

THE ROLE OF TAXATION ON CAPITAL AND RECURRENT EXPENDITURE: IMPLICATIONS FOR ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

This paper seeks to find out the role of taxation on capital and recurrent expenditure and its implications for economic growth. Taxation as a source of revenue has remained a much-debated issue, and to take a position in the debate, this study's data were collected from CBN statistical bulletin covering the period 1998 to 2017. OLS in the form of single and multiple regression technique was adopted for analysis. It revealed that tax revenue has positive and significant relationship with capital and recurrent revenue. More, it was found that the ratio of taxation on capital and recurrent expenditure has positive relationship with GDP. In other words, an increment in taxation revenue will bring about corresponding increase in government capital and recurrent expenditure and economic growth in Nigeria. Based on the findings and conclusion, it is recommended that government see taxation as an important source of revenue. Government should also strengthen the electronic tax collection system to enhance effective mobilization of taxes.

Key Words: Taxation, Capital Expenditure, Recurrent expenditure, Economic Growth, Nigeria.

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INTRODUCTION

The desire of every government in power is to ensure improvement in the welfare of the people it represents. This no doubt is done through provision of basic infrastructures, provision of good roads, stable power supply, creation of jobs, payment of wages and salaries, establishment of investment friendly environment for its industries to develop while also encouraging foreign investors. However, that government cannot achieve any of this without funds or financial resources. Government actions to achieve all these is

carried out under the term of its fiscal policy which entails mobilization of revenue from various sources such as tax and use of such revenue to perform the listed tasks under capital and recurrent expenditure. Anyanwu (1997) succinctly defined capital expenditure as government's plan for acquiring and maintaining long-term assets while regarding recurrent expenditure incurred on recurring activities limited to the year. According to Maku (2009), there is a general view that public expenditure either recurrent or capital on social or economic infrastructure can be growth-

enhancing although the financing of such expenditure to provide essential infrastructural facilities-including transport, electricity, telecommunications, water and sanitation, waste disposal, education and health can be growth-retarding. Studies by Afonso and Furceri (2007), Minea (2008) also suggest that government expenditure on infrastructural facilities plays an important role in affecting economic growth.

The development of any country therefore depends on the amount of revenue generated to carry out its public expenditure policies (capital or recurrent). Government revenue comes from tax and non-tax revenue. One of the most common and popular sources of generating revenue for the government is a well-structured tax system as documented by Adaramola and Ayeni-Agbaje (2015), Ogbonna and Appah (2011) and Salami, Apelogun, Omidia and Ojoye (2015). Tax is a legal fee paid by individuals or business organizations to the government. It is also a compulsory levy by government on goods, services, income and wealth primarily to obtain revenue. Azubike (2009) is of the view that tax is a major player in every society of the world while recognizing the tax revenue as an opportunity for government to collect additional revenue needed in discharging its pressing obligations. This is why Nzotta (2007) stated that taxes constitute key sources of revenue to the federation account shared by the federal, state and local governments especially in Nigeria.

Tosun and Abizadeh (2005) outlined five possible mechanisms by which taxes can affect economic growth. First, taxes can stimulate rate of investment through such taxes as corporate and personal income, capital gain taxes and secondly, taxes can slow down growth in labour supply by disposing labour leisure choice in favour of leisure. The third mechanism is that tax policy can affect productivity growth by discouraging research and development

expenditures while its fourth is that it can lead to a flow of resources to other sectors that may have lower productivity. Last is that high taxes on labour supply can distort the efficient use of human capital high tax burdens even though they have high social productivity.

From the foregoing, it can be seen that the research arguments have been either in favour or against the positive effect of tax on government spending and the consequent outcome on economy growth. But it is expected that the positive should outweigh its negative since government all over the world rely heavily on taxes as revenue. It is on this note that this paper seeks to find out the role of taxation on capital expenditure and recurrent expenditure and its implications for economic growth. The paper sets out to achieve the following objectives:

- i. To find out the relationship between tax revenue and capital expenditure.
- ii. To determine the impact of tax revenue on recurrent expenditure.
- iii. To assess the relationship that ratio of tax revenue to capital and recurrent expenditure as they impact on economic growth.

