

Effect of Taxation on Domestic Investment in Nigeria

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ABSTRACT

This study examined the effect of taxation on Domestic Investment in Nigeria; using time series data from 1995 to 2017. Data for the study was sourced from the Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics. The estimation technique adopted in the study was the Ordinary Least Square (OLS) Technique. The results of the estimates showed that: Taxation has long run relationship with Domestic investment in Nigeria; Personal income tax and Gross domestic product have non significant negative effects on Domestic investment in the long run, while company income tax has a significant positive effect on Domestic Investment. Value added tax has a non significant positive relationship with Domestic investment in the long run. In conclusion, the study finds a mixed result. Based on findings of the study, the following recommendation was made; Government should use money derived from taxation in providing adequate infrastructures like good roads, water and electricity. This will lower the cost of doing business in Nigeria.

Keywords: Taxation, Company income tax, Personal income tax, Value added tax, Gross domestic product, Domestic investment, Nigeria.

JEL Classification: E22; E62; H21.

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Highlights of this paper

- This study investigate the effect of taxation on domestic investment in Nigeria; using time series data from 1995 to 2017.
- The results of the estimates showed that: taxation has long run relationship with domestic investment in Nigeria; personal income tax and Gross domestic product have non significant negative effects on domestic investment in the long run, while company income tax has a significant positive effect on domestic investment.

1. INTRODUCTION

Social, economic, and political development of a country depends on the amount of revenue generated for the provision of infrastructure. However the major means of generating the amount of revenue for providing the needed infrastructure and developing human resources is through a well-structured tax system.

Governments raise taxes for public expenditure, ranging from social security to national defense, education, and infrastructure like highways or airports. The question is what kinds of taxes are raised and what sorts of effects they have. In particular, the difference between income taxes and consumption taxes is important (Bumpei, 2011).

Taxation is an important part of fiscal policy which can be used effectively by government in developing economies. Taxation play a vital role in economic development of a country which includes: resource mobilization, reduction in inequalities of income, improvement in social welfare, foreign exchange, regional development, control inflation. Apart from the objectives of raising public revenue, tax can be used as an important tool in the following manner; optimum allocation of available resources, encouraging savings and investments acceleration of economic growth, price stability and control mechanism.

Since its inception, Income Tax has been a pervasive force tending to influence the economic decisions of business entities. On the part of government, there have been tougher economic measures in order to control the adverse economic condition of the country. Among such measures are tax rules which are designed to increase revenues and accomplish other economic goals, but invariably; these rules have significant impact on business and investment decision.

Taxes inhibit investment rate through such taxes as Corporate, Personal income and Capital gain taxes. Taxes can slow down growth in labour supply by disposing labour-leisure choice in favour of leisure. Taxation can also affect research and development expenditure. It can lead to a flow of resources to other sectors that may have lower productivity. High taxes on labour supply can distort the efficient use of human capital.

Investment responds negatively to an increase in the taxes like corporate tax rate and a decrease in capital depreciation allowances through changes in the user cost of capital. Different tax policies can affect investment and productivity. It is well understood that taxes can distort investment plans by reducing the after tax returns of new investment.

For most investors and small business people, taxes play a role on how business and investment decisions are made. Taxes could also affect investment by reducing the amount of cash a firm has available to invest.

This study used the most recent data and thus provides an up to date findings on the effect of taxation on Domestic Investment in Nigeria. There have been conflicting results from the previous studies carried out on the effect of taxation on Domestic Investment. Some of these findings showed negative relationship between taxation and investment for example (Raza *et al.*, 2011); (Njuru *et al.*, 2013) carried out in Pakistan and kenya respectively and Talpos and Vancu (2009) carried out in Europe. Other studies reported a positive relationship between taxation and investment for example (Yan and Lu, 2013) carried out in China. Edame and Okoi (2014); Funke (2002) both carried out in Nigeria showed a negative relationship between taxation and investment while Akpo *et al.* (2015);

Asogwa and Okeke (2013) also carried out in Nigeria showed a positive relationship. This study is therefore important in resolving the differences revealed by the above studies. Moreover most of these studies were carried out overseas and this study was intended to add to the existing literatures in Nigeria.

This study therefore seeks to evaluate the effect of taxation on domestic investment in Nigeria. The remainder of this paper is organised as follows; Section 2 discusses the literature on taxation and domestic investment. Section 3 lays out the analytical framework and econometric methodology. Section 4 reports the results while section 5 concludes.

2. REVIEW OF RELATED LITERATURE

2.1. Company Income Tax and Domestic Investment

Taxes can affect growth through their impacts on factor accumulation and total factor productivity. With regard to the first channel, taxes can raise the cost of capital and reduce incentives to invest. To the extent that higher tax rates discourage investment, economic growth will be adversely affected (Ferede and Dahlby, 2012). The adverse effect of taxes on entrepreneurship reduces the creation of new ideas and lowers total factor Productivity (Ferede and Dahlby, 2012).

