The Role of Taxation on Revenue Generation: Nigeria Experience

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Abstract
The role of taxation on revenue generation cannot be underestimated. It was on this note, this study investigated taxation role on revenue generation in Nigeria. Secondary data was used and sourced from Federal Inland Revenue Service and Central Bank of Nigeria Statistical Bulletin between 2011Q1 and 2020Q4. The study employed descriptive analysis, Regression analysis, and VAR as the estimation techniques. The findings showed that VAT contributes positively and significantly on revenue generation, that is, when VAT increases by 1, the revenue generation will increase with the value of 0.688648. Petroleum profit tax revealed a significant positive impact on revenue generation in which an increase in PPT will contribute 0.507721 to revenue generation. Company income tax contributes positively to revenue generation, but it was significant. Capital gain tax exhibited a negative impact on revenue generation significantly during the study period. It was concluded that company income tax contributes more to revenue generation, followed by petroleum profit tax, capital gain tax and value added tax. Meanwhile, in the long-run, company income tax also contributes the highest percentage followed by petroleum profit tax, value added tax and capital gain tax.
Keywords: *Tax, Revenue Generation, Value Added Tax, and Tax Evasion*

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I. Introduction

The importance of taxation in promoting economic growth and development as well as the survival of many nations cannot be overemphasized. Through it, government ensures that resources are channeled towards important projects in the society. According to Emmanuel (2013), many developed and developing economies around the world had experimented and proven that no nation can truly develop without developing its tax system. Consequently, many countries have embarked on tax reforms and restructuring with a view to developing a tax system that maximizes government revenue without creating decreasing investment. Taxation in Nigeria is imposed by the 3 tiers of government, that is, federal, state, and local governments with each having its sphere clearly spelt out in the taxes and levies Decree, 1998. However, the most veritable tax handles are under the control of the federal government while the lower tiers are the state and local governments (Odusola, 2006). The primary aim of taxes is to collect money to fund government expenses as well as redistribute income to control the economy (Bhartia, 2009). The functional form of taxes applies to how the efficient demand for economic goods is dispersed among society's individuals. Tax is punitive in the sense that it is levied on individuals or land based on profits/incomes or gains, and the value received by taxpayers from tax paying is unrelated to actual taxpayers' contributions (Nightingale, 2000). The role of taxation policy in fostering investment as a vital measure of maintaining a stable economy by generating new resources is the capital distribution component of taxation policy. In Nigeria, the government uses tax incentives and enticing exemptions to lure and persuade potential investors in industries such as manufacturing, export production, oil and gas, and services, all of which are vital and important for the country's economic development and growth. Therefore, the act of evading and avoiding taxes by most registered companies and some individuals have however affected the revenue base of the government especially in providing essential services in the society. The amount of revenue provided for the provision of infrastructure in a country determines its political, economic, and social growth. A well-structured tax system is a means of raising the requisite revenue for infrastructure growth. Though there exist many obstacles in the taxing system of the developing countries. In the case of Nigeria, even if the tax regulators dominate the economy, those in the informal sector see little need to pay taxes. Furthermore, the formal sector's labor activities do not even prepare the ground for a strong tax policy implementation (Ayodele, 2006). The rate of tax evasion and avoidance by taxpayers is high in Nigeria, resulting in low revenue, which further decreases government spending, resulting in a decline in household and firm income savings and expenditure, resulting in low economic activity and development (Fagbemi Uadiale, & Noah, 2010).

II.   Literature Review

A government's decision of what proportions and on whom to levy tax is referred to as tax policy. Tax policies are introduced for several purposes, with the primary goals of raising revenue to finance government spending, resource utilization, and reducing inequality resulting from wealth distribution among customers. Furthermore, Romer and Romer (2010) reported that tax policies are introduced to fund a government spending or to combat other economic factors. The revenues of the tax are used by the government to carry out its basic duties, such as providing public goods, preserving law and order, defending against foreign threats, and controlling trade and industry to ensure social and economic support (Takumah, 2014). The tax has microeconomic implications (income distribution and resource efficiency) and also macroeconomic effects (capacity production, jobs, prices, and growth) (Musgrave and Musgrave, 2004).

Taxation is a tool used by the government to take interest in the incomes of individuals in return for goods and services provided by the government to people. Taxation is an encouragement mechanism used by the government to motivate its residents to carry out such types of practices. Taxation seems to be a mechanism that the government utilized as a disincentive to deter its people from such habits. Tax revenue is classified as income received by the government by taxation. That is the money that the government has levied on its people as a way of fulfilling its duties and commitments for its citizens.

Empirical Study

In an empirical study done by Abiola and Asiweh (2012) on tax administration and revenue. They employed descriptive analysis and discovered that tax revenue is a function of tax administration. Sule and Edogbanya (2013) studied revenue generation on governmental development in Kogi state of Nigeria using secondary data which were sourced from the local council of Kogi east. The regression method revealed that significant connection exists between revenue generated and government developmental effort. To buttress this survey, Onaolapo, Aworemi, and Ajala (2013) assessed the effect of VAT on revenue generation in Nigeria. Secondary data was used and sourced from CBN and FIRS of Nigeria. the regression analysis reported that VAT impacted significantly on revenue generation during the study period. In the study conducted by Riakhi and Ahuru (2014) on tax reform and revenue generation in Nigeria using cointegration, granger causality tests and ECM. They found that tax reform boosts the ability to generate more revenue to the government. Wisdom (2014) wrote on tax revenue and the Ghanaian economic growth between 1986 and 2010. VAR analysis was employed and reported that tax revenue is statistically significant on the Ghanaian economic growth. Izedonmi and Okunbor (2014) carried out VAT role on Nigeria economy between 1994 and 2010. They used regression analysis and reported that VAT has a significant impact on economic growth in Nigeria. In the study of Owusu-Gyimah (2015) on the connection between tax revenue and the Ghanaian economic development employing multiple regression analysis and found that a positive significant exists between tax revenue and economic development. Saidan, Basit and Hamza (2016) wrote on tax role on the growth of the economy within Asian countries. They use panel data analysis between 2011 and 2015. They found that tax revenue is imperative for sustainable development.

Ojong, Anthony and Arikpo (2016) studied taxation impact on the Nigeria economic growth between 1986 and 2010. Regression analysis was used and found that petroleum profit tax and company income tax have no significant effect on the Nigerian economic growth. Inyiama and Ubesie (2016) carried out a study on the relationship between the Nigerian VAT and customs and excise duties between 2000 and 2015. Descriptive and regression analyses were used and reported that VAT and CED are parts of the GDP contributors. Gatawa, Aliero and Aishatu (2016) studied VAT impact on economic growth in Nigeria between 1994Q4 and 2014Q4. Descriptive and cointegration tests were employed and found that positive correlation exists between VAT and economic growth in Nigeria. Omokhuale (2016) conducted a survey on VAT contributions to the Nigerian economy between 2000 and 2012. The study employed OLS technique and found that VAT has a positive significant connection with the Nigerian economy.

The study of Soetan (2017) examined the connection between tax administration and its revenue generation in Nigeria. the study used quantitative survey while descriptive and regression methods were used. It was found that in the study that tax administration revealed no significant impact on revenue generation during the study period. Animasaun (2017) investigated the connection between tax administration and Ogun state revenue generation in Nigeria. The study employed descriptive and inferential statistics and found that there no connection between tax administration and Ogun stated revenue generation during the study period. Folayan and Adeniyi (2018) studied tax evasion on revenue generation, a case study of Nigeria using both qualitative and quantitative data where the quantitative data were sourced from the internally generated revenue of Oyo State in Nigeria. The study found that tax evasion revealed an adverse relationship on revenue generation. Okeke, Mbonu, and Ndubuisi (2018) used different estimation techniques ranging from regression analysis, cointegration test, and ECM to examine the connection between tax revenue and the Nigerian economic development. The study found that tax revenue has a statistically significant on economic development. Sorsa

and Durga (2018) wrote on the contribution tax on revenue generation in Ethiopia. Descriptive analysis was used and found that tax contributes significantly to revenue generation. Ironkwe and Agu (2019) examined the connection between tax revenue and the Nigerian economic development between 1986 and 2016. The multiple regression revealed that tax revenue exhibits a positive impact on economic development of Nigeria.

Source of Data

The study used secondary form of external data which was sourced from the Federal Inland Revenue Service and Central Bank of Nigeria Statistical Bulletin. The data span from 2011Q1 to 2020Q4. The justification for the date was that using the recent data before and during pandemic to investigate the taxation role in relation to revenue generation during this period.

Specification of Model

To achieve the broad objective of the connection between the role of taxation and the revenue generation in Nigeria, A functional model was employed. The model is presented in functionality form, mathematical form, and econometric form below:

$REVG = f(VAT, PPT, CIT, CGT)$ ---eq1

Where:

REVG = Revenue Generation
VAT = Value Added Tax
PPT = Petroleum Profit Tax
CIT = Company Income Tax
CGT = Capital Gain Tax

Mathematical Form

$REVG = \tau_0 + \tau_1 VAT + \tau_2 PPT + \tau_3 CIT + \tau_4 CGT$ ------------------eq2

Where:

τ_0 = Constant
τ_1 to τ_4 = intercept/shift parameter

Econometric Form

$REVG = \tau_0 + \tau_1 VAT + \tau_2 PPT + \tau_3 CIT + \tau_4 CGT + \varepsilon$ -------------eq3

Econometric Time Series Form

$REVG_t = \tau_0 + \tau_1 VAT_t + \tau_2 PPT_t + \tau_3 CIT_t + \tau_4 CGT + \varepsilon_t$ --------eq4

Where:

ε_t = Error term
t = time series

Estimation Technique

The estimation technique presents the statistical methods/techniques to be employed to achieve the stated objectives. The estimation techniques used were descriptive analysis, regression analysis, and VAR analysis (Impulse Response Function and Variance Decomposition).

III. Result Discussion

Descriptive Analysis

Table 1: Descriptive Output

	REVG	VAT	PPT	CIT	CGT
Mean	3.380762	2.354513	2.697361	2.418990	4.550070
Median	3.411548	2.316269	2.719894	2.447449	1.128550
Maximum	3.592529	2.657714	2.948524	2.745286	72.59310
Minimum	3.147398	2.184060	2.247354	2.083998	0.056500
Std. Dev.	0.121097	0.112719	0.177078	0.181933	12.03147
Skewness	-0.525270	0.834373	-0.620669	-0.084374	4.818767
Kurtosis	2.369525	3.138627	2.698561	2.071358	27.12950
Jarque-Bera	2.501887	4.673214	2.719639	1.484754	1125.192
Probability	0.286235	0.096655	0.256707	0.475981	0.000000
Sum	135.2305	94.18053	107.8944	96.75960	182.0028
Sum Sq. Dev.	0.571917	0.495517	1.222907	1.290886	5645.498

Source: Author Computation

The report of the descriptive presented in Table 1 shows that revenue generation (REVG) has the mean value of 3.380762, median value of 3.411548, the maximum value of 3.592529. The standard error value was

0.121097, skewness value of -0.525270, indicating that REVG was negatively skewed, the Kurtosis value was 2.369525, implying a platykurtic form of Kurtosis, while the Jarque-Bera value and its probability are 2.501887 and 0.286235, indicating that REVG was normally distributed, this is because the probability value of the Jarque-Bera is more than 5% alpha level. Value Added Tax (VAT) has the average value of 2.354513, median value of 2.316269, the maximum value of 2.657714. The standard error value was 0.112719, skewness value of 0.834373, meaning that VAT was positively skewed, the Kurtosis value was 3.138627, implying a leptokurtic form of Kurtosis, while the Jarque-Bera value and its probability are 4.673214 and 0.096655, indicating that VAT was normally distributed. Petroleum Profit Tax (PPT) reveals the mean value of 2.697361, median value of 2.719894, the maximum value of 2.948524. The standard error value was 0.177078, skewness value of -0.620669, implying that PPT exhibits a negative skewness, the Kurtosis value was 2.698561, implying a platykurtic form of Kurtosis, while the Jarque-Bera value and its probability are 2.719639 and 0.256707, indicating that PPT was normally distributed. Company Income Tax (CIT) has the mean value of 2.418990, median value of 2.447449, the maximum value of 2.745286. The standard error value was 0.181933, skewness value of -0.084374, indicating that CIT was negatively skewed, the Kurtosis value was 2.071358, implying a platykurtic form of Kurtosis, while the Jarque-Bera value and its probability are 1.484754 and 0.475981, signifying that CIT was normally distributed. Capital Gain Tax (CGT) has the mean value of 4.550070, median value of 1.128550, the minimum value of 0.056500, maximum value of 72.59310. The standard error value was 12.03147, skewness value of 4.818767, indicating that CGT was positively skewed, the Kurtosis value was 27.12950, implying a leptokurtic form of Kurtosis, while the Jarque-Bera value and its probability are 1125.192 and 0.0000, indicating that CGT was not normally distributed because the probability value of the Jarque-Bera is less than 5% alpha level.

Unit Root Report

Table 2: *Unit root @Level*

Variable	ADF value	Critical Value @5%	Prob Value	Decision
CIT	-1.309013	-2.945842	0.6148	Non-Stationary
VAT	0.633403	-2.938987	0.9889	Non-Stationary
PPT	-1.098711	-2.938987	0.7067	Non-Stationary
REVG	-1.547026	-2.938987	0.4996	Non-Stationary
CGT	-4.944858	-2.938987	0.0002	Stationary

Source: Author's computation

The report of the ADF unit root @ level shows that CIT has the ADF value of -1.309013, the critical value of -2.945842 with the probability value of 0.6148. The company income tax was not stationary because the critical value in its absolute value is greater that the ADF value. VAT reveals that ADF value of 0.633403, the critical value of -2.938987, probability value of 0.9889 while the decision was not stationary. The unit root of PPT @level has the ADF value of -1.098711, critical value of -2.938987, probability value of 0.7067, implying that PPT was not stationary at level. The unit root report of REVG has the ADF value of -1.547026, critical value of -2.938987, with p-value of 0.4996, indicating that REVG was not stationary at level. The CGT ADF value was -4.944858, critical value of -2.938987, with p-value of 0.0002, connoting that CGT was stationary at level.

Table 3: *Unit Root @ First Difference*

Variable	ADF value	Critical Value @5%	Prob Value	Decision
CIT	-16.25464	-2.945842	0.0000	Stationary
VAT	-8.464388	-2.941145	0.0000	Stationary
PPT	-5.591818	-2.941145	0.0000	Stationary
REVG	-8.311365	-2.941145	0.0000	Stationary

Source: Author's computation

The above table shows the unit root first differencing of the variables that are not stationary at level. It was reported that CIT ADF value was -16.25464, the critical value was -2.945842, while the p-value was 0.0000, indicating that CIT became stationary after converting to first difference. The unit root @ first difference of VAT has the ADF value of -8.464388, critical value of -2.941145, with p-value of 0.0000, implying that VAT was stationary after first differencing. PPT has the ADR value of -5.591818, the critical value of -2.941145, with p-value of 0.0000, meaning that PPT became stationary after first differencing. REVG @ first difference has the ADF value of -8.311365, critical value of -2.941145, with p-value of 0.0000, indicating that REVG also became stationary after proceeding to first difference.

Table 4: *Unit Root Integration Order*

Variable	@Level	@First Difference	Decision
CIT	Non-stationary	Stationary	Stationary
VAT	Non-stationary	Stationary	Stationary
PPT	Non-stationary	Stationary	Stationary
REVG	Non-stationary	Stationary	Stationary
CGT	Stationary	--	Stationary

Source: Author's computation

Table 4 presents the integration order of the unit root testing. It was reported that company income tax, value added tax, petroleum profit tax, revenue generation were stationary after first difference while capital gain tax was stationary at level. Accordingly, due to the mix result of the stationarity level autoregressive distributed lag model analysis will later be conducted.

Regression Analysis

Table 5: *Regression Output*

Dependent Variable: REVG				
Sample: 2011Q1 2020Q4				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.345453	0.336360	1.027031	0.3115
VAT	0.688648	0.108802	6.329342	0.0000
PPT	0.507721	0.062737	8.092800	0.0000
CIT	0.021799	0.063163	0.345116	0.7321
CGT	-0.001837	0.000908	-2.023548	0.0507
R-squared	0.756634	Durbin-Watson stat		1.096569
Adjusted R-squared	0.728821	F-statistic		27.20409
		Prob(F-statistic)		0.000000

Source: Author's computation

Regression analysis output displayed in Table 5 shows when the variables employed are held constant, revenue generation will increase positively and grow with the coefficient value of 0.355453. VAT has one of the independent variables contributes positively and significantly on the revenue generation, that is, when VAT increases by 1, the revenue generation will increase with the value of 0.688648. Petroleum profit tax reveals a significant positive impact on revenue generation in which an increase in PPT will contribute 0.507721 to revenue generation. Company income tax has a coefficient value of 0.021799 with the p-value of 0.7321, connoting that CIT contributes positively to revenue generation but it was significant. The report shows that capital gain tax (CGT) coefficient value was -0.001837 and the sig value was 0.0507, indicating that CGT exhibits a negative impact on revenue generation significantly during the study period.

The R-squared value was 0.756634 and the adjusted R-squared value was 0.7288821, indicating that the coefficient of multiple determination of the variables has above 75% variation and also implies that it is reliable. The Durbin-Watson shows that the variables are not serially correlation while the F-stat and its probability indicates that the joint controlling variables can predict the dependent variables significantly.

Post Regression Analysis

Table 6: *Serial Correlation*

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	3.104860	Prob. F(2,33)	0.0581
Obs*R-squared	6.334878	Prob. Chi-Square(2)	0.0821

Source: Author's computation

The report of the serial correlation test shows the value of F-stat (3.104860) with p-value of 0.0581. the observed R-squared value was 6.334878 with probability of Chi-square value of 0.0821. This indicates that no serial correlation exist among the variables.

Table 7: *Heteroskedasticity Test*

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.670399	Prob. F(4,35)	0.6169
Obs*R-squared	2.846583	Prob. Chi-Square(4)	0.5838
Scaled explained SS	3.002181	Prob. Chi-Square(4)	0.5575

Source: Author's computation

The report of heteroskedasticity using Breusch-Pagan-Godfrey shows the F-stat value of 0.670399, the observed R-squared value was 2.846583 with the scaled explained value of 3.002181 while the probability of F-stat value was 0.6169 and probability of Chi-squares are 0.5838 and 0.5575, implying that the variables are not heteroskedasticity rather homoskedasticity.

**Figure 1:** Normality Test
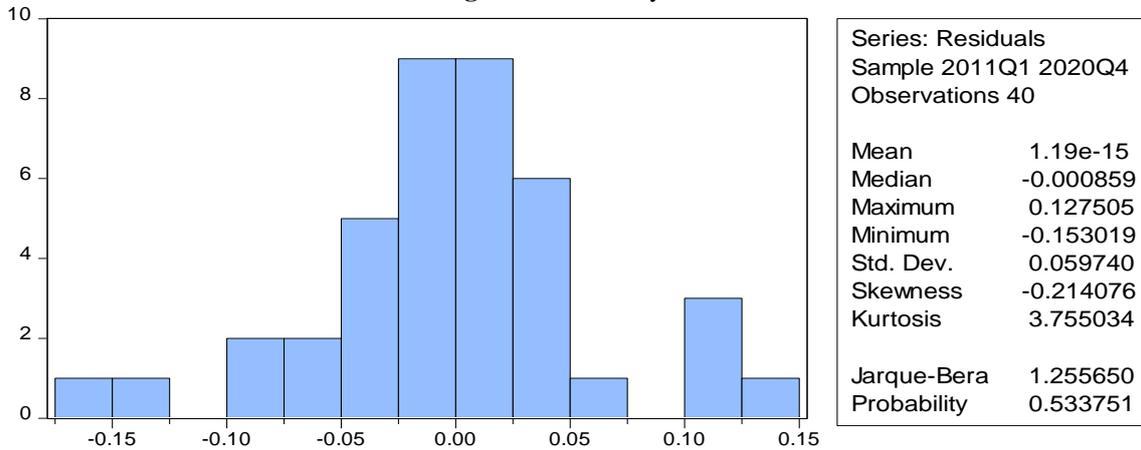
Source: Author's computation

The above figure indicates that the variables are normally distributed that is the Jarque-Bera value was 1.255650 with its probability value of 0.533751. Since the probability value exceed 5% alpha level, this indicates normally distributed.

Vector Autoregressive Analysis
The VAR analysis presented in Appendices 1 showed the coefficient, standard error, and t-statistic values of all the employed variables. 4 lag length was used to conduct the VAR since the lag selection criteria including the Akaike Information Criterion.

Impulse Response Function
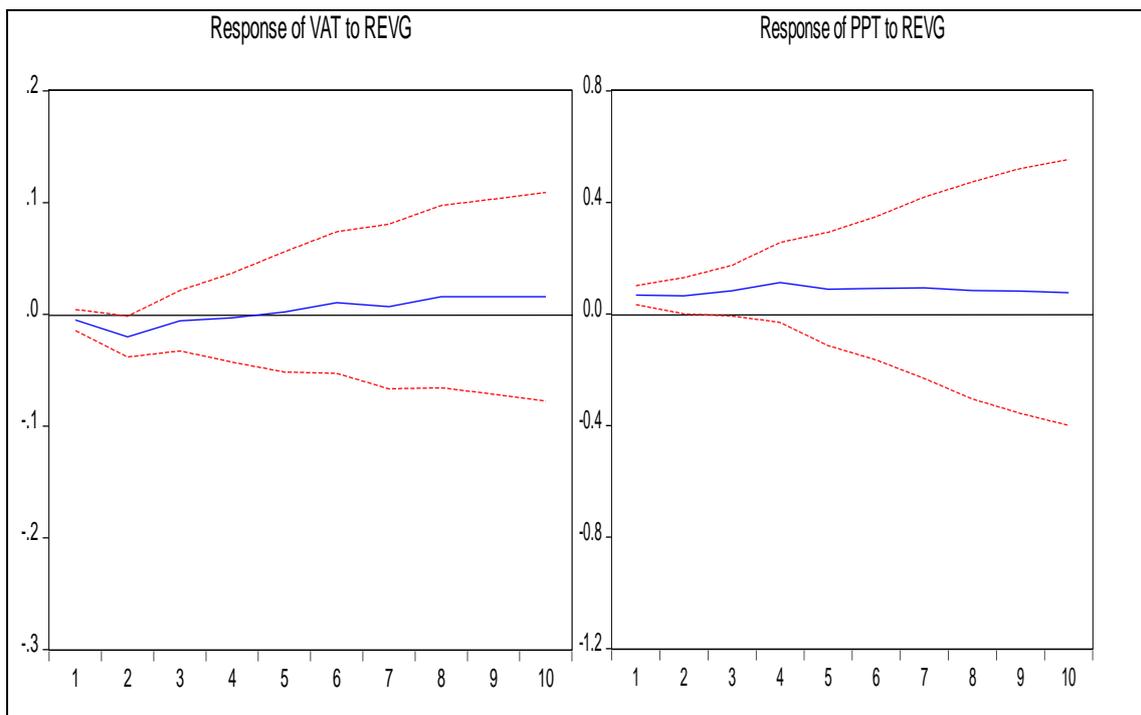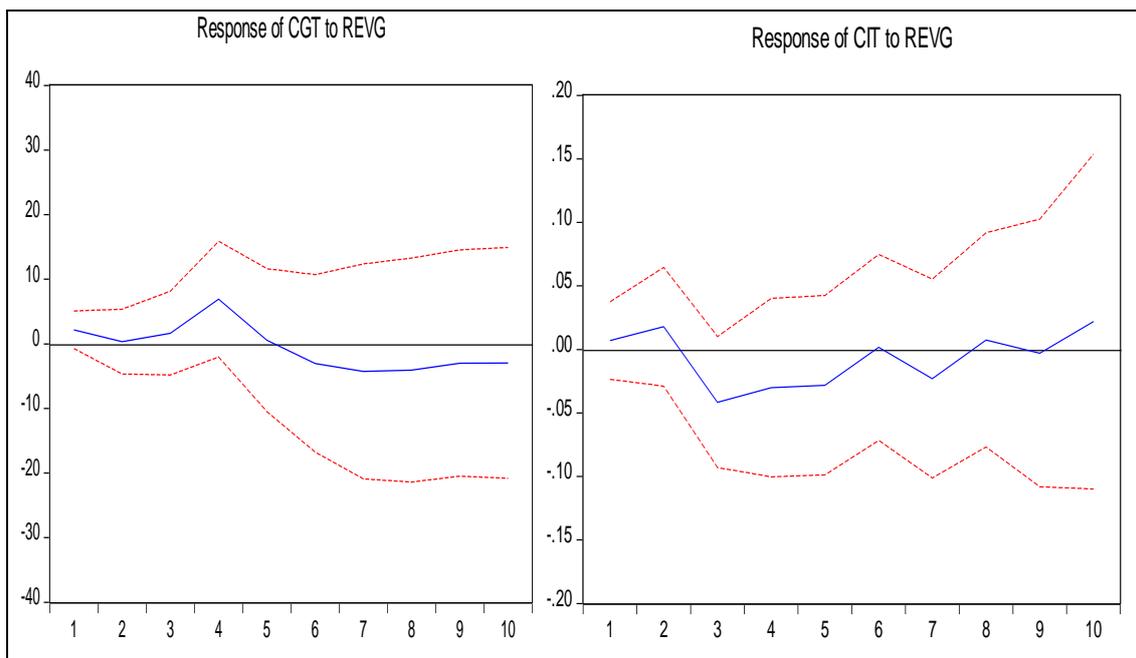
The impulse response function of the VAR analysis reveals the response of value added tax (VAT) to revenue generation (REVG). From period 1 to early quarter of period 4, VAT oscillates negatively but closer to zero which later move positively from early period of quarter 5 to the end of period 10 significantly.

Petroleum profit tax PPT) contributes to revenue generation positively from the early quarter of period 1 to the end of period 10 in a significant manner. This indicates that PPT contributes significantly to revenue generation.

The response of capital gain tax (CGT) to revenue generation (REVG), at the beginning of period 1oscillate slightly positive to the early quarter of period 4. It rose significantly positive to the earlier quarter of period 5. It later falls in a negative direction still the end of period 10. This implies that CGT contribution has not been significant on revenue generation.

