

agricultural segment share is expected to be able to reduce sales output by as much as 0.4 per cent. Results suggest that while foreign aid essentially improves revenue efficiency, debt is not. He has discovered corruption among the institutional elements that has a fundamentally negative effect on revenue performance. Some viable considerations are political and monetary stability but only fundamental determinations. Then again, better-performing nations that put greater emphasis on taxing wages, profits and capital gains similar elements are considered essential for all income groups when evaluating the level of income across the sub-samples.

Hafiz, et al. (2016) investigated the socio-economic determinants of tax revenue in Pakistan empirically, and found low tax revenues. Their research adopts time series data from 1975-2012. We used the ARDL (Auto Regressive Distributed Lag) method to check the long- and short-term observer coefficients of these determinants. Hafiz et al. (2016) used the tax-to - GDP ratio to explain tax revenue while the independent variables include narrow tax base, economic activity, tax enforcement, informal economy and government administration. They find that GDP per capita and fiscal stability among socioeconomic determinants are positive and statistically significant determinants of tax revenues. As a result, they see the informal economy and low tax base as negative and notable determinants of Pakistan's tax revenues. The study suggests that by archiving the informal economy, broadening the tax base, improving institutional and political governance, and exempting any specific pressure group from tax exclusion, Pakistan will increase its tax revenues.

Begum (2007) analyzed tax policies for 11 low-wage economies, including Burma, Bolivia, India , Indonesia, Jordan, Mongolia, Morocco, Nicaragua, Pakistan , Sri Lanka, and the Philippines; From 1991 to 2005 the researcher adopted the data panel method for a long frame. The OLS approach was used, and the Hausman test was concerned with choosing between fixed effects and random effects models. Tax-to - GDP ratio was used as the dependent variable while the explanatory variables were the sectoral GDP share, large supply of capital, public debt-to -

GDP ratio, per capita GDP and population growth rate. The study highlighted that, due to two notable factors, these developing countries did not have an adequate level of tax to-GDP ratio. Firstly, small tax base system and, respectively, structural and political problems such as lawlessness, corruption, lack of transparency and political instability. Results of the study showed that cash supply, public debt, trade openness and the pace of population growth had a huge impact on the proportion of tax to GDP among these emerging economies. The contribution Industry made to GDP had no connection with raising tax revenue.

The study of Ahmed, and Mohammed (2010) however examined tax buoyancy determinants using emerging economies. Their research adopts a survey of 25 emerging economies using data from 1998 to 2008 from a cross section. For the study, they apply a pooled least square methodology. The researchers show that significant determinants of tax levies are imports, production, utilities, