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Research Article

Account and Financial Management Journal ISSN: 2456-3374

The Impact of Personal Income Tax on Government Expenditure in Oyo State

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ARTICLE INFO

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ABSTRACT

The study evaluated the impact of Personal income tax on government expenditure in Oyo state. It also investigated the significant components of Personal income tax on government expenditure in Oyo state. Secondary data were sourced from approved budgets of the Oyo State government from 1990 to 2015. Pearson product moment correlation and multiple regressions were employed to examine the relationship between the dependent variable (Government expenditure in Oyo State) and independent variables (Pay As You Earn(PAYE), Capital Gain Tax, Road Tax, and Other Taxes (Stamp duties, Betting and Gaming Taxes, Business Premises and registration levies, Development levies and Market fees)). Findings reveals that Pay As You Earn (PAYE) has a positive significant impact on government expenditure in Oyo state ($\beta = 1.907001$; $p \leq 0.05$). Road tax has negative insignificant effect on Government Expenditure in Oyo state ($\beta = -.3206565$; $p \leq 0.05$) with the adjusted R^2 @ 66.7%. In conclusion, Personal income tax has positive significant and statistical impact on Government expenditure in Oyo State. It is now recommended that Oyo state government should reduce the expenditure on governance so that money generated from personal income tax will be expended on payment of salaries of civil servants instead on frivolity. Also Government should increased Road tax inorder to boost government revenue which will ultimately increase government expenditure power extensively.

KEY WORDS: ***Government Expenditure; Personal income tax; PAYE; Road Tax; Oyo state***

INTRODUCTION

The relationship between government expenditure and personal income tax has continued to generate series of debate among scholars. Government expenditure occurs on every level of government irrespective of local, state, and federal Government. Government expenditure is classified into government consumption, government investment and transfer payments. Government consumption is refers to government purchases of goods and services for current use, government investment is also refers to government purchases of goods and services intended to create future benefits such as infrastructure investment or research spending where as government expenditures that are not directly purchases of goods and services, they are also referred to as transfer payments (Danladi et al 2015). In Oyo state, government expenditure (increased demand for public (utilities) goods like roads, communication, power, education and health) has continued to rise despite there is

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decrease in federal allocation and excess crude oil. Besides, there is increasing need to provide both internal and external security for the people in the state. All these government expenditure must be financed through a variety of methods. One of the methods used by Oyo state government to finance government expenditure is Personal income tax. In an attempt to fulfill the government responsibilities and to cater for rising expenditure, government may increase taxes. Higher income tax discourages individual from working for long hours or even searching for jobs. This in turn reduces income and aggregate demand. In the same vein, higher profit tax tends to increase production costs and reduce investment expenditure as well as profitability of firms. A rising government expenditure which can be translated to meaningful growth and development in the state can be absolutely financed and traced to effective utilization of personal income tax. Tanzi (1994) observes that fiscal policy applies to the use of fiscal instruments (taxation and spending) to influence the working of the economic system in order to maximize economic welfare with the overriding objective of promoting long-term growth of the economy.

The ability of the Oyo state government to provide such services constitutes the primary legitimacy of the power of government to levy taxes. Government has a primary obligation to provide basic social welfare services like basic education, access to basic health services, safe drinking water, sanitation and security for the citizenry. The failure of any government to live up to that expectation erodes loyalty to the government and destroys the incentive to voluntarily pay taxes. Given the issues raised above, this paper seeks to examine the effect of personal income tax on government expenditure in Oyo state Nigeria. The paper is organized as follows. Section 1 is the introduction, while section 2 contains literature review, empirical review and conceptual framework. Section 3 consists of methodology and model estimation, while section 4 contains discussion of results. Section 5 is summary conclusion and recommendations.

LITERATURE REVIEW

Personal Income Tax

Adebisi and Gbegi (2013) define personal income tax as a tax levied on employment income and any other income received by individuals. Individuals here being those in paid employment and those in self- employment, i.e. those engaged in a trade, business, profession or vocation such as lawyers, accountants, doctors, traders in shops etc. The assessment and collection of this tax in Nigeria is regulated by the Personal Income Tax Act No. 104 LFN, 1993. It is this law that gives the necessary procedures and administrative powers to impose and collect taxes from persons, individuals, partnerships, executors, trustees Family or Communities Corporation sole or body of individuals. Personal Income Tax is collected by the various state governments through the State Board of Internal Revenue (SBIR) from individuals resident in the tax territory. Taxes from certain categories of individual - members of the Armed Forces, the Nigeria Police, FCT residents, External Affairs Officials and nonresident individuals- are collected by the Federal Government via the Federal Board of Inland Revenue (FBIR).

According to Adebisi and Gbegi (2013), the following taxes/levies are collectible by State Governments in Nigeria:

i Personal Income Tax:
   a. Pay-as-you-earn (PAYE),
   b. Direct (Sell and government) Assessment
   c. Withholding Tax (individuals only).
ii Capital Gains Tax (Individuals only)
iii Road Taxes

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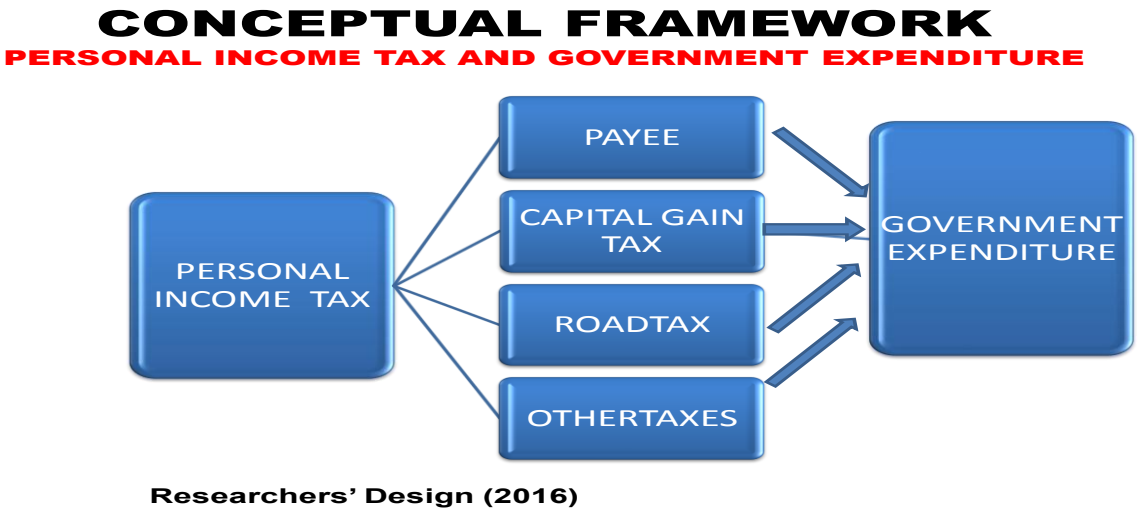
iv Stamp Duties (instruments executed by individuals);
v Pools Betting and Lotteries, Gaming, and casino Taxes;
vi Business premises registration and renewal levy.



Researchers' Design (2016)

EMPRICAL REVIEW

Martin and George (2003) analyzed several tax rates and expenditure categories and concluded that the tax system has a direct impact on the growth rate of the economy of a country. Furthermore, Tracy and Kester (2009) investigated the interrelationship between total government expenditure and total tax revenue in Barbados applying Granger Causality on both bivariate and multivariate co-integrating models. The result of the multivariate error correction model suggests that a unidirectional causality exists from tax revenue to government expenditure. Emelogu and Uche (2010) studied the relationship between government revenue and government expenditure in Nigeria using time series data from 1970 to 2007. They utilized the Engel-Granger two-step co-integration technique, the Johansen co-integration method and the Granger causality test within the Error Correction Modeling (ECM) framework and found a long-run relationship between the two variables and a unidirectional causality running from government revenue to government in Nigeria.

Ogujiuba and Abraham (2012) also examined the revenue-spending hypothesis for Nigeria using macro data from 1970 to 2011. Applying correlation analysis, grangercausality test, regression analysis, lag regression model, vector error correction model and impulse response analysis, they report that revenue and expenditure are highly correlated and that causality runs from revenue to expenditure in Nigeria. The vector error correction model also proves that there is a significant long run relationship between revenue and expenditure. Taghav1 and Ebrahim (2013) show that the influence of government´s expenditures and taxes on employments and consumption in Iran. They have estimated the pattern of Iran´s economy by using VAR method. The results have shown that a positive shock in government´s expenditure increases employment rate and consumption, while the negative shock reduces the consumption and the rate of employment.

Easterly and Rebelo (1993) emphasized the importance of government policy (activity) in

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economic growth. They laid emphasis on the composition of public expenditure rather than its level and in that vein felt that the productive government expenditure has an effect while the unproductive government expenditure has no effect. But the problem is to identify which government expenditure is unproductive before the spending. This implies that government expenditure and composition of government expenditures are important determinants of growth. On the other hand, there seems to be a direct link between budget policy and growth, and this has primarily been associated with tax policy. The structure of taxation could have important implication for growth. The empirical evidence of the impact of various aspect of tax policy on growth has so far been mixed. Easterly and Rebelo (1993) pointed out that a major difficulty in isolating the impact of tax on growth arises because key non-tax variables such as public expenditure that are often not independent of tax policy can also affect growth.

Balanchard and Perotti (1999) have revealed a positive government spending shocks as having a positive effect on output, and positive tax shocks as having a negative effect. The multipliers for both spending and tax shocks are typically small. Turning to the effects of taxes and spending on the components of GDP, one of the results has a distinctly non-standard flavor: Both increases in taxes and increases in government spending have a strong negative effect on investment spending. Taghavee and Rezaei [13] have shown that the influence of government´s expenditures and taxes on employments and consumption in Iran. They have estimated the pattern of Iran´s economy by using VAR method. The results have shown that a positive shock in government´s expenditure increases employment rate and consumption, while the negative shock reduces the consumption and the rate of employment..

Hjelm (2001) has studied how the US budget responds to shocks in taxes, spending and output. In particular, they consider the dynamic adjustment of the two budgets Components (taxes and spending) to such shocks. The recently developed Generalized Impulse Response Function, which takes the historical distribution of the Residuals into account, is applied. They select the 'correct' specification, estimate two VAR and two VEC models and compare the results. Their chosen specification suggests that tax; spending and output shocks generate deficits in the long run while the tax and output shocks generate a surplus in the short run.

Hasan and Lincoln (1997) carried out a research on this issue for United Kingdom by using cointegration technique and quarterly data from 1961-93 was used for this purpose. This study reveals that government tax revenue Granger causes government expenditures and vice versa.
Abdul Aziz and Shah Habibullah (2000) investigated causality between taxation and government spending by using an application of Toda-Yamamoto approach in Malaysia for the period 1960 to 1997. Their evidence generally supports the existence of bidirectional causality between government spending and tax revenues. Kollias and Makrydakis (2000) examined tax and spending relationship in four countries namely; Greece, Portugal, Spain, Ireland which are comparatively poorer countries in European Union. They found that cointegration prevails in only Greece and Ireland cases and whereas there is no long run relationship in the models for Spain and Portugal. Moreover, bidirectional causality between government spending and revenue exists in Greece and Ireland. As far as Spain and Portugal cases are concerned, in the former country, causality runs from revenue to expenditure and in the later country, there is no causal link between these two important fiscal variables.

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Maghyereh and Sweidan (2004) examined tax-spend, spend-tax and fiscal synchronization hypothesis for Jordan using annual time series data from 1969 to 2002. The authors used real GDP as control variable along with real government expenditures and real government revenues and Granger causality test based on Multivariate ECM. They conclude evidence in favor of bidirectional causality between revenue and expenditure. The result also suggests that there is long-run interdependence between output and fiscal variables indicating effectiveness of fiscal policy in Jordan.

Mohsen and Abbasal (2014) investigate the relationship between government revenue and government expenditure in IRAN by using annual data and applying the Toda - Yamamoto Granger causality test for the period of 1978 to 2011. it is an important issue for this country but scare empirical literature available on this issue for IRAN. The research uses the annual time series data which is obtained from the website of Central Bank. Data properties were analyzed to determine their stationary using unit root tests ADF and Zivot-Andrews unit root test which indicated that the series are I(1). The Toda – Yamamoto Granger causality test found unidirectional causality running from government revenue to government expenditure.

METHODOLOGY

Data were sourced from approved budgets of the Oyo State government. This Model evaluated the impact of Personal Income Tax on Government Expenditure in Oyo State. Secondary data were used in this study which were gathered from approved budgets of the Oyo State government from 1990 to 2015. Regression analysis technique was used to examine the effects of independent variables on dependent variable, and Pearson product moment correlation was used to examin the significant relationship among the variables.

MODEL SPECIFICATION

Government Expenditure in Oyo State is the dependent variable while Pay As You Earn(PAYE), Capital Gain Tax, Road Tax, and Other Taxes (Stamp duties, Betting and Gaming Taxes, Business Premises registration and renewal levies, Development levies and Market fees) are independent variables

$$GOVEXP = f(PAYE, CGT, RTAX, OTTAXS) \quad (1)$$

$$\sum_{i=1}^{n} GOVEXP = a0 + \sum_{i=1}^{n} a1PAYE + \sum_{i=1}^{n} a2CGT + \sum_{i=1}^{n} a3RTAX + \sum_{i=1}^{n} a4OTTAXS + \mu 1 \quad (2)$$

$$\sum_{i=1}^{n} LOGGOVEXP = a0 + \sum_{i=1}^{n} a1LOGPAYE + \sum_{i=1}^{n} a2LOGCGT + \sum_{i=1}^{n} a3LOGRTAX + \sum_{i=1}^{n} a4LOGOTTAXS + \mu 1 \quad (3)$$

$$r = \frac{n\Sigma wc.sf - \Sigma wc\Sigma sf}{\sqrt{\left(n\Sigma wc^2\right) - \left(\Sigma wc\right)^2} \cdot \sqrt{\left(n\Sigma sf^2\right) - \left(\Sigma sf\right)^2}} \quad (4)$$

Where: n = no of observations

r = Coefficient of correlation showing the degree of relationship between the dependent variable and independent variable.