The response of company income tax to revenue generation reveals in the above diagram reported that, at the beginning of period 1 to the earliest period 2, CIT moves positively which later move negatively significant at the end of period 2 still mid quart of period 6 to early quarter of period 8. It later oscillates between positive and negative line to the early quarter of period 9 and later move positively to period 10.

Variance Decomposition

Table 8: Variance Decomposition of REVG

Period	S.E.	REVG	VAT	PPT	CIT	CGT
1	0.049733	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.055809	86.25434	0.461146	12.07315	0.312862	0.898502
3	0.081132	49.63338	0.600713	22.61869	22.76749	4.379729
4	0.098249	46.87087	0.657629	32.07355	16.57674	3.821206
5	0.120490	43.39647	0.837633	30.69048	21.85382	3.221604
6	0.158395	36.94616	1.639225	28.56989	30.81051	2.034211
7	0.203111	31.44993	8.591189	28.01496	30.56685	1.377067
8	0.242201	31.50606	12.08246	25.82156	29.57777	1.012152
9	0.278697	29.41140	16.40798	24.27910	29.08475	0.816770
10	0.327275	25.12643	23.86093	22.44924	27.33445	1.228952

Source: Author's computation

The variance decomposition of revenue generation against other variables such as VAT, PPT, CIT, CGT. The report shows that the own shock of revenue generation in the short-run period 3 with the value of 49.63338, company income tax accounts for 22.76749 followed by petroleum profit tax which accounts for 22.61869, capital gain tax accounts for 4.379729, and value added tax accounts for 0.600713. in the long-run period 8, company income tax accounts for the highest value of 29.57777, followed by petroleum profit tax which accounts for 25.82156, value added tax accounts for 12.08246, and capital gain tax accounts for 1.012152. This implies that in the short-run, company income tax contributes more to revenue generation,

followed by petroleum profit tax, capital gain tax and value added tax. Meanwhile, in the long-run, company income tax also contributes the highest percentage followed by petroleum profit tax, value added tax and capital gain tax.

IV.   Conclusion

The study had investigated taxation role on revenue generation. From the findings, it was concluded that value added tax contributes positively and significantly on revenue generation, petroleum profit tax revealed a significant positive impact on revenue generation, company income tax contributes positively to revenue generation, but it was significant. Capital gain tax exhibited a negative impact on revenue generation significantly.

It was also concluded that company income tax contributes more to revenue generation, followed by petroleum profit tax, capital gain tax and value added tax. Meanwhile, in the long-run, company income tax also contributes the highest percentage followed by petroleum profit tax, value added tax and capital gain tax. Though, there was an inconclusive relationship between the role of taxation and revenue generation that is, no adequate report whether there is a long-run or short-run relationship.

V.   Recommendations

The study recommended that:

1.   Government should endeavor to introduce policies to avoid loopholes in its taxing system, by doing this, it will encourage the taxpayers to comply and to enhance government to perform its social obligations.

2.   Government should encourage regular staff training and development on tax implementation and compliance.

3.   Value added tax and capital gain tax need to be monitored, and through the provision of high-quality infrastructure, government could boost tax-payers morale.

