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Original Research Article

A Comparative Analysis of the Effect of Direct and Indirect Tax on Nigeria's Economy

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Abstract

The study comparatively analyzed the effect of direct and indirect tax on economic growth in Nigeria. The aim of the study is to compare the effect of both taxes in relation to their contribution to the growth of Nigeria's economy. The researcher employed expost facto design, the sample size was chosen through purposive sample method to be 22 years. The data used were time series collected from CBN annual report and account 2020. The statistical tool applied was ordinary least square multiple regression analysis. The findings at 0.05 level of significance, revealed that both direct and indirect taxes have positive and significant effect on gross domestic product in Nigeria. Based on the findings, it was recommended that government should sustain the tempo of the collection of both direct and indirect taxes because, they are equally important.

Keywords: Economic growth, Gross Domestic Product, Direct Tax, Indirect Tax etc.

INTRODUCTION

Tax is a compulsory levy that citizens and residents of a country pay to the government (Ihenetu 2021). The revenue generated from tax is used to develop the economy. It is important to note that apart from raising revenue for the government, tax can be used to protect infant industry, redistribute wealth, discourage consumption, discourage production of harmful goods etc. According to Worlu and Emeka (2012), a tax can be charged on a product, income or activity. If it is directly on person or corporate income; it is called direct tax. If on the other hand, it is levied on price of goods or service, it is regarded as indirect tax.

Direct tax comprises of company income tax, education tax etc where as indirect tax is comprises of custom and excise duty, value added tax etc. These two forms of taxes are used extensively by the government of Nigeria to generate revenue (Oyewo 2013) and grow the economy.

Economic growth is determined by institutions, size of aggregate demand, saving and investment rates, efficiency of financial system, budgetary and fiscal policies, migration of labour and capital, efficiency of government, capital accumulation technological progress, cultural factors, social factors, geographical and demographical factor etc. (Acemoglu, Johnson, Robinson and Yared 2009).

A lot of research have been conducted on tax revenue and economic growth. For example, Ogundana, Ogundana, Ogundana, Ibidunni, and Adetoyinbo (2017) investigated the impact of direct and indirect tax on the Nigerian economic growth using descriptive research design and secondary data between 1994-2013, Grace *et al* (2016) examined the effect of tax revenue on the economic growth and development of Nigeria, Margaret, Charles and Gift (2014) examined the impact of direct tax revenues on Economic Growth (GDP) of Nigeria etc., but none of them separated direct and indirect tax to know which of them contributes more to the economy. Not only that, the research carried out on the subject matter by the researcher ended up in 2018. None has extended it to 2020 so as to capture the dynamics of Covid 19 pandemics that affected the global businesses. This therefore constitutes the gap which the study is design to fill.

The main objective of the study is to compare the effect of direct and indirect tax on economic growth. The rest of the work shall be segmented into literature review, methodology, presentation and analysis and conclusion and recommendations.

Literature Review

Under literature review, we shall consider the following:

a) Theoretical Framework

i. Ability to Pay Theory

The theory was propounded by Adams Smith 1776 and was further popularized by Cicil Pigou 1877. This theory was adjudged one of the most remarkable, renown and generally accepted theory of taxation that allow citizens to pay tax to the government according to their ability (Otu & Theophilus, 2012). Jones and Rhoades (2011) posited that since the introduction of this theory, it has the dominant effect and explain the basis upon which good tax system should operate (Lawrence, 2015). The theory contends that tax system should be on progressive basis to the taxpayers so that those who earn more pay more tax and those who earn lower income pay less. The theory is adjudged reasonable and fair theory of taxation because it takes into account the differences in income for different tax payers.

ii.The Harrod Domar growth Model

Harrod (1939) came up with the theory of investment and also Domar (1946). They are of the view that investment leads to growth. If the economy invest or give themselves to investments, then, there will be expansion in the economy. According to them, investment will encourage aggregate demand and aggregate supply. Aggregate demand will help in economic expansion and aggregate supply will enhance capital formation and more production. All these will bring growth in the economy.