LITERATURE REVIEW

Conceptual Framework

Economic Growth: Economic growth refers to increase in a country's potential GDP, although this differs depending on how national product has been measured (Nworji, Okwu, Obiwuru and Nworji (2012).

Taxation: The National Tax Policy defined tax as the enforced proportional contributions from persons and property, levied by the State by virtue of its sovereignty for the support of Government and for all public needs. Agyel (1990) define tax as transfer of resources from private sector to the public sector in order to accomplish a nation's economic and social goals, which will primarily increase the rate of

economic growth and per capita income for higher standard of living. Taxation was however defined by Anyanwu (1997) as the compulsory transfer or payment (or occasionally of goods and services) from private individuals, institutions or groups to the government. Government collects tax revenue by way of direct & indirect taxes. Direct taxes include; Corporate tax; personal income tax capital gain tax and wealth tax. Indirect taxes include custom duty, central excise duty, Value Added Tax (VAT) and service tax (Chaudhry and Munir, 2010; Anyim, 2018).

Government expenditure: Okanta (2005) defined government expenditure as the amount government spends for the purpose of maintaining itself, the society and the economy specifically on defence, state, administration, justice, law and order, health, education, housing, communication, infrastructure, transfer, social security etc. within a period of one year popularly called fiscal year. According to Anyafor (1996), government expenditure is the total in cash terms of the federal, state and the local government spending including transfer to the parastatals and the three levels of the government.

Capital expenditure: Capital expenditure is a plan for acquiring and maintaining long-term assets. It is also a means of providing the means of financing these activities: (a) new facilities and major additions (b) major renovation and repairs to existing facilities. The benefits that result from capital expenditure extend beyond the year of payment.

Recurrent Expenditure: Recurrent expenditure is defined as the spending on running costs or for day to day running of government affairs such as payment of workers' salaries and remunerations, spending necessary to maintain existing levels of government services (Solomon, 2018). According to Anyanwu (1997), the recurrent expenditure serves the following purposes determining

income and expenditure, assisting in policy-making and planning, authorizing future expenditure, providing the basic for controlling income and expenditure, setting a standard of evaluating performance, motivating government managers and employees and coordinating the activities of multi-purpose organizations and government's department and ministries.

Link between Taxation and Government Expenditure

Government expenditure comes in two main forms-recurrent and capital expenditure. While the recurrent expenditure refers to financial outlays necessary for the day-to-day running of government businesses, the capital expenditure refers to investment outlets that increase the assets of the state and this categorization are not mutually exclusive but inter-linked. Agbonkhese and Asekome (2014) were of the opinion that while capital expenditure gave rise to recurrent expenditure in most cases through the operational and maintenance costs of completed capital projects, the amount available for investment was a function of not only the size of revenue but also the amount that goes annually into the running of government.

The volume of revenue base usually determines the planned expenditure of the government. An economy with low resources or whose projected revenue falls behind planned expectation results into borrowing to finance its project (Solomon, 2018). Thus, government can witness increased expenditure over revenue which leads to fiscal or budget deficit/imbalance. Tax occupies a unique position, because it is an important part of government policies. The ability of a government to generate revenue from this sector affects services offered by such a government (Olatunji, 2009).

Kiable and Nwikipasi, (2009) noted that the tax laws have vested the authority to assess,

administer and collect all taxes from corporate entities on the Federal Inland Revenue Services. Taxes administered at the Federal level include the Petroleum Profits Tax, Companies Income Tax, and the Value Added Tax as well as the Capital Gain Tax, when such capital gains are generated by corporate entities. Fatoki (2014) discussing the effect of tax evasion noted that the revenue due to the federal government will be reduced by the lack of good governance and unpatriotic act of tax evaders. This assertion indicates that tax is an important component of revenue for the government.

Soyede and Kajola (2006) opined that there are five distinct bodies on which the administration of taxation rest in Nigeria and are inter-related and the function of each is complimentary to those of the others. They are; (a). The board (Federal Board of Inland Revenue) (b). The service (Federal Inland Revenue Service) (c). The technical committee, (d). The Nigerian custom service, (e). The VAT directorate. However, other sub-internal in include: (a). The state Internal Revenue Services, (b). The Zonal Officer and (c). The local VAT offices.

Link between Taxation, Expenditure and Economic Growth

The size and structure of government capital and recurrent expenditure will determine the pattern and form of growth in output of the economy is the argument made by Taiwo and Abayomi (2011). According to the Keynesian view, the government needs to spend in order to achieve stability in the economy, stimulate or increase productivity or investment (Mehrara, Soufiani, & Rezaei, 2016). The government, along with the cost of economic stabilization, incurs distribution and allocation costs. However, increase in government spending in form of intervention, going by the neo-Classical economists could result in higher debt, high inflation outcomes given the full-

employment assumption (Olayungbo, 2013). Studies following the path of neoclassical theory do not see taxation as an important source of revenue, rather they argue that it distorts the economy and business growth. Authors such as Adelegan (2007), Ekeocha, Ekeocha, Malaolu and Oduh (2012) did not find any relationship between taxation and economic growth. In short Edame and Okoi (2014) claimed that there is an inverse relationship between taxation and investment, that is, taxation lowers investment and revenue for the government.

Taxation is therefore a vital instrument in the economic development, which provides a steady flow of revenue to finance development priorities such as strengthening physical infrastructure, and other numerous policy areas, ranging from good governance and formalizing the economy, to spurring growth (Uwuigbe and Olusegun, 2013). Taxation also plays an important role in achieving equality and distributive social and economic needs as observed by Samuel and Inyada (2010).

It is evident that a good tax structure plays a multiple role in the process of economic development of any nation which Nigeria is not an exception (Appah, 2010). Musgrave and Musgrave (2004) also note that these roles include: the level taxation affects the level of public savings and thus the volume of resources available for capital formation; both the level and the structure of taxation affect the level private saving. A system of tax incentives and penalties may be designed to influence the efficiency of resource utilization; the distribution of the tax burdens plays a large part in promoting an equitable distribution of the fruit of economic development; the tax treatment of investment from abroad may affect the volume of capital inflow and rate of reinvestment of earnings there from; and the pattern of taxation on imports relative to that of domestic producers affect the foreign trade balance.

A country seeking to improve its revenue generation would opt for a more recognized source which is peculiar to the socio-economic make-up and taxation easily comes to bear. It is no wonder Chigbu, Akujuobi, and Appah, (2012) argued that the Nigerian tax system has been structured and reformed over the years to increase government revenue and expenditure thus to achieve economic growth and development. It can therefore be implied that taxation is meant to allow for stimulation of the economy and not stifle growth, as it is only through sustained economic growth that the potential ability to offer improvements in the well-being of Nigerians will arrive. Taxation no doubt is not specifically meant to discourage investment and the propensity to save but to assist government in its expenditure (capital and recurrent) decision as a source of additional revenue. From Solomon (2018)'s assertion, tax is increasing being recognised as a tool for raising more revenue by all the three tiers of government in Nigeria especially in this democratic dispensation to enable them increase on their capital and recurrent expenditure which will no doubt stimulate economic growth and development. A government that is consistent in the payment of its employees' wages and salaries, provision of securities, provide essentials in healthcare and education under recurrent expenditure helps keep the economy going without holdup. Investment under capital expenditure in the provision basic infrastructures, good road networks, light, water, security facilities, telecommunications, health facilities which are ingredients for encouraging and boosting businesses and economic growth and development.

METHODOLOGY

Research Design: Quasi-experimental design was adopted as the study seeks to use time series data and econometric based analysis to

find out the relationship between two or more economic variables.

Sources of Data: Secondary data was used in this study sourced from Central Bank of Nigeria (CBN) annual report and Statistical Bulletin and Federal Inland Revenue Service covering the period of 1998 to 2017. The data include: tax revenue, capital expenditure, recurrent expenditure and GDP.

Model Specification: To specify model, the researcher first identifies the dependent and independent variables and explains their roles in the models.

$$Y = f(X) \quad (i)$$

Where Y= dependent variable and X= Independent variable. Mathematically, this is restated as

$$Y = b_0 + b_1X + \mu \quad (ii)$$

H₀₁: There is no positive and significant relationship between tax revenue and capital expenditure in Nigeria

In the first analysis to be carried out, tax revenue as it relates with capital expenditure is examined. A positive sign between the two variables implies that an increase in tax revenue will lead to increase in capital expenditure implying that tax revenue plays an important role while a negative sign implies vice versa.

$$\text{Capital expenditure} = F(\text{Tax revenue}) \quad (iii)$$

$$\text{CAPEX} = b_0 + b_1\text{TAX} + \mu \quad (iv)$$

H₀₂: There is no positive and significant relationship between tax revenue and recurrent expenditure in Nigeria.

In the second analysis, the level of contribution tax revenue makes on capital expenditure is examined. Like the first model, a

positive sign between the two variables implies that an increase in tax revenue will lead to increase in recurrent expenditure while a negative sign implies tax revenue does not contribute to recurrent expenditure.

Recurrent expenditure = F (Tax revenue) (v)

$$RECEX = b_0 + b_1TAX + \mu \quad (vi)$$

H₀₃: Ratio of tax revenue to capital and recurrent expenditure has no relationship with economic growth in Nigeria.

The ratio of tax revenue to capital and recurrent expenditure shows how much depth tax revenue has on capital and recurrent expenditure and

the influence on GDP growth is the focus of this hypothesis therefore significant relationship between the ratios and GDP tends to prove that tax actually plays an immense role in enhancing economic growth via expenditure.

$$TAXREC = \frac{\text{Recurrent expenditure}}{\text{Tax Revenue}}$$

$$TAXCAP = \frac{\text{Capital expenditure}}{\text{Tax Revenue}}$$

$$\text{Gross Domestic Product} = F (TAXREC, TAXCAP, \mu) \quad (vii)$$

$$GDP = b_0 + b_1TAXREC + RAXCAP + \mu \quad (viii)$$

Table 1: Data

YEAR	TAX	CAPEX	RECEX	TAXCAP	TAXREC	GDP	GDPRATE
1998	372.20	309.02	178.10	0.830	0.479	4588.99	0.1000
1999	416.90	498.03	449.66	1.195	1.079	5307.36	0.1565
2000	455.30	239.45	461.60	0.526	1.014	6897.48	0.2996
2001	586.60	438.70	579.30	0.748	0.988	8134.14	0.1793
2002	433.90	321.38	696.80	0.741	1.606	11332.25	0.3932
2003	703.10	241.69	984.30	0.344	1.000	13301.56	0.1738
2004	1194.80	351.25	1290.20	0.294	1.080	17321.30	0.3022
2005	1741.80	519.47	1589.27	0.298	0.912	22269.98	0.2857
2006	1866.20	552.39	2117.36	0.296	1.135	28662.47	0.2870
2007	1846.90	759.28	2300.19	0.411	1.245	32995.38	0.1512
2008	2972.20	960.89	2117.36	0.323	0.712	39157.88	0.1868
2009	2197.60	1152.80	2127.97	0.525	0.968	44285.56	0.1309
2010	2839.30	883.87	3109.38	0.311	0.716	54612.26	0.2332
2011	4628.50	918.50	3314.51	0.198	0.664	62980.40	0.1532
2012	5007.70	874.80	3325.16	0.175	0.768	71713.94	0.1387
2013	4805.60	1108.39	3689.06	0.231	0.768	80092.56	0.1168
2014	4714.60	783.12	3426.90	0.166	0.727	89043.62	0.1118
2015	3741.80	818.35	3831.95	0.219	1.024	94144.96	0.0573
2016	3307.50	634.80	4178.59	0.192	1.263	101489.49	0.0780
2017	4027.94	2867.92	5158.92	0.712	1.281	113711.63	0.1204

Source: CBN Statistical Bulletin, 2017, FIRS 2017.

Method of Data Analysis: This study employs single and multiple regression econometric

technique in estimating the relationship between the variables. The study is to be

estimated using the ordinary least square (OLS) since it will be able to capture the essence of the work effectively in addition to its high level of simplicity and global acceptability. It also helps measure the relationship between two or more variables in a linear model. More specifically, regression analysis helps to understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed (Freedman, 2005:1).

RESULTS AND DISCUSSIONS

The value of the variables for analysis is depicted in table 1 above:

From the graph, it can also be seen that tax revenue rose from the period 2002 under Obasanjo's regime owing to years of dependence on oil sector.

For the trend in movement of the variables refer to graph in appendix one. For a better picture of the variables, the graphs shows the growth trend of GDP, Recurrent expenditure have an upward movement. However, it can also be seen that tax and capital expenditure have similar movement.

Table 2: Descriptive Statistics

Date:

04/01/19

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Sample: 1998 2017

	TAX	CAPEX	RECEX	TAXCAP	TAXREC	GDP	GDPRATE
Mean	2393.022	761.7050	2246.329	0.436750	0.971450	45102.16	0.182780
Median	2031.900	697.0400	2122.665	0.317000	0.994000	36076.63	0.154850
Maximum	5007.700	2867.920	5158.920	1.195000	1.606000	113711.6	0.393200
Minimum	372.2000	239.4500	178.1000	0.166000	0.479000	4588.990	0.057300
Std. Dev.	1671.459	571.6014	1453.049	0.276870	0.264551	35919.65	0.088955
Skewness	0.227521	2.559551	0.207984	1.220231	0.359563	0.497605	0.773422
Kurtosis	1.617749	10.37781	1.958943	3.779789	3.038950	1.876307	2.720576
Jarque-Bera	1.764732	67.19770	1.047358	5.469939	0.432215	1.877608	2.059006
Probability	0.413803	0.000000	0.592337	0.064896	0.805649	0.391095	0.357184
Sum	47860.44	15234.10	44926.58	8.735000	19.42900	902043.2	3.655600
Sum Sq. Dev.	53081709	6207836.	40115654	1.456478	1.329753	2.45E+10	0.150347
Observations	20	20	20	20	20	20	20

Table 2 shows the descriptive statistics with the mean value for the various variables showing that ₦2393 billion was collected annually for the period under review while an average of ₦2246.329 billion and ₦761.7050 billion spent on recurrent and capital expenditure respectively. It confirms the

argument that governments in Nigeria have expended more on overhead cost and wages over the years while spending little on capital projects which are ingredients for industrialization and long term development. The table also showed that tax to recurrent expenditure ratio averaged 0.971450 while tax

to capital expenditure ratio amounts to 0.436750 on the average for the period under

review. GDP also grew by an average of 0.1827 within this period growth.

Table 3: Correlation Matrix

	TAX	CAPEX	RECEX	TAXCAP	TAXREC	GDP	GDPRATE
TAX	2654085.	528177.4	2070572.	-283.3899	-132.2826	50573548	-74.15646
CAPEX	528177.4	310391.8	581256.7	-1.915903	9.721553	13560399	-18.58479
RECEX	2070572.	581256.7	2005783.	-211.9236	-6.848768	48318930	-64.40246
TAXCAP	-283.3899	-1.915903	-211.9236	0.072824	0.017419	-4755.267	0.002617
TAXREC	-132.2826	9.721553	-6.848768	0.017419	0.066488	-298.1220	0.008500
GDP	50573548	13560399	48318930	-4755.267	-298.1220	1.23E+09	-1836.364
GDPRATE	-74.15646	-18.58479	-64.40246	0.002617	0.008500	-1836.364	0.007517

Table 3 depicting the co-linearity amongst the variables shows that capital expenditure has positive correlation with recurrent expenditure and GDP. The ratios have negative correlation with other variables which may be as a result of the differences in depth of taxation in capital and recurrent expenditure.

we reject the null hypothesis and accept that tax has significant relationship with recurrent expenditure.

Further analysis shows that tax is responsible for 30.19% of the total variation in capital expenditure as indicated by the R². The coefficient value of 0.199005 also suggests that the higher the tax revenue, the higher the capital expenditure. From the t-statistics result, it can be seen that a value of 3.035873 was obtained with a prob.value of 0.0071 which is less than 0.05 confidence level, hence we reject the null hypothesis and accept that taxation has significant relationship with capital expenditure.

Table 4: Summary of OLS Analysis

	RECEX	CAPEX
C	379.4248	285.4807
TAX	0.780145	0.199005
R ²	80.54	33.86
R ²	79.45	30.19
t-Statistic	8.629662	3.035873
Prob. value	0.0000	0.0071
F-statistic	74.47106	9.216522
Prob. value	0.000000	0.007108
Durbin Watson	0.756540	1.266550

Source: *Eviews 8*.