It can be derived that the corporation tax policy can affect consumption, investment activity and employment to some extent. An appropriate tax system can lead to the optimal resources allocation and to the increase of economic growth. Most studies which are in this area however employ only tax rates which have only limited informative value about actual tax burden (Kotlan *et al.*, 2011).

2.1.1. Personal Income Tax and Domestic Investment

Akaegbu (2012) has attributed the lapse in poor investment growth and low contribution to GDP by Nigerian Manufacturing sector to a persistent increase in multiple taxation. He pointed out that multiple taxation has affected the GDP in the country, which has declined from 9.5% in 1975 to 6.65% in 1995, 3.421% in 2010. Similarly, manufacturing capacity utilization declined rapidly from 70.1% in 1980 to 29.29% in 1995, 52.78% was recorded in 2005 but the figure declined to 46.44% in 2010.

2.1.2. Value Added Tax and Domestic Investment

The theoretical tax incidence literature argues that if a tax affects the price of an accumulated factor of production (physical capital, human capital and technology) then this tax is distortionary. An increase in distortionary taxation discourages the economic activities and consequently lowers the growth rate of economic output (Mureşan *et al.*, 2014). At the same time, a high VAT rate limits the possibility of consumption and investment, and it generates negative effects on the supply and the demand of economic goods produced by economic agents. The increment of the value-added tax has negative effects on inflation by increasing it and it has a series of inconvenient consequences on the economy (Mureşan *et al.*, 2014).

The income effect of VAT on aggregate consumption is clearly negative because the rise in the VAT rate will decrease people's disposable income. In addition to income effects, a change in the VAT rate has a substitution effect, which means even if the government reduces the income tax rate in order to offset the decrease in people's income due to the rise of the VAT rate, aggregate consumption will change (Bumpei, 2011). On the contrary, Adereti *et al.* (2011) reveals that though a positive correlation exists between VAT revenue and domestic investment, but there is no evidence of causality between the two variables. Owolabi and Okwu (2011) on the other hand found that valued added tax revenue contributed positively to the development of the respective sectors.

2.1.3. Tax Incentives

Tax incentives are instrument for effective domestic investments and Foreign Direct Investment (FDI). Such incentives should be carefully planned so that fiscal incentives would not entail the risk of distortionary effect (Oloichi, 2014).

Any Government company income tax policy which increases the rate and reduces tax and investment incentives would drastically reduce investment. On the other hand tax incentives incite investment growth rate. Apart from the corporate income tax, other taxes such as Valued Added Tax, property tax, royalty payments, and import tariffs affect investment. Tax incentives include tax holidays, grants, capital allowance acceleration, enhanced deductions, and special investment allowance among others (Oloichi, 2014).

2.2. Theoretical Frame Work

Laffer Curve Theory

The theory of Laffer curve was propounded by Arthur Laffer in the year 1979. It shows the relationship between tax rates and tax revenue collected by government.

The Laffer curve illustrates the concept of taxable income elasticity. That is taxable income will change in response to changes in the rate of taxation. It postulates that no tax revenue will be raised at the extreme tax rates of 0% and 100% and that there must be at least one rate which maximizes government tax revenue.

The curve suggest that as taxes increase from zero level, tax revenue collected by the government also increases. It also shows that tax rate increasing after a certain point, would cause people not to work as hard (or reduced level of investment) thereby reducing tax revenue and investment. If tax rates reached 100% (the far right of the curve) then all people would choose not to work or invest because everything they earned would go to the government.

2.3. Review of Previous Studies

Raza *et al.* (2011) examined the effect of corporate income tax and firm size on investment in Pakistan. The study used panel financial data on annual basis for the period of six years from sample manufacturing Companies. The data were analyzed using multiple regression analysis. The result concluded that there is a negative relationship between Corporate Income Tax and Investment, while firm size and investment reveal a positive relationship with each other.

Ezejiyor *et al.* (2015) seek to assess whether tax as a fiscal tool affect the performance of the selected manufacturing companies in Nigeria. Descriptive method was adopted and data were collected through the use of six years financial accounts of the selected companies. The hypothesis formulated for the study was tested with the ANOVA using the Statistical Package for Social Sciences (SPSS)version 20.0. It was found that Taxation as a fiscal policy instrument has a significant effect on the performance of Nigeria manufacturing companies.

Edame and Okoi (2014) examine the impact of Taxation on investment and economic growth in Nigeria from 1980-2010. The ordinary least square method of multiple regression analysis was used. The data was sourced from the Central Bank of Nigeria statistical bulletin and National Bureau of statistics. The result of the analysis showed that the parameter estimates of Corporate Income Tax (CIT) and Personal Income (PIT) appears with negative signs. This means that there is an inverse relationship. Implication of the result is that a one percent (1%) increase in (CIT) will result in decrease in the level of investment in Nigeria. Consequently an increase in PIT will result in decrease in the level of investment. Therefore it shows that taxation is negatively related to the level of investment and the output of goods and services (GDP) and is positively related to Government Expenditure in Nigeria.