iii. The expediency theory

Tax proposal should pass the test of practicality so that government authorities can choose a tax policy that can be effective and efficient (Otu and Adejumo 2013). It should be the only consideration weighted by tax authorities in choosing a good tax system. This theory was entrenched in tax canon and explains the economy of tax collection instruments. Tax provides a strong tool to the government authorities and should be used effectively to remedy economic and social irregularities of the society such as income inequality, regional disparities, and unemployment (Afuberon and Okoye 2014).

b) Empirical Review

Ogundana, Ogundana, Ogundana, Ibidunni, and Adetoyinbo (2017) investigated the impact of direct and indirect tax on the Nigerian economic growth using descriptive research design and secondary data between 1994-2013. OLS regression technique was adopted for the analysis. It was discovered that both direct and indirect taxes have positive effect on the economy of Nigeria.

Onakoya and Afintinni (2016) examined the correlation between taxation and economic growth in Nigeria. The variables used are petroleum profit tax, company income tax, personal income tax, value added tax revenue and GDP. Secondary data ranging for thirty years (1980-2013) were used. Descriptive statistics, augmented dickey fuller (ADF), co-integration test and vector error correction model were also used for the analysis. The study found a long run relationship between taxation and economic growth in Nigeria. Petroleum profit tax, Company Income tax have positive relationship on economic growth, where as a negative relationship was found between economic growth and customs and Excise Duties.

Also, Grace *et al* (2016) examined the effect of tax revenue on the economic growth and development of Nigeria using both GDP and HDI as proxies for economic growth and economic development respectively for a period of ten (10) years (2005-2014) and time series data for the study. Ordinary least square (OLS) regression technique was used to analyze the data and findings from the study reveal a positive and significant relationship between tax revenue and economic growth and low impact on economic development.

Apere and Durojaiye (2016) investigated the relationship between Value Added Tax (VAT) and government revenue and Gross Domestic Product (GDP). The study covered from 1994 to 2014 using secondary data extracted from Central Bank statistical bulletin 2014. Phillip-Perron unit root and Correlation test was also conducted to ascertain the strength of their relationship. The regression results revealed that there is a long-run positive relationship between Value Added Tax (VAT) and Economic Growth.

Margaret, Charles and Gift (2014) examined the impact of direct tax revenues on Economic Growth (GDP) of Nigeria from 1994 to 2012 using Company Income Tax as one of the proxies for direct tax. The study employed secondary data generated from Central Bank of Nigeria statistical bulletin. Data analysis was carried out using descriptive statistics, correlation, T-statistics and F-Ratio. The result of the study revealed a significant positive relationship between Company Income Tax and Gross Domestic Product (GDP) of Nigeria.

Lyndon and Paymaster (2016) examined the impact of Company Income Tax and Economic Growth of Nigeria using GDP as proxy for economic growth. The study employed secondary time series data retrieved from the Statistical

Bulletin of the Central Bank of Nigeria (CBN) for a period of nine (9) years (2005-2014). OLS regression analysis was employed and the results of the analysis showed that company income tax has a significant positive effect on the economic growth in Nigeria.

Dladla & Khobai (2018) conducted research on the effect of taxation in Zimbabwe 1980 to 2012 using granger causality and vector error correction model. The results showed that taxes affects allocation of resource and alter the growth of the economy.

Stoilova (2017) conducted research on exploring the relationship between tax structure and economic growth using 28 European Union countries from 1996 to 2013. Barro's endogenous model was used and the result showed that total revenue has significant effect on the economy. The study found that personal incometax has positive effect on economic growth where as corporate taxes have a negative effect on economic growth.

Kneller, Bleaney, & Gemmell (1999) employed a panel of 22 OECD countries between 1970–1995 and discovered a depressing effect of distortionary taxes, which consist of taxes on income and property.