The result shows that Tax is responsible for 79.45% of the total variation found in recurrent expenditure as suggested by the R². The coefficient of 0.780145 implies that there is positive relationship between tax revenue and

recurrent expenditure, in other words, the higher the tax generated, the higher the recurrent expenditure. The t-statistics of 8.629662 with a prob. Value of 0.000 indicates

Table 5: Summary of Analysis

	GDPRATE
C	0.057538
TAXCAP	0.005719
TAXREC	0.126352
R ²	14.49
R ²	4.43
t-Statistic	TAXCAP(0.076840) TAXREC(0.9396)
Prob. value	(0.9396) (0.1232)
F-statistic	1.439980
Prob. value	0.264414
Durbin Watson	1.304389

Source: *Eviews 8*.

The result in table 5 shows that tax to capital expenditure ratio has positive relationship with GDP (coefficient value is 0.005719), that is, the higher the capital expenditure owing to increment in tax revenue the higher the economic growth rate while a lower capital expenditure due to less tax revenue will result in lower economic growth rate. Although the t-statistics with prob value of 0.9396 which is above 0.05 confidence level suggested that the relationship is not significant it however provides that taxation plays a role in influencing Nigeria's economic growth via increment in public spending on capital projects such as roads construction, provisions of facilities, buildings, schools, telecommunication facilities, security gadgets, machineries and many more.

There is also a positive relationship between tax to recurrent expenditure ratio and GDP (coefficient value is 0.126352) which indicates that the higher the recurrent expenditure owing to increment in tax revenue, the higher the economic growth rate and vice versa. The t-statistics with a probability value of 0.1232 which is above 0.05 confidence level suggested that the relationship is not significant.

The insignificant relationship experienced in these results may be attributed to the fact that taxation was not taken as a serious source of revenue by the Nigerian government until lately most especially under Obasanjo's regime owing to years of over-dependence on oil revenue which is still applicable today but which more emphasis been placed on tax revenue. The global financial crisis and short fall in oil revenue owing to crash in oil price adversely affected Nigeria's revenue base and government expenditure as indicated by CBN report in 2008. The findings made by this study agrees with the view of Afuberoh and Okoye (2014), Chigbu, Akujuobi and Appah (2012), Ogbonna and Appah (2011), Success, Success and Ifurueze (2012) who all found that tax reforms has positively impacted on

economic growth in Nigeria owing to increase in tax revenue base and government expenditure. It also conforms with the findings of Adams (2001), Solomon (2016), Sote (2016) revealed that tax provides significant source of revenue for government expenditure.

The findings thus disagree with the claims of Adelegan (2007), Edame and Okoi (2014), Ekeocha *et al.*, (2012), Olayungbo, 2013) that taxation does not contribute to government expenditure and their arguments that it distorts business and economic growth as a result of its inverse relationship with GDP and government expenditure.

CONCLUSION AND RECOMMENDATIONS

Taxation as a source of revenue has remained a much debated issue. The role of taxation on capital and recurrent expenditure based on the findings of this study is positive and significant. In other words, an increment in taxation revenue will bring about corresponding increase in government capital and recurrent expenditure. This study also concludes that taxation plays a positive role in influencing economic growth as result of increment in government capital and recurrent expenditure.

Based on the findings and conclusion, it is recommended that government see taxation as an important source of revenue. To this end, corporate taxes should be effectively supervised, while companies with profitability of millions should be taxed at higher rates but caution should be taken so that it doesn't affect their overall growth. Government should also strengthen the electronic tax collection system to enhance effective mobilization of taxes.