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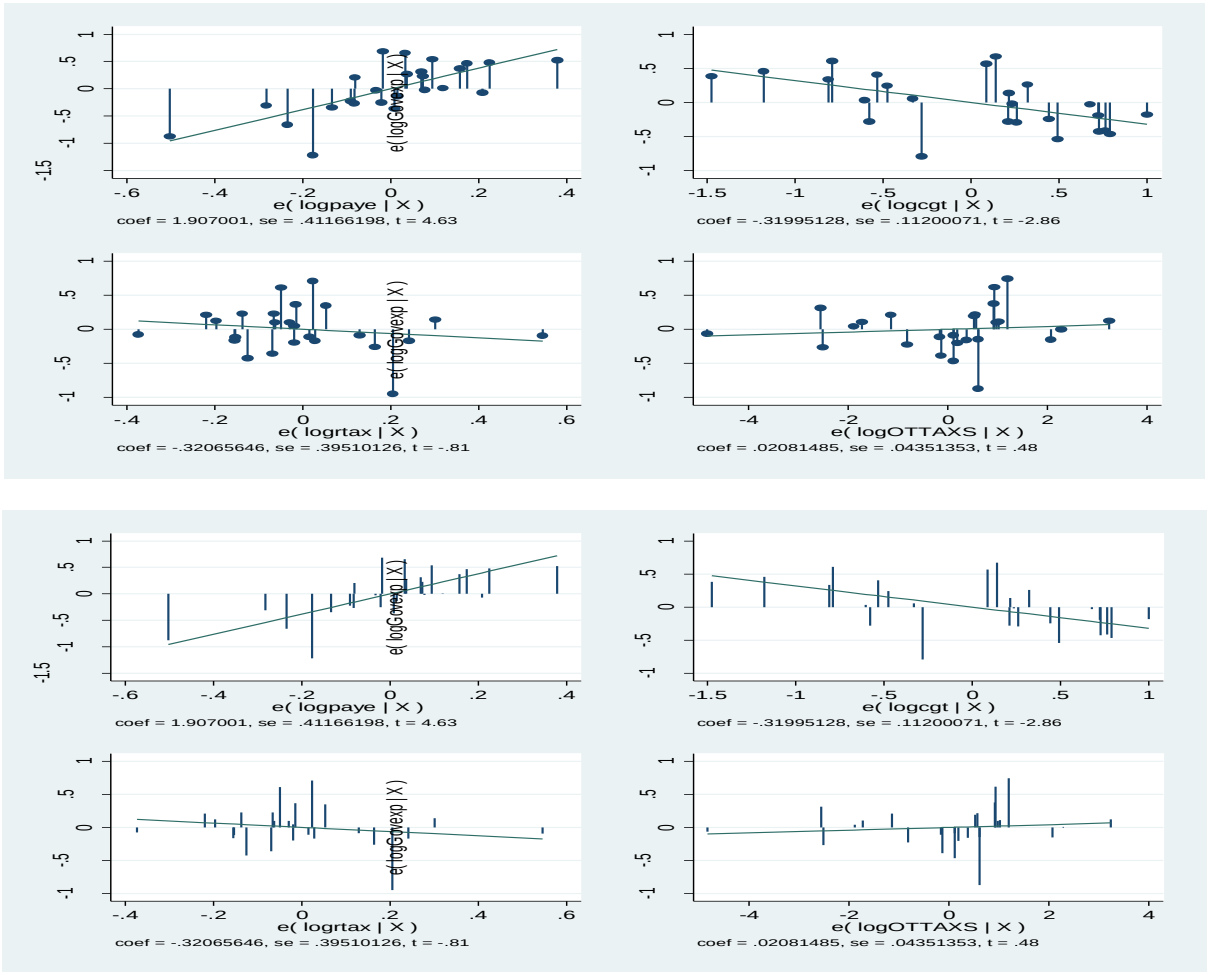
RESULTS AND DISCUSSION

Table 1: The Effect of Personal Income Tax on Government Expenditure in Oyo State

Independent Variable	Dependent Variables	Coefficient	Standard Error	T	P>|t	[95%Conf. interval]
GOVEXP	LOGPAYE	1.907001	.411662	4.63	0.000	1.048289 2.765713
	LOGCGT	-.3199513	.1120007	-2.86	0.010	-.5535807 -.0863219
	LOGRTAX	-.3206565	.3951013	-0.81	0.427	-1.144823 .5035103
	LOGOTTAXS	.0208148	.0435135	0.48	0.638	-.0699528 .1115825
	constant	-9.195227	1.410772	-6.52	0.000	-12.13804 -6.252408
R-squared = 0.6722	Adj R-squared = 0.6666	Prob > F = 0.0000		F(4, 20) = 174.81		
		Root MSE = .36701				

Source: Researcher's computation (2016) using STATA Version 11

Figure 1- The above table is represented by regression plots below:



The effects of personal income tax on Government Expenditure in Oyo State are shown in table 1 above. 1% increase in the Pay As You Earn (PAYE) increases Government Expenditure (GOVEXP) by 1.9%. This suggests a positive significant effect of PAYE on GOVEXP. 1% increase in Capital gain tax (CGT) reduces Government Expenditure (GOVEXP) by 0.319

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%.This means that the relationship between CGT and GOVEXP is negative suggesting that if CGT increases GOVEXP reduces. More so, 1% increase in the Road tax (RTAX) reduces Government Expenditure (GOVEXP) by 0.32%. This also suggests a negative insignificant effect of RTAX on GOVEXP. Furthermore, 1% increase in Other taxes (OTTAXS) increases Government Expenditure (GOVEXP) by 0.2%. This reveals a positive significant effect of OTTAXS on GOVEXP. This is suggesting that if OTTAXS in Oyo state increases, Government Expenditure (GOVEXP) also increases.

Given coefficient of determination (R^2) to the tune of 0.6722 (67%) with the adjusted R^2 as 66.7%, it connotes that the independent variables incorporated into this model have been able to determine effects of personal income tax on Government Expenditure to 67%.The F and probability statistics also confirmed the significance of this model. This hypothesis is that Personal income tax has no significant effect on Government Expenditure in Oyo state. From the decision rule above, because the p-value is equals 0.0000 which is less than 0.05, therefore the null hypothesis is rejected while the alternative hypothesis is upheld that is Personal income tax has positive significant effect on Government Expenditure in Oyo state

Table 2: The relationship between Government Expenditure and Personal Income Tax in Oyo State|

	LOGPAYEE	LOGPAYEE	LOGPAYEE	LOGPAYEE	LOGPAYEE
GOVEXP	1.0000				
PAYEE	0.7914*	1.0000			
CGT	0.6614*	0.9501*	1.0000		
RTAX	0.6413*	0.9567*	0.9966*	1.0000	
OTTAXS	0.5927*	0.6160*	0.5722*	0.5719*	1.0000

. Correlation is significant at the 0.01 level (2-tailed)*. Correlation is significant at the 0.05 level (2-tailed). Source: Researchers' computation (2016) using STATA Version 11

The table 2 above shows the relationship between Government Expenditure and Personal Income Tax in Oyo State The table shows that Government expenditure in Oyo state (GOVEXP) has positive relationship with pay as you earn (PAYE) with the value 0.7914*. capital gain Tax (CGT) also has positive significant relationship with Government Expenditure in Oyo state with the value of 0.6614*. This result implies that an increase in capital gain Tax (CGT) leads to increase in Government Expenditure in Oyo state. Also, Road Tax (RTAX) has positive correlation with Government Expenditure (0.6413*) in Oyo state. This result implies that the increase in Road Tax (RTAX) also leads to increase in Government Expenditure in Oyo state. In the same vein, other taxes (OTTAX) such as Stamp duties, Betting and Gaming Taxes, Business Premises and registration levies, Development levies and Market fees) also have positive significant relationship with Government Expenditure in Oyo state with the value of 0.5927*. The table also revealed that all the predictor variables have a positive relationship with Government revenue in Oyo state. This hypothesis is that Personal income tax has no significant relationship with Government Expenditure in Oyo state. Therefore the null hypothesis is rejected while the alternative hypothesis is advocated that is Personal income tax has positive significant relationship on Government Expenditure in Oyo state

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SUMMARY AND CONCLUSION

This study examined the effects of personal income tax on government Expenditure in Oyo State from 1990 to 2015.This study used Pearson product moment correlation and multiple regression analysis technique. Multiple regression analysis technique was used to detect the effects of personal income tax on government Expenditure. However, based on the outcome of the study, there is a positive effect of Pay As You Earn (PAYE) on Government Expenditure in Oyo state. All other variables have positive significant effect on Government Expenditure in Oyo state with the exception of Capital gain tax and Road tax which have negative insignificant effects on Government Expenditure in Oyo state. Also there is a positive significant relationship between Government Expenditure with Road tax, Pay As You Earn, Capital gain tax and Other taxes this means that when Road tax, Pay As You Earn, Capital gain tax and Other taxes increase, Government Expenditure also increases. The higher the level of Road tax, Pay As You Earn, Capital gain tax and Other taxes, the higher the Government Expenditure of Oyo State. In conclusion, Personal income tax has positive significant and statistical impact on Government expenditure in Oyo State. It is now recommended that Oyo state government should reduce the expenditure on governance so that money generated from personal income tax will be expended on payment of salaries of civil servants instead on frivolity. Also Government should increased Road tax in order to boost government revenue which will ultimately increase government expenditure power extensively.

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