Asogwa and Okeke (2013) examined the impact of Value added tax on Investment. Data from the Central Bank of Nigeria Statistical Bulletin (CBN) were analyzed using multiple regression analysis. The result show that value added tax has significant effect on investment growth in Nigeria. The sign of VAT does not conform to prior expectation of the model.

Oloichi (2014) examined the effect of Company Income Tax (CIT) on investment decision of companies liable under the company income tax act in Nigeria. Questionnaire was designed to collect data from 180 companies in the south west zone. Findings revealed that company income tax has influence on the rate of return on investment and Investment Evaluation criteria; Tax incentives motivate investment. Tax was considered to be very important when compared with other factors affecting investment decision. Therefore tax policy should aim at fostering economic growth.

Njuru *et al.* (2013) investigated the impact of taxation on private investment in Kenya. Vector auto-regression techniques was used to achieve study objectives. Time series research design was used covering the period 1964-2010. The study found that VAT, Income tax and establishment of Kenya Revenue Authority (K.R.A) had negative impact on private investment, while excise tax, import tax amnesty impact positively on private investment. The study concluded that appropriate tax system and progressive tax reforms are necessary to ensure that private investors are given enabling environment to establish.

Talpos and Vancu (2009) investigate the effects of Company income tax burden on investment decision. The study estimated a pool data econometric model with dependent variables as Gross fixed capital formation per capita and as an independent variable, the average tax burden of corporation tax. The samples contain time series for the 2000-2007 periods for all the 27 EU member states. Data were collected from Eurostat statistical data base. The Ordinary Least Square (OLS) method was used to estimate the model. Result showed that corporate income taxation has a negative impact for some developing former transition countries. For average and above average countries, the result showed a direct connection between Gross fixed capital formations, corporate income tax burden with taxation being a less significant determinant of investment.

Yan and Lu (2013) examined the effect of Value added tax transformation on Non-current assets investment based on the data of Jiang Su listed companies. The data collected were analyzed using econometric regression analysis. In overall the transformation of Value added tax has a positive effect on management and development of Jiangs listed companies.

Funke (2002) examines the effect of Estonia 2000 income tax reforms on taxation and investment. The study concludes that there is 6% increase in the equipment capital stock over the long run as a result of the tax reform.

Schwellenus and Arnold (2008) examined the effects of corporate income taxes on two of the main drivers of growth, productivity and investment of firms in European EDC member countries over the time period of 1996-2004, through stratified sampling. This is found to be true across firms of different size and age classes except for young and small firms. The result suggests that corporate income tax reduce investment through an increase in the user cost of capital. This may partly explain the negative productivity effects of corporate income taxes if new capital goods embody technology change.

3. METHODOLOGY

3.1. Sources of Data

Secondary data was used in this study. The relevant data for the study were obtained from the Central Bank of Nigeria (CBN) statistical Bulletins, (various Issues) and the National Bureau of statistics. The data covered the period of 23years from 1995-2017.

3.2. Model Specification

The specification of the econometric model adopted in this study, builds on theoretical propositions. The model used in this study is specified as follows;

$$DINV = F(CIT, PIT, VAT, GDP)$$

Put in linear form, the above model becomes;

$$DINV = \alpha_0 + \alpha_1 CIT + \alpha_2 PIT + \alpha_3 VAT + \alpha_4 GDP + U$$

Where DINV = Domestic Investment expenditure

CIT = Company Income Tax

PIT= Personal Income tax

VAT = Valued Added Tax

GDP= Gross Domestic product

U = Random error Term

α = Constant

$\alpha_1, \alpha_2, \alpha_3$ and α_4 are the co-efficient of the regression equation.

3.3. Methods of Analysis

The above model designed to test the impact of taxation on Domestic investment was analyzed using the ordinary least square technique (OLS). The E- view statistical tool was used to carry out the analysis which includes, the descriptive statistics that shows the properties of the variables used, including their mean, minimum, maximum values, standard deviation etc. The cointegration test measured the long run relationship of the variables while the model estimation shows the impact of the independent variables on the dependent variable which is domestic investment.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Presented below in Table 1 is the descriptive statistics of the variables used in this study.

Table-1.Descriptive Statistics.

