suggests there is a long-run relationship. Therefore, the alternate hypothesis, which indicates that there is a long-run effect of the tax on foreign direct investment, is accepted.

3.5. Co-integration result

Table 6. Normalized co-integrating coefficient (standard error in parentheses)

<i>LFDI</i>	<i>LTAX</i>	<i>LEXFR</i>	<i>LINF</i>	<i>LRGDP</i>
1.000000	0.000000	0.09425	2.946122	-4.655685
-	-	(0.60451)	(0.81331)	(1.855052)
0.000000	1.000000	0.00918	-0.078564	-0.017175
-	-	(0.01643)	(0.02210)	(0.05029)

Note: The normalized co-integrating coefficient is written in its implicit form, to make it explicit.

It is re-written by changing the sign as follows:

$$LFDI = 1.00000TAX - 0.097425LEXR - 2.946122LINF + 4.655685LRGDP. \quad (2)$$

Based on this result, it is observed that a 1% increase in corporate tax will lead to about 1% increase in FDI. Theoretically, this is not expected but could be ascribed to the structure of the Nigerian economy. The result also depicts that a negative relationship exists between exchange rate and FDI inflow to the country over the years. Hence, a 1% increase in the exchange rate will lead to a decrease in FDI by 0.097%. This is theoretically expected, because investors are looking for countries with strong currencies. The more naira devalues against the dollar, the more the investors are discouraged. The result further shows that a negative relationship exists between the inflation rate and the FDI in Nigeria. A 1% increase in inflation will lead to a 2.95% decrease in FDI inflow in Nigeria. This is also theoretically expected as investors are willing to invest in a sound economy and not one that is faced with a challenge of a sustained increase in the price of goods and services almost every quarter of the year. Table 6 shows that a positive relationship exists between the real gross domestic product and FDI inflow. This implies that a 1% increase in the real gross domestic product will yield an increase in FDI by 4.66%. This is theoretically expected and it suggests that investors take the economic growth of a country very seriously in making investment decisions. This also explains the reason Nigeria has been a large recipient to FDI over the years.

Findings on the first hypothesis, which attempts to determine if taxation has an impact on the inflow of FDI in the country, show that taxation has a negative impact on the inflow of FDI in Nigeria. The result also indicates that an increase in corporate tax will lead to an 8.9% decrease in FDI into Nigeria. Some other test such as F-test and also some econometrics test such as heteroskedasticity test were carried out. Therefore, the null hypothesis, which indicates that there is a negative relationship between tax and FDI is accepted.

To determine if a long-run relationship exists between taxation and FDI, the co-integration test was carried out. However, before that test was car-

ried out, the unit root test was conducted to determine if the variables are stationary and are at first difference. The value of the trace statistics is less than the critical value at 5%. Therefore, the study observed that there are two co-integration equations, meaning there is a long-run relationship. Hence, the study accepts the alternate hypothesis, which indicates that there is a long-run effect of tax on foreign direct investment.

Table 7. Ordinary least square regression analysis

Source: Computed by researchers using E-Views 9.

Variable	Coefficient	Std. error	t-statistics	Prob.
C	-12.00583	19.28908	-0.622416	0.5391
LTAX	-8.916774	9.312230	-0.957534	0.3471
LEXR	0.051301	0.158153	0.324377	0.7482
LINF	0.048120	0.133103	0.361524	0.7206
LRGDP	2.189006	0.883146	2.478647	0.0200
R-squared	0.810986	Mean dependent var		21.35991
Adjusted R-squared	0.781907	S.D. dependent var		1.015114
S.E. of regression	0.474062	Akaike info criterion		1.491733
Sum squared residuals	5.843107	Schwarz criterion		1.723021
Log-likelihood	-18.12186	Hannan-Quinn criteria		1.567127
F-statistic	27.889060	Durbin-Watson stat		1.667872
Prob (F-statistic)	0.000000		-	-