Shaver & Flyer (2000) carried out research on the effect of taxes on economic growth in the United Kingdom between the period of 1950 to 1998 applying exogenous and endogenous growth models and found out that the relationship between tax and economic growth is extremely weak and in practice, taxes does not have positive effect on the rate of growth.

Gemmell, *et al.,* (2006) investigated the link between taxes and economic growth in 21 OECD countries between 1970–2004 using the Error Correction Model. The study discovered insignificant relationship between corporate and personal taxes and economic growth.

Okonkwo and Chukwu (2019) carried out a study on Government Tax Revenue and economic development in Nigeria from 1996 and 2017 using Vector Autoregressive Estimates. The result showed that PPT and TTR had positive relationship with HDI where as EDT and CIT had negative relationship with HDI.

Inyiama and Ubesie (2016) investigated the effect of Customs and Excise Duties on economic growth of Nigeria. The study employed secondary data and regression analysis was used for the analysis of the data. The result showed a positive and significant relationship between Customs and Excise Duties and economic growth of Nigeria.

Akhor, Atu and Ekundayo (2016) conducted research on the impact of indirect tax revenues on Economic Growth (GDP) of Nigeria from 1993 to 2013. The study utilized secondary data extracted from Central Bank of Nigeria statistical bulletin 2015. Data was analyzed with descriptive statistics, correlation, unit root test, co-integration test and error correction model regression. The result showed a negative significant relationship between custom and excise duty real gross domestic product.

Amos, Uniamikogbo and Aigienohuwa (2017) investigated the impact of tax revenue on economic growth of Nigeria between 1995 and 2015. The study used time series data. The result revealed that Education tax has no significant effect on economic growth in Nigeria.

METHODOLOGY

According to Ihenetu (2008), research design is a blue print, framework for collecting and analyzing data. The researcher employed expost facto design. The fact that the data was original from CBN annual report and adopted for the study necessitated the choice of the design. Purposive sampling method was adopted for the work. The sample size is 22 years (1999-2020). The researchers applied ordinary least square regression analysis was used to analyze the data.

The mathematical model is given as:

GDP= f(CIT, EDT) ---------- equ (1)
GDP= f(CED, VAT) ---------- equ (2)

This functional model was trans- modified into the econometric form by the introduction of the constant α, β and error term μ as:

$GDP = \alpha + \beta_1 CIT + \beta_2 EDT + \mu$ ---------- equ (3)
$GDP = \alpha + \beta_1 CED + \beta_2 VAT + \mu$ ---------- equ(4)

Where GDP = Gross Domestic Product

CIT = Company Income Tax
EDT = Education Tax
CED = Custom and Excise Duty
VAT = Value Added Tax
α = constant variable

β_1, β_2, β_3, = Coefficient of independent variables (slope)
μ = error term.

Data Presentation and Analysis

The data used for the work is presented below:

Table_1: Gross Domestic Product (GDP), Company Income Tax (CIT), Education Tax (EDT), Custom and Excise Duty (CED) and Value Added Tax (VAT) in billions (1999 – 2020).

Year	GDP	CT	ET	CED	VAT
1999	5,482.35	46.2	0	87.9	47.1
2000	7,062.75	51.1	7.5	101.5	58.5
2001	8,234.49	68.7	16.2	170.6	91.8
2002	11,501.45	89.1	10.3	181.4	108.6
2003	13,556.97	114.8	0	195.5	136.4
2004	18,124.06	130.1	0	217.2	159.5
2005	23,121.88	162.2	0	232.8	178.1
2006	30,375.18	244.9	28.4	177.7	230.4
2007	34,675.94	327	51.8	241.4	301.7
2008	39,954.21	416.8	47.2	281.3	404.5
2009	43,461.46	568.1	139.5	297.5	468.4
2010	55,469.35	657.3	114.5	309.2	562.9
2011	63,713.36	700.5	101.7	438.3	649.5
2012	72,599.63	848.6	214.6	474.9	710.2
2013	81,009.96	985.5	281	433.6	795.6
2014	90,136.98	1207.3	193.1	566.2	794.2
2015	95,177.74	1029.1	202.1	546.2	778.7
2016	102,575.42	988.4	152.3	548.8	811
2017	114,899.25	1206.3	49	628	967.7
2018	129,086.91	1429.9	136.6	705.5	1097.4
2019	145,639.14	1637.2	247.8	837.3	1175.9
2020	154,252.32	285.94	0	251.57	425.11