Variables	CIT	GDP	INVESTMENT	PIT	VAT
Mean	420.8948	39665.31	10.23174	326.0191	358.7389
Median	244.9	28662.47	8.6	134.195	221.6
Maximum	1215.057	113711.6	16.56	1133.62	972.348
Minimum	21.878	2895.2	5.46	16.99	20.761
Std. Dev.	411.1705	36298.84	3.421618	321.6966	318.1359
Skewness	0.622395	0.669029	0.49124	0.859304	0.49998
Kurtosis	1.919506	2.055415	1.767192	2.74143	1.745524
Jarque-Bera	2.603763	2.570864	2.381537	2.894618	2.466396
Probability	0.272019	0.276531	0.303987	0.235202	0.291359
Observations	23	23	23	23	23

The mean and median used in this study are very close. This shows that the data used are stable and reliable. Moreover, the standard deviations of the variables used are not so large, therefore further indicating the reliability of the data used. 23 observations were made covering the period from 1995-2017 (23 years).

4.2. Co integration Test

The result of the co integration text carried out is presented in Table 2.

Table-2. Co integration Result.

	Likelihood	5 Percent	1 Percent	Hypothesized
Eigenvalue	Ratio	Critical Value	Critical Value	No. of CE(s)
0.955856	142.6666	68.52	76.07	None **
0.801015	77.14036	47.21	54.46	At most 1 **
0.59884	43.23534	29.68	35.65	At most 2 **
0.585727	24.05404	15.41	20.04	At most 3 **
0.23218	5.548191	3.76	6.65	At most 4 *

The test indicates at least 5 co integrating equations at 5% significance level. The result indicates a long run relationship between the variables which includes Gross domestic product, Personal income tax, Company income tax, Value added tax and Domestic Investment.

4.3. Results of the Estimated Model

This study was carried out to investigate the effect of taxation on Domestic investment in Nigeria. Presented below in Table 3 are the results of the effect of the independent variables (Personal income tax, Company income tax, Value added tax and Gross domestic product) on the dependent variable (Domestic Investments).

Table-3. Model Estimation.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.288124	0.615207	11.84662	0
CIT	0.015972	0.007439	2.147086	0.0457
GDP	-3.84E-05	6.90E-05	-0.55622	0.5849
PIT	-0.01069	0.007092	-1.50763	0.149
VAT	0.003428	0.007954	0.430916	0.6716
R-squared	0.78149	Mean dependent var		10.23174
Adjusted R-squared	0.732932	S.D. dependent var		3.421618
S.E. of regression	1.768244	Akaike info criterion		4.167511
Sum squared resid	56.28036	Schwarz criterion		4.414358
Log likelihood	-42.9264	F-statistic		16.09403
Durbin-Watson stat	1.722488	Prob(F-statistic)		0.000009

4.4. Result of the Estimated Model

The adjusted R- squared of 0.732932 (73%) indicates that 73 percent of the changes in the dependent variable (Domestic Investment) are accounted for by changes in the independent variables. This shows a significant relationship between taxation and Domestic investment in Nigeria.

Other results of the test are as follows:

- I. Company income tax has a significant positive impact on Domestic investment in Nigeria. This shows that increases in company income tax does not negatively affect Domestic investment in Nigeria. The findings of this study is in line with Oloichi (2014) but differs from Talpos and Vancu (2009). The availability of tax incentives to companies operating in Nigeria help to cushion the negative effects of company income tax. Example of such incentives includes; Capital allowances, Tax holidays and exemptions etc. There is also the case of decreasing tax rates which fell from 45% in 1979 to 30% presently.

- II. Personal income tax also has a non-significant negative relationship with Domestic investment. It also shows that an increase in personal income tax rates negatively affects Domestic investment. But the effect is not significant.

This finding is in line with the findings of [Edame and Okoi \(2014\)](#). The multiplicity of taxes in Nigeria tends to negatively affect Domestic investments by inhibiting initiatives and hard work.

- III. The result also shows that Value Added tax has a positive non significant effect on Domestic investment in Nigeria. This result is in line with [Yan and Lu \(2013\)](#) but differs from [Asogwa and Okeke \(2013\)](#) and [Njuru et al. \(2013\)](#). Value added tax is an expenditure tax and as such the burden of the tax is borne by the final consumers.

In conclusion the study finds a mixed result. While Company income tax and Value added tax both have positive effects on Domestic investment, Personal income tax has a negative, though insignificant effect on Domestic investment in Nigeria.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

This study examined the effect of taxation on investment in Nigeria. It used aggregate time series data sourced from CBN statistical bulletin covering the period 1995 to 2017. Data collected were analyzed using the ordinary least square technique. Findings indicate that company income tax and Value added tax both have positive effects on Domestic Investment while Personal income Tax and Gross Domestic Product have negative effects on Domestic investment in Nigeria. Taxation therefore has a long run impact on Domestic investment in Nigeria.

5.2. Recommendation

Money derived from taxation should be used by Government in providing infrastructures like good roads, electricity and other social amenities. This will encourage businesses by reducing the cost of doing business.

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