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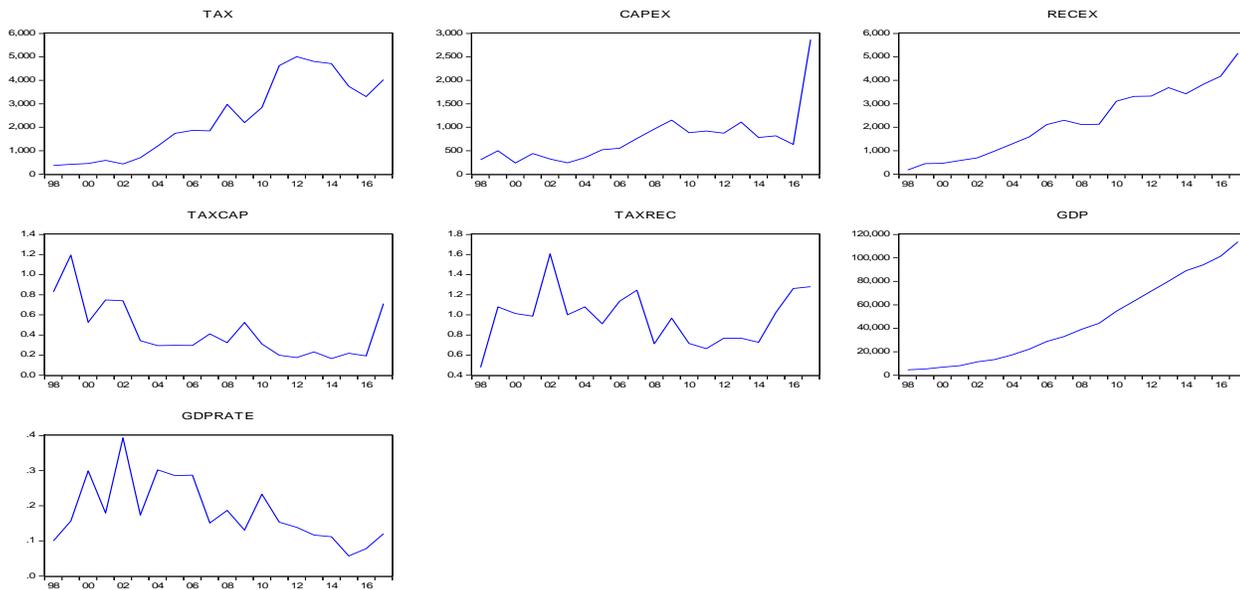
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APPENDIX ONE



APPENDIX TWO

Dependent Variable: RECEX
 Method: Least Squares
 Date: 04/01/19 Time: 00:37
 Sample: 1998 2017
 Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	379.4248	261.7099	1.449792	0.1643
TAX	0.780145	0.090403	8.629662	0.0000
R-squared	0.805345	Mean dependent var	2246.32	9
Adjusted squared	0.794530	S.D. dependent var	1453.04	9
S.E. of regression	658.6490	Akaike info criterion	15.9129	0
Sum squared resid	7808732.	Schwarz criterion	16.0124	7
Log likelihood	157.1290	Hannan-Quinn criter.	15.9323	4
F-statistic	74.47106	Durbin-Watson	0.75654	

stat 0

Prob(F-statistic) 0.000000

Dependent Variable: CAPEX
 Method: Least Squares
 Date: 04/01/19 Time: 00:36
 Sample: 1998 2017
 Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	285.4807	189.7667	1.504377	0.1498
TAX	0.199005	0.065551	3.035873	0.0071
<hr/>				
R-squared	0.338637	Mean dependent var	761.705	0
Adjusted R-squared	0.301895	S.D. dependent var	4	571.601
S.E. of regression	477.5884	Akaike info criterion	2	15.2700
Sum squared resid	4105633.	Schwarz criterion	9	15.3695
Log likelihood	150.7002	Hannan-Quinn criter.	5	15.2894
F-statistic	9.216522	Durbin-Watson stat	0	1.26655
Prob(F-statistic)	0.007108			

Dependent Variable: GDPRATE
 Method: Least Squares
 Date: 04/01/19 Time: 00:34
 Sample: 1998 2017
 Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.057538	0.077002	0.747221	0.4651
TAXCAP	0.005719	0.074429	0.076840	0.9396
TAXREC	0.126352	0.077895	1.622090	0.1232

		Mean dependent	0.18278
R-squared	0.144868	var	0
Adjusted R-squared	0.044264	S.D. dependent var	5
			-
S.E. of regression	0.086964	Akaike info	1.90916
		crit	4
			-
Sum squared resid	0.128567	Schwarz crit	4
			-
Log likelihood	22.09164	Hannan-Quinn criter.	1.88000
			7
F-statistic	1.439980	Durbin-Watson stat	1.30438
Prob(F-statistic)	0.264414		9