Source: CBN Annual Report and Account 2020

Apriori expectation: indirect tax revenues such as CED and VAT contribute more than CIT and EDT to economic growth (GDP).

The data were analyzed to achieve the stated objectives. Ordinary least square multiple regression was used for the analysis. The result of the analysis is summarized below:

Table 2 Result of ordinary least square analysis for direct tax

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.833[a]	.695	.662	27442.63129
a. Predictors: (Constant), EDT, CIT				
b. Dependent Variable: GDP				

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32541251188.816	2	16270625594.408	21.605	.000[b]
	Residual	14308862235.033	19	753098012.370		
	Total	46850113423.849	21			
a. Dependent Variable: GDP						
b. Predictors: (Constant), EDT, CIT						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14367.435	9295.376		1.546	.139
	CIT	100.400	21.054	1.057	4.769	.000
	EDT	-150.863	113.968	-.293	-1.324	.201
a. Dependent Variable: GDP						

Table 3 Result of ordinary least square analysis for indirect tax

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870[a]	.757	.732	24468.48206
a. Predictors: (Constant), VAT, CED				
b. Dependent Variable: GDP				

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35474687747.841	2	17737343873.920	29.626	.000[b]
	Residual	11375425676.009	19	598706614.527		
	Total	46850113423.849	21			
a. Dependent Variable: GDP						
b. Predictors: (Constant), VAT, CED						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	9360.851	12658.384		.739	.469
	CED	-75.097	113.049	-.329	-.664	.514
	VAT	157.877	65.897	1.187	2.396	.027
a. Dependent Variable: GDP						

Table 4 comparing the result of direct and indirect tax in Nigeria

Direct Tax	T-cal	P-value	F-cal	P-value	R	Sig.
CIT	4.769	.000		0.0000	.833	Significant
EDT	-1.324	.201	21.605			Not significant
Indirect Tax						
CED	-.664	.514		0.0000	.870	Not significant
VAT	2.396	.027	29.626			Significant

Summary of SPSS print out

From the result, both direct and indirect tax has significant effect on economic growth in Nigeria. The P-value for both direct and indirect tax is 0.0000 which is less than 0.05 power of test.

The analysis further revealed that company income tax has positive and significant effect on gross domestic product in Nigeria ie 0.000 < 0.05 where as education tax has no significant effect on gross domestic product at 5% level of significant ie 0.201 > 0.05. In the vain, value added tax has positive and significant effect on gross domestic product in Nigeria ie 0.027 < 0.05 where as custom and excise duty has no significant effect on gross domestic product at 5% level of significant ie 0.514 > 0.05.

The also revealed that the coefficient of correlation (R) that showed the strength of the relationship for both direct and indirect tax is very high ie 83% and 87% respectively. This means both direct and indirect tax contributes immensely to the growth of Nigeria's economy. The result supported the findings of (Onakoya and Afintinni 2016; Ogundana, Ogundana, Ogundana, Ibidunni, and Adetoyinbo 2017) that both direct and indirect tax has positive significant effect on economic growth in Nigeria.

CONCLUSION AND RECOMMENDATION

Since it is apparent that both direct and indirect tax contributes greatly to the growth of the economy, the study comes up with the following recommendations:

1. Government should sustain the tempo of the collection of both direct and indirect taxes because, they are equally important.
2. Company income tax and value added tax should be given much priority in the course of collection by the tax authorities in Nigeria.
3. Custom and excise duty and education tax should be improved by tax collection officers in Nigeria.

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