Table 7 basically describes the estimates of the parameters, while the coefficient values describe the impact of each explanatory variable on the dependent variable. Thus, an intercept value is of -12.00583. This value suggests that if all explanatory variables are held constant, FDI will be -12.00583. It could be said that the variables in this regression are very essential for the inflow of FDI. Likewise, a coefficient value is of -8.916774 representing average tax rate (LTAX). This indicates that there is a negative relationship between tax rate and FDI. This also means that a unit increase in tax rates will reduce the inflow of FDI into the country by -8.916774. Similarly, the result for the logged exchange rate shows a positive coefficient of 0.051301. This implies that exchange rate has a positive relationship with the FDI inflow in the country which makes sense. Therefore, a unit increase in the exchange rate will result in an increase in the inflow of FDI by 0.051301. Similarly, findings for the coefficient of the logged inflation

rate depict a positive coefficient of 0.048120. This suggests that inflation rate has a positive and huge impact on the FDI inflow in Nigeria. A unit increase in the inflation rate will yield to an increase in FDI by 0.048120. In the same vein, findings on the real gross domestic product (LRGDP) have a positive coefficient of 2.189006. This implies that

RGDP has a positive relationship with FDI inflow. Hence, a unit increase in RGDP will automatically result in an increase in FDI by 2.189006. From the trend above, taxation (LTAX) has a negative relationship with FDI, while exchange rate (LEXR), inflation (LINF) and real gross domestic product (LRGDP) have a positive relationship with FDI.

CONCLUSION AND RECOMMENDATIONS

It has been highlighted that corporate tax plays a very salient role in FDI inflow over the years. From the regression analysis (OLS) it was observed that taxation has a negative effect on FDI, yet it has a long-run relationship with FDI. It is important to also note that this is not the only factor that investors consider. While analyzing the data, it was also observed that the explanatory variables, which include taxation, exchange rate, inflation rate and real gross domestic product, had a significant impact on FDI. These variables together are responsible for 68.2% of the variation in the FDI inflow into the country. However, guided by the observations in this research, the study concludes that government should make other tax-related policies that would offset the negative effect that corporate tax has on FDI inflow in Nigeria. In addition, the government should focus on ensuring that macroeconomic policies that will improve the macroeconomic variables such as exchange rate, inflation rate and real gross domestic product, because they have a significant impact on the flow of FDI into the country. This is important because taxation is one of the many factors that affect the inflow of FDI in Nigeria. The co-integration result shows that exchange rate, inflation rate and real gross domestic product like corporate tax have a long-run relationship with FDI. Finally, other determinants of FDI like skilled labor, political stability, ease of doing business, etc., should be improved upon if Nigeria would want to attract more FDI in the future.

CONTRIBUTION TO KNOWLEDGE

The study sheds more light on taxation and FDI in Nigeria by providing a framework or model that shows a significant determinant of foreign direct investment inflow into Nigeria. The study also shows or establishes the long-run relationship between taxation, exchange rate and FDI in Nigeria. Another contribution is that the study identifies other variables that have a significant impact on the inflow of FDI into the country besides taxation, which is mostly neglected by other prior studies.

REFERENCES

1. Agbaeze, E. K., Udeh, S. N., & Onwuka, I. O. (2015). Resolving Nigeria's Dependency on Oil – The Derivation Model. *Journal of African Studies and Development*, 7(1), 1-14. Retrieved from <https://academicjournals.org/journal/JASD/article-full-text-pdf/D12F4AA49306>
2. Anyafor, M. O. (1996). *Public Finance in a Developing Economy: the Nigerian Case*. Enugu: National Library of Nigeria.
3. Anyanwu, J. C. (1998). An econometric investigation of determinants of foreign direct investment in Nigeria. *Proceedings of the Nigerian Economic Society Conference* (pp. 219-240).
4. Aykut, D., & Ratha, D. (2003). South-South FDI flows: how big are they? *Transnational Corporations*, 13(1), 149-176.
5. Beck, S., & Chaves, A. (2012). *The impacts of various taxes on foreign direct investment* (Working Paper). University of Delaware, Department of Economics. Retrieved from <https://ideas.repec.org/p/dlw/wpaper/11-18.html>
6. Dartmouth Business Journal. (2012). *Foreign direct investment in Nigeria*. Retrieved from <http://dartmouthbusinessjournal.com/2012/05/30/foreign-direct-investment-in-nigeria/>
7. De Mooij, R., & Ederveen, S. (2008). Corporate Tax Elasticities:

- A Reader's Guide to Empirical Findings. *Oxford Review of Economic Policy*, 24(4), 680-697. <https://doi.org/10.1093/oxrep/grn033>
8. Desai, M. A., Foley, C. F., & Hines Jr., J. R. (2004). Foreign Direct Investment in a World of Multiple Taxes. *Journal of Public Economics*, 88(12), 2727-2744. <https://doi.org/10.1016/j.jpubeco.2003.08.004>
 9. Egger, P., & Radulescu, D. M. (May, 2008). *Labour Taxation and Foreign Direct Investment* (CESifo Working Paper No. 2309). Retrieved from https://www.ifo.de/DocDL/cesifo1_wp2309.pdf
 10. Ekpung, E. G., & Wilfred, O. W. (2014). The Impact of Taxation on Investment and Economic Development in Nigeria. *Academic Journal of Interdisciplinary Studies*, 3(4), 209-318. Retrieved from <https://pdfs.semanticscholar.org/ff73/8598b07c585065917ae2c28307613e63b3c9.pdf>
 11. Kumar, N. (1995). *Changing Character of Foreign Direct Investment From Developing Countries: Case Studies from Asia* (Discussion Paper No. 9516). United Nations University, Institute for New Technologies. Retrieved from <https://ideas.repec.org/p/unm/unuint/199516.html>
 12. Lall, S. et al. (1983). *The New Multinationals: The Spread of Third World Enterprises*. Chichester: John Wiley.
 13. Mokuolu, J. (2018). Effect of exchange rate and interest rate on Foreign Direct Investment and its relationship with economic growth in Nigeria. *European Journal of Economic and Financial Research*, 3(1), 33-47. Retrieved from <https://oapub.org/soc/index.php/EJEFRA/article/view/314>
 14. OECD. (2006). *Trends and Recent Developments in Foreign Direct Investment*. International Investment Perspectives: 2006 Edition. Retrieved from <http://www.oecd.org/daf/inv/investmentstatisticsandanalysis/37010986.pdf>
 15. OECD. (2007). *Tax Incentives for Investment – A Global Perspective: experiences in MENA and non-MENA countries* (Draft). MENA-OECD Investment programme. Retrieved from <http://www.oecd.org/mena/competitive-ness/38758855.pdf>
 16. Omankhanlen, A. (2011). Effect of exchange rate and inflation on Foreign Direct Investment and its relationship with economic growth in Nigeria. *Economic and Applied Informatics*, 17(1), 5-16. Retrieved from <https://core.ac.uk/download/pdf/27168280.pdf>
 17. Page, S. (1998). South-North Investment by Developing Countries in the EC: A sign of the Emergence of New Investors. In B. G. Hickman, & L. Klein (Eds.), *Link Proceedings 1991, 1992* (pp. 210-230). Studies in Applied International Economics. http://dx.doi.org/10.1142/9789812816870_0011
 18. Saidu, A. S. (2015). Corporate Taxation and Foreign Direct Investment in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 3(8), 17-24.
 19. Shylajan, C. S. (2011). FDI and its determinants in India. *The India Economy Review*, 8, 162-169. Retrieved from <http://www.theindiaeconomyreview.org/Article.aspx?aid=106&mid=5>
 20. Tolulope, I., Uwuigbe, U., Uwuigbe, O. R., Emmanuel, O., Oriabie, S., & Asiriwuwa, O. (2018). The Effect of Corporate Governance Attributes on Earnings Management: A Study of Listed Companies in Nigeria. *Academy of Strategic Management Journal*, 17(6), 1-13. Retrieved from <https://www.abacademies.org/articles/the-effect-of-corporate-governance-attributes-on-earnings-management-a-study-of-listed-companies-in-nigeria-7757.html>
 21. Tosun, M. S., & Abizadeh, S. (2005). Economic growth and tax components: An analysis of tax change in OECD. *Applied Economics*, 37, 2251-2263. Retrieved from http://www.business.unr.edu/faculty/tosun/RAEF_A_129364.pdf
 22. Ugochukwu, U., Amah, O., & Onoh, J. O. (2013). The Impact of Foreign Direct Investment on the Nigerian Economy. *European Journal of Business and Management*, 5(2), 25-33. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2865155
 23. UNCTAD. (2004). *World Investment Report 2004: the Shift Towards Services*. Geneva: UNCTAD. Retrieved from https://unctad.org/en/Docs/wir2004_en.pdf
 24. UNCTAD. (2009). *Trade and development report, 2002*. New York and Geneva: United Nations. Retrieved from https://unctad.org/en/Docs/trdr2002_en.pdf
 25. Uwuigbe, U., Eluyela, D. F., Uwuigbe, O. R., Obarakpo, T., & Falola, I. (2018). Corporate governance and quality of financial statements: a study of listed Nigerian banks. *Banks and Bank Systems*, 13(3), 12-23. [http://dx.doi.org/10.21511/bbs.13\(3\).2018.02](http://dx.doi.org/10.21511/bbs.13(3).2018.02)
 26. Uwuigbe, U., Uwuigbe, O. R., & Francis, I. (2013). Environmental Tax as a Tool for Flood Reduction in Nigeria: A study of Lagos state Creating Global Competitive Economies: 2020 Vision Planning and Implementation. Proceedings of the 22nd International Business Information Management Association Conference. IBIMA 2013, 3, 2211-2221.
 27. Wheeler, D., & Mody, A. (1992). International Investment Location Decisions: The Case of U.S. firms. *Journal of International Economics*, 33(1-2), 57-76. [https://doi.org/10.1016/0022-1996\(92\)90050-T](https://doi.org/10.1016/0022-1996(92)90050-T)
 28. Young, K. H. (1988). The effects of taxes and rates of return on foreign direct investment in the United States. *National Tax Journal*, 41(1), 109-121. Retrieved from <https://ntanet.org/NTJ/41/1/ntj-v41n01p109-21-effects-taxes-rates-return.pdf?v=%CE%B1>