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Appendices 1

Vector Autoregression Estimates					
Standard errors in ( ) & t-statistics in [ ]					
	REVG	VAT	PPT	CIT	CGT
REVG(-1)	0.000411	-0.245186	-0.135089	0.176278	-3.524357
	(0.27805)	(0.15978)	(0.62249)	(0.51342)	(49.5828)
	[0.00148]	[-1.53450]	[-0.21701]	[0.34334]	[-0.07108]
REVG(-2)	0.050472	0.194539	1.027577	-0.863626	80.47267
	(0.25935)	(0.14903)	(0.58061)	(0.47888)	(46.2472)
	[0.19461]	[1.30534]	[1.76982]	[-1.80343]	[1.74006]
REVG(-3)	0.147102	0.127639	0.145998	-0.149919	63.64494
	(0.21609)	(0.12418)	(0.48377)	(0.39901)	(38.5335)
	[0.68074]	[1.02789]	[0.30179]	[-0.37573]	[1.65168]
REVG(-4)	0.057118	0.015887	-0.600291	-0.539119	-46.87076
	(0.21136)	(0.12146)	(0.47317)	(0.39026)	(37.6894)
	[0.27024]	[0.13081]	[-1.26865]	[-1.38142]	[-1.24361]
VAT(-1)	0.857491	1.127649	1.964432	-1.326938	361.0129
	(0.67804)	(0.38963)	(1.51793)	(1.25197)	(120.907)
	[1.26467]	[2.89416]	[1.29415]	[-1.05988]	[2.98586]
VAT(-2)	0.310428	0.279590	-1.337336	1.288463	-365.8514
	(0.63789)	(0.36656)	(1.42805)	(1.17783)	(113.748)
	[0.48665]	[0.76274]	[-0.93648]	[1.09393]	[-3.21633]
VAT(-3)	0.130796	-0.018130	-1.753030	1.584261	-343.2427
	(0.63131)	(0.36278)	(1.41334)	(1.16570)	(112.576)
	[0.20718]	[-0.04998]	[-1.24035]	[1.35907]	[-3.04898]
VAT(-4)	-0.973531	-0.498540	-1.399227	0.873182	-166.9304
	(0.57793)	(0.33211)	(1.29383)	(1.06713)	(103.057)
	[-1.68451]	[-1.50115]	[-1.08146]	[0.81825]	[-1.61979]
PPT(-1)	0.251438	-0.079945	1.221945	0.120995	28.44413
	(0.19220)	(0.11044)	(0.43028)	(0.35489)	(34.2727)
	[1.30823]	[-0.72385]	[2.83991]	[0.34094]	[0.82994]
PPT(-2)	0.406151	0.247110	-0.338807	-0.211648	3.596752
	(0.20894)	(0.12006)	(0.46775)	(0.38579)	(37.2577)
	[1.94389]	[2.05814]	[-0.72433]	[-0.54860]	[0.09654]
PPT(-3)	-0.184555	-0.089835	0.094624	0.153512	-83.46535
	(0.25134)	(0.14443)	(0.56269)	(0.46409)	(44.8193)
	[-0.73428]	[-0.62199]	[0.16817]	[0.33078]	[-1.86226]
PPT(-4)	-0.021659	-0.088968	-0.359248	0.604922	-9.639731
	(0.19300)	(0.11091)	(0.43207)	(0.35636)	(34.4155)
	[-0.11223]	[-0.80220]	[-0.83146]	[1.69748]	[-0.28010]
CIT(-1)	0.078858	0.043391	0.528213	-0.466594	91.98201
	(0.20549)	(0.11808)	(0.46003)	(0.37942)	(36.6424)
	[0.38376]	[0.36746]	[1.14822]	[-1.22974]	[2.51026]
CIT(-2)	0.245631	0.117444	0.458093	-0.354010	100.9435
	(0.18097)	(0.10400)	(0.40515)	(0.33416)	(32.2714)
	[1.35727]	[1.12932]	[1.13067]	[-1.05939]	[3.12796]
CIT(-3)	-0.064299	0.013228	0.178196	-0.300913	44.55702

	(0.12372)	(0.07110)	(0.27698)	(0.22845)	(22.0625)
	[-0.51970]	[0.18605]	[0.64334]	[-1.31718]	[2.01958]
CIT(-4)	0.074443	-0.018594	0.334418	0.568334	115.8789
	(0.16334)	(0.09386)	(0.36568)	(0.30160)	(29.1271)
	[0.45575]	[-0.19810]	[0.91452]	[1.88437]	[3.97839]
CGT(-1)	0.000773	0.001397	-0.001903	-0.001298	-0.065456
	(0.00116)	(0.00067)	(0.00260)	(0.00214)	(0.20678)
	[0.66650]	[2.09685]	[-0.73318]	[-0.60607]	[-0.31655]
CGT(-2)	-0.002924	-0.000555	-0.000620	-0.001672	-0.623805
	(0.00130)	(0.00075)	(0.00292)	(0.00241)	(0.23238)
	[-2.24384]	[-0.74136]	[-0.21255]	[-0.69483]	[-2.68444]
CGT(-3)	0.001698	-4.19E-05	-0.000744	-0.001315	0.292867
	(0.00142)	(0.00081)	(0.00317)	(0.00261)	(0.25238)
	[1.19951]	[-0.05150]	[-0.23483]	[-0.50316]	[1.16041]
CGT(-4)	0.000636	0.001404	0.002412	-0.002987	0.307742
	(0.00134)	(0.00077)	(0.00300)	(0.00248)	(0.23902)
	[0.47467]	[1.82238]	[0.80379]	[-1.20672]	[1.28749]
C	-0.302200	-0.409147	1.783682	1.007525	199.6372
	(0.43577)	(0.25041)	(0.97557)	(0.80464)	(77.7070)
	[-0.69348]	[-1.63388]	[1.82834]	[1.25215]	[2.56910]