

## TAX AS AN INSTRUMENT OF ECONOMIC GROWTH

NNAJI, REGINALD CHIDI

DEPARTMENT OF ACCOUNTING, IMO STATE POLYTECHNIC, UMUAGWO

UMEAKA, E. C., PhD.

DEPARTMENT OF ACCOUNTING, IMO STATE UNIVERSITY, OWERI

AGUSIMBA, S.N.

DEPARTMENT OF ACCOUNTING, IMO STATE POLYTECHNIC, UMUAGWO

### ABSTRACT

*This study tends to evaluate tax as an instrument of economic growth. In the study, different types of taxes are used as a proxy to tax and Real Gross Domestic Product is used as a proxy for economic growth. Relevant data to the study are collected from the Central Bank of Nigeria statistical bulletin, National Bureau of Statistics and Federal Inland Revenue Service. Regression is used in analyzing the Model. The Augmented Dickey-Fuller unit root test is employed to establish the stationarity of the variables while the General-to-Specific approach to Autoregressive Distributed Lag (ARDL) model is used for testing for the existence of long-run and short-run equilibrium conditions. The study finds that there exists a long run equilibrium relationship evidence between taxes and Real Gross Domestic Product (RGDP) during the period under study. The adjusted  $R^2$  value of 0.972914 shows that about 97.29% of the total variation in the real GDP is explained by the independent variables included in the model. The regression test also shows a very strong relationship among the variables. We therefore conclude that tax is a strong instrument of fiscal policy and therefore recommend that government should establish a strong fiscal responsibility and transparency system in the fiscal institutions; and combating of corruption and rise in investment activities should be a product of the tax reforms. Government debts should be channeled towards provision of critical infrastructure so as to provide the enabling investment environment, while fiscal policy should be complemented with the use of effective monetary policy.*

*Keywords: Economic growth, Gross Domestic Product, CIT, VAT, PPT.*

### INTRODUCTION

For Nigeria to raise enough revenue that will prompt growth in the economy, she will urgently need effective and efficient tax system (Oji, 2000). According to Olusanya (2012), taxation may be seen as an intention to harm a person's proposed level of living or even business proposed revenue generation, but to the government and the fiscal need for taxation, it is the stronghold of development and its facilitator. In national development, taxation is rising and the presence of new technology has caused continuous economic growth and

development. The actual objective of taxation is to take money from tax payers so that tax payers give up control over economic resources and make them available to the state. It is a fiscal policy instrument which the government handles skillfully to achieve macroeconomic purpose. This purpose could be covering a wide area geared towards decreasing the rate of national unemployment; government through tax incentives can stimulate investment as the tax liability on investors is reduced and more money becomes available for investment purposes thereby, reducing

the level of poverty as more unemployed people become gainfully employed; this for sure is a signal for economic development.

The redistribution of wealth and income is certain, thus, an instrument for the actualization of socially desirable objectives (Olakunri, 2000). Nigeria experienced a long economic instability as a result of huge fiscal deficits attributable to Gross Domestic Product (GDP). The deficits were followed by increase in the rate of inflation, poor productivity in public sector investment and considerable debt overhang. Even till date we are still faced with economic deficit. More specifically, prior to the recent economic reforms, Nigeria's economic performance was characterized by large macroeconomic instability for variables such as inflation and exchange rates, etc; unfriendly business environment impeding private sector growth and also the case of poor governance.

The objective of this study is to examine tax as an instrument of fiscal policy and its effect on economic development.

### **Conceptual Framework**

Every economy of any country, no matter the structure, is normally regulated by certain policies developed by the government of that country; one of such regulation is the fiscal policy.

### **TAX**

Tax is a compulsory levy imposed on individuals, companies or corporate bodies by government for the purpose of achieving its goals or provision of public goods.

The concept of taxation involves more than the mere imposition of the compulsory levies by the government or its agencies. This is the aggregate of tax assessment, the introduction and enforcement of mandatory

sums of money by the government or its relevant agencies on the citizens and organizations, the collection of and the accounting for the levied amounts and the keeping and auditing of tax records, (Anyanwuocha, 1993) as cited by (Olusanye 2012).

**Tax** is a charge or levy imposed on the citizens by the government or its agency to fund various public programmes.

### **ECONOMIC Growth**

**Economic growth** is described as the way in which a state increases her political, social and economic well-being of its citizens. It can also be seen as policy intervention measure which aims at economic and social well-being of the people; economic growth is a phenomenon of market productivity and rise in GDP. (online)

**Economic growth** is the process whereby simple, low-income national economies are transformed into modern industrial economies as stated by Anne O. Krueger (2006).

**Economic growth** is the growth of wealth of countries, regions or communities for the well-being of their people. Policy wise, economic development is the ability to better the economic well-being and standard of living for a state by establishing jobs, retaining deand, encouraging incomes and the tax base. (online)

In general, **economic development** is mostly the focus of federal, state, and local governments to improve their living standard through jobs creation, initiation of new ideas, improving innovations, wealth creation and the creation of an overall better life of its citizens. Economic development has been seen as what it tends to achieve. These include improving infrastructure, social amenities, improving our education

system and enhancing our public safety through fire and police service; or encouraging new businesses to open a location in a community.

### **THEORETICAL FRAMEWORK**

Generally, theories differ depending on the schools of thought that propound them. Some economists suggest whether or not the state should be involved in economic cycles. However, one of the theories which is believed to have an important role in providing knowledge on theories about fiscal policies and in terms of depression in the economy is based on the theories of British economist, John Maynard Keynes, which is also known as Keynesian economics. This theory basically states that governments should use its policies to bring to stability the market force before the long run to inhibit inflation (generally, it is considered to be good when it is at the levels between 2% and 3%), and it also increases employment and maintains a wholesome amount of money.

The theory of taxation could be based on the activities between tax liability and the state. The basic objective of taxation is to generate revenue for the government to settle its expenditures and for the provision of social amenities and welfare for the general public.

According to Ogbonna and Appah (2012), this reason justifies the imposition of taxes for financing state activities and for the provision of a basis for apportioning the tax burden among members of the society.

**Benefit theory** states that, tax should be based on the benefits the individuals receive from the social amenities provided by the government. The more benefits the individual gets from government, the more tax he or she should pay.

This theory assumes an exchange of money for social amenity between the government and the citizens. The government provides some goods and services to her citizens and contributes the cost of such goods and services according to the received benefits which serves as the basis for apportioning the levy of tax in a particular manner.

### **COST OF SERVICE THEORY**

Some stakeholders in economics state that if the government charges her citizens for the services it provides, it therefore satisfy the idea of equity or justice in taxation. This means that the cost of service principle can be applied to some areas like postal, railway services, supply of electricity, etc but most of the expenditures incurred by the state cannot be fixed for each individual because it cannot be exactly determined. For instance, how can we measure the cost of service of the police, armed forces, judiciary, etc., to different individuals? Dalton has also rejected this theory on the ground that there is no quid pro quo in a tax (Chigbu, et.al, 2012).

They see the cost of service theory as very similar to the benefits-received theory, the theory emphasize semi commercial relationship between the state and the citizens to a greater extent. The implication according, to Chigbu, et.al, (op.cit) is that the citizens are not entitled to any benefits from the state and if they do receive any, they must pay the cost thereof. In this theory, costs of services are scrupulously recovered unlike the benefits-received theory where a balanced budget is implied.

### **ABILITY TO PAY THEORY**

This theory states that tax payment should be based on the ability to pay. The theory has gained popularity because of its equity and justice.

It seems that if the taxes are levied on this ability to pay principle, then justice can be achieved. But this theory is difficult in the sense that it poses a problem on the definition of ability to pay. The economists are not unanimous as to what should be the exact measure of a person's ability or faculty to pay.

This system of taxation requires that higher earning persons pay taxes higher than those with lower income. The basic belief of this theory is that the burden of taxation should be shared by the members of the society on the principle of equity and justice and that this principle obligates that tax burden is shared according to their relative ability to pay. Adam Smith is the brain behind the principle of equity and justice. He advocates that the amount of tax payable should be equal. This by implication means that tax payable is in proportion to earned income. Equity and justice is assumed only when the tax system is based on the ability of the tax payer to pay the amount levied as tax liability.

### **EMPIRICAL STUDIES**

Several studies have been carried out on the impact of taxes on economic growth. Anyanwu (1997) in a study of the effects of taxes on Nigeria's GDP/Economic Growth (1981-1996) shows that companies' income tax positively and significantly affects GDP just as customs and excise duties. However, petroleum profit tax positively and insignificantly affects Nigeria's GDP.

Mokua and Kenya (2012) as cited by Kwaji (2017) examined the Impact of Tax Reforms on Revenue Productivity in Kenya. The researchers observe that the regression result showed that total tax in Kenya was inelastic during the three periods, but it was buoyant during the pre-reform and

piecemeal reform periods. The study also showed that the reforms had a positive impact on productivity of income tax, but did not have a positive impact on productivity of Value Added Tax (VAT). The positive reform on the productivity of income tax was as a result of the relative effectiveness of income tax reform that made the tax system simpler and reduced avenues for evasion and corruption, whereas the low elasticity of value added tax might have been caused by tax evasion and collusion between the tax collectors and tax payers.

Similarly, Dennis and Emmanuel (2014) investigated the impact of taxation on revenue generation in Nigeria: A Study of Federal Capital Territory and Selected States. The researchers discovered among others that, taxation has a significant contribution to revenue generation and taxation has a significant contribution on Gross Domestic Product (GDP). The researchers therefore recommend among others that Well Equipped Data Base (WEDB) on all tax payers should be established by the Federal, State and Local Governments with the aim of identifying all possible sources of income of tax payers for tax purpose; the tax collection processes must be free from corruption. In addition, the Federal, States and Local Governments should urgently fully modernize and automate all its tax systems, improve tax payers' convenience in the assessment and payment process whilst at the same time entrenching effective and modern human resources management practice in the tax authorities.

Tosun and Abizadeh (2005) in their study of economic growth of tax changes in OECD countries from 1980 to 1999 reveal that economic growth measured by GDP per capita has a significant effect on the tax mix of the OECD countries. The analysis reveals

that different taxes respond to the growth of the GDP per capita. It is shown that while the shares of personal and property taxes have responded positively to economic growth, shares of the payroll and goods and services taxes have shown a relative decline. Arnold et al. (2011) in their study entitled "Tax policy for Economic Recovery and Growth" found that short term recovery requires increase in demand while long term growth requires increase in supply. As short term tax concessions can be hard to reverse, this implies that policies to alleviate the crisis could compromise long run growth as recorded by (Chigbu 2012).

Dackehag and Hansson (2012) studied how statutory tax rates on corporate and personal income affect economic growth using panel data from 1975 to 2010 for 25 rich OECD countries. They found a negative influence on economic growth from both taxation of corporate and personal income. Their study revealed a more robust economic growth in correlation with corporate income tax. Koester and Kormendi, (1989) construct measures on average and marginal income tax rates by regressing tax revenue on GDP, and they summed the measures in a growth regression. They detect no statistically significant relationship between taxes and economic growth. In their finding, tax rates seem to have a negative impact on the growth rate, though with marginal tax rate having negative effect on the level of activity. However, contrary to Koester and Kormendi findings, Galli, (2001) constructed a similar tax measures and included a dummy slope to allow changes in tax rates over time, they found tax rates as having negative and statistical significance on growth. Their study in 2002 eventually confirms a negative correlation between

marginal tax rates and economic growth, and average tax rates to have significant impact on economic growth and development. Poulson and Kaplan, (2008) studied the impact of tax policy on economic growth in the states within the framework of an endogenous growth model. They applied the regression analysis to estimate the impact of tax on economic growth in the state from 1964 to 2004. They found a significant negative impact of higher marginal tax rate on economic growth. This analysis however, underscores the importance of controlling for regressivity, convergence, and regional influences in isolating the effect of taxes on economic growth in the states.

Engen and Skinner (1996) carried out a study of taxation and economic growth of U.S economy, large sample of countries and the use of evidence from micro level studies of labour supply, investment demand and productivity growth. Their result suggests modest effects, on the order of 0.2 to 0.3% points' differences in growth rates in response to a major tax reform. They stated that such small effects can have a large cumulative impact on living standards.

Appah (2010) carried out a study of the relationship between fiscal policy and economic growth in Nigeria (1991–2005) utilizing multiple regression analysis, adopting gross domestic product as proxy for economic growth and tax revenue, government debt, government recurrent expenditure, government capital expenditure, government recurrent expenditure budget and government capital expenditure budget as the explanatory variables. He argued that significant relationship exists between fiscal policy variables jointly and economic growth and that the specific variables contributing to the

GDP are government recurrent and capital expenditures. Similarly, Medee and Nendee (2011) in their study on econometric analysis of the impact of fiscal policy variables on Nigeria's economic growth (1970–2009) using gross domestic product as the dependent variable and Federal government expenditure, Federal government revenue, inflation rate and capital inflow as the regressors and by adopting arcane method of Vector auto regression and error correction mechanism techniques argued that there exists long run equilibrium relationship between fiscal policy variables and economic growth in Nigeria.

### METHODOLOGY

The data used for this study were sourced from Statistical Bulletin and Statement of Accounts of the Central Bank of Nigeria (CBN) of various issues as well as National Bureau of statistics (NBS) Annual Report for various years. The macroeconomic data cover Gross Domestic Product (GDP), taxes for the period 1994 to 2015 in Nigeria. Some

data were also obtained from FIRS on different types of taxes like CIT, VAT and PPT.

The statistical tools used in the analysis of the data are regression and other econometric tests.

The regression equation model is given as follows;

$$RGDP = F(CIT, VAT, PPT)$$

$$RGDP = b_0 + b_1cit + b_2vat + b_3ppt + u$$

Where

RGDP = Real Gross Domestic Product

CIT = Company Income Tax

VAT = Value Added Tax

PPT = Petroleum profit Tax

U = the error term or stochastic variable.

The model also uses Granger causality test to ascertain the direction of causality between GDP and TAX between 1970 and 2009. Other econometric tests such as co-integration test and vector error correction mechanism were also performed to determine the stationarity of the data and long run.

### DATA PRESENTATION AND ANALYSIS

#### Stationarity Test

The result below summarizes the ADF statistics for the variables of the study

	ADF	5%		5%		5%		
Variables	@ level	c.v.	ADF @ 1 <sup>st</sup> diff	Crit. Value	ADF @ 2 <sup>nd</sup>	c.v.	Remark	Order of integr
RGDP	0.4000255	-3.020686	-2.129271	-3.020686	-4.847103	-3.029970	Stationary	1(2)
CIT	3.908830-	3.020686	0.485973	-3.029970	-4.202338	-3.029970	Stationary	1(2)
VAT	-2447480	-3.039970	-1.614385	-3.020686	-5.206385	-3.027770	Stationary	1(2)
PPT	-1.588197	-3.012363	-4.540121	-3.020686	-	-	Stationary	1(1)

The results of the unit root test show that all of the series were not stationary at level 1. PPT attained stationary after first difference and RGDP, CIT and VAT attained stationary after second difference at 5% significance level.

**CAUSALITY TEST**

Null Hypo4	0.55	f-statistic	Prob	Decision	
CIT does not granger cause RGDP		0.33166	0.7229	Accept Ho	Does not granger cause, No-directional causality
RGDP does not granger CIT	20	2.43158	0.1217	Accept Ho	
VAT does not granger cause RGDP		2.98630	0.0810	Accept Ho	Does not granger cause, No-directional causality
RGDP does not granger cause VAT	20	1.10559	0.3565	Accept Ho	
PPT does not granger cause RGDP	20	1.33891	0.2917	Accept Ho	Does not granger cause, No-directional causality
RGDP does not granger cause PPT		1.10559	0.3565	Accept Ho	
VAT does not granger cause CIT		1.69567	0.2168	Accept Ho	Does not granger cause, No-directional causality
CIT does not granger cause VAT	20	1.43229	0.2696	Accept Ho	
PPT does not granger cause CIT		4.02319	0.0399	Reject Ho	Does not granger cause, Uni-directional causality
CIT does not granger cause CIT	20	1.41433	0.2737	Accept	
PPT does not granger cause VAT	20	2.13323	0.1530	Accept Ho	Does not granger cause, No-directional causality
VAT does not granger cause PPT	20	0.70361	0.5104	Accept Ho	

From causality above, there is No-directional granger causality between RGDP and CIT. It means. When there is an increase in company income tax, it does not increase the Real Gross Domestic Product and vice versa.

In the same vein when value added tax is increased, it does not bring about any increase in Real Gross Domestic Product and vice versa. The same situation also occurs when there is an increase in Petroleum Profit Tax, it does not increase in Real Gross Domestic Product and an increase in Real Gross Domestic Product does not increase petroleum profit tax.

VAT and CIT: in the same way Value Added Tax do not have effect on company income tax because an increase in company income

tax does not increase value added tax and vice versa.

PPT and CIT: AN increase in petroleum profit tax causes an increase in company income tax but an increase in company income tax does not increase petroleum profit tax.

PPT & VAT: An increase in PPT does not cause an increase in VAT, Neither does an increase of VAT cause an increase in PPT, which implies that there is no causality existing.

**Regression**

The estimated regression equation from the computer analysis becomes

$$RGDP = f(CIT, VAT, PPT)$$

$$RGDP = b_0 + b_1 CIT + b_2 VAT + b_3 PPT + \mu$$

$\mu$  = error term or stochastic variable i.e. other factors that affect the dependent

variable (RGDP) but not included in the equation.

$b_0$  = the variable to be estimated

$b_s > 0$  implying all the independent variables are expected to have positive relationship with the dependent variable.

From the regression result analysis through the aid of E-view package, the estimated regression line becomes

$$\text{RGDP} = 313377.6 + 0.416263 \text{ CIT} + 0.140420 \text{ VAT} + 0.068845 \text{ PPT}$$

The coefficient value of 313377.6 for the constant ( $b_0$ ) shows the mean values of the dependent variable when all the independent variable are equal to zero. In other words, the absolute value of RGDP will be equals to 313377.6 if Company Income Tax (CIT), Value Added Tax (VAT) and Petroleum Profit Tax (PPT) are equal to zero.

The estimated co-efficient value of 0.416263 for CIT implies that there is a positive relationship between Company income tax and RGDP which is in line with the appropriate theory or expectation. This means that when there is a ₦1 increase in Company income Tax, other factors held constant, it will equally increase the RGDP by 0.416263. The t-statistic of 2.558790 for CIT shows that a positive significant relationship exists between CIT and the RGDP since the probability of value of 0.02 is less than 0.05.

The estimated co-efficient value of 0.140420 for VAT means that there is a positive relationship between VAT and RGDP. It shows that any ₦1 increase in VAT will bring about 0.140420 increases in the RGDP. The t-statistic of 0.482504 for VAT shows that a negative insignificant relationship exists between VAT and RGDP since the probability value of 0.6356 is greater than 0.05.

From the estimated value of 0.068845 for PPT, there is a positive relationship between PPT and RGDP. It shows that a ₦1 increase in the PPT will cause a 0.068845 increase in the RGDP.

The t-statistic is 2.673276 for PPT. It shows that there is a positive significant relationship between PPT and RGDP since the probability value of 0.0160 is less than 0.05.

### THE CO-EFFICIENT OF MULTIPLE DETERMINATIONS

$R^2$  which defines the proportion of the variation in the independent variable (RGDP) that is explained by the dependent variables turned out with a high percentage value of 97.2914%, showing that there is a very high and strong relationship existing between the variables in the model. The implication of the result is that 97.2914% of the total variations in the level of RGDP are explained by the changes in the explanatory variables modeled in our study while the remaining 2.7% are attributed to factors that are not included in the model (i.e. the error term)

### CO-INTEGRATION TEST

For the co-integration analysis result, both the trace test and maximum eigen value test indicate three co-integration equation at 0.05 level of significance showing that there is a long run relationship between the variables of the study.

### SUMMARY OF FINDINGS

From the result of the Regression test and other tests carried out, it was observed that the company's income tax, value added tax and petroleum profit tax have a positive, strong and significant relationship with real gross domestic product.

In the same vein, in testing the co-efficient of multiple determinations, it was observed that a very high level, and strong relationship



exists between the variables in the model (i.e CIT, VAT, and PPT)

### CONCLUSION

The empirical results showed a clear and strongly expressed impact of taxes on economy's growth. With respect to the effects of taxes, personal income tax is negatively related to growth, whereas company income and petroleum profit tax and value added tax are usually positively related. Although one has to be cautious, this seems to imply that the tax burden has been unequally distributed in the economy.

From the tests carried out and the analyses made we hereby conclude that tax is a very strong instrument for fiscal policy.

### REFERENCES

- Anne, O. Krueger (2008) . Economic Policy Reform and Financial Market Reform. NBER Workshop Paper and Publication.
- Anyanwu, C.J. (1997). Nigeria Public Finance. Onitsha: Joanne Educational Publishers Ltd
- Arnold (2011). Do Tax Structure Affect Aggregate Economic Growth? Empirical Evidence. Online Published
- Appah, E. (2010). The Relationship between fiscal policy and Economic Growth in Nigeria (1991–2005). International Journal of Economic Development Research and Investment
- Dackehag and Hansson (2012). Monetary and Fiscal Actions: A Test of Their Relative Importance in Economic Stabilization. Federal Reserve Bank of St. Louis Review, 50 (November): 24-44.
- Dennis. & Okoye Emmanuel ( 2014). The Impact of Taxation on Revenue Generation in Nigeria 2(2):22-47. 22 Online
- Engen, E. & J. Skinner, (1996). Taxation and Economic Growth. Natl. Tax J., 49(4): 617-642.
- Galli, (2001). Financial Intermediation and Economic Growth in Developing Countries. Journal of Economics Studies, 25(3) (1998), 203-224.
- Kwaji, (2017). Empirical Analysis of Tax Revenue Collection by the Federal Government in Nigeria. online published.
- Kwaji, Sini Fave.; Ishaya John Dabari (2017). Department of Accountancy, School of Management and Information Technology, Modibbo Adama University of Technology, Yola, Adamawa State- Nigeria.
- Kormendi, R. (1989). Government Debt, Government Spending, and Private Sector Behavior. American Economic Review, (December), 73 994-1010.\*
- Medee, P. N. & Nenbee, S. G. (2011). Econometric Analysis of the Impact of Fiscal Policy Variables on Nigeria's Economic growth (1970–2009). International Journal of Economic Development, Research and Investment, 2(1), 171–183).
- Ogbonna & Appah (2012). The Impact of Tax Policy on Economic Growth in Nigeria. International Journal of Economic Development, Research and Investment. Online Published
- Oji, J. (2011). Review of Nigeria's 2011 Budget. Awesome Inc. template.
- Olusanya, Samuel Olumuyiwa., Peter, Medunoye, Oyebo Afeez Oluwatosin (2012). Taxation As A Fiscal Policy Instrument For Income Redistribution Among Lagos State Civil Servants. (A

- Case Study of Lagos State Civil Servants). Online Published.
- Poulson & Kaplan (2008). Global Financial Meltdown and the Reforms in the Nigerian Banking Sector. Paper delivered in a Public lecture at the convocation square.
- Wikipedia. (2011). Economic Growth. Wikipedia, the free encyclopedia. Retrieved from <https://en.wikipedia.com/terms/e/economicgrowth>.