APPENDIX A

Table A1. Components of net capital flow by origin

Source: CBN Statistical Bulletin, 2012.

Year	UK	USA	Western Europe	Others
1980	27.9	43.9	26.5	6.2
1981	55	43	51	7
1982	269.8	28.5	76.5	38.5
1983	127	32.1	35.5	34.2
1984	178.2	36.1	49.8	32.1
1985	198.5	36.7	49.8	32.1
1986	116.5	46.9	90.9	62.1
1987	241.4	82.3	59.7	44.1
1988	85.3	151.2	84.7	75.7
1989	629.4	251.7	148.3	165.1
1990	781.4	557.3	98.2	94.9
1991	391.6	55.3	416.1	1238.5
1992	245.7	163.9	385.6	94.3
1993	1416.1	252.9	733.6	331.9
1994	141.1	754.3	419.8	434.5
1995	3023.8	640	488.7	276.3
1996	481.3	329.1	470.4	477.4
1997	748.4	130.9	777.4	285.8
1998	3480	569.3	274.3	5148.2
1999	1159.6	38.3	885.7	636.1
2000	157	0	820.4	315.8
2001	2486	98	464	863.4
2002	3729	163	641.3	1265.4
2003	5594	253	1045.7	1806.6
2004	5960	263	1090	5903.5
2005	7748	343.1	1417	7674.6
2006	12396.8	549	2267.2	12339.2
2007	15996	786.3	3034	15424
2008	16018.171	844.66	3316.92	18730.73
2009	18075.91	979.92	3832.3	22097.78
2010	20133.648	1115.18	4347.68	25464.83
2011	22191.386	1250.44	4863.06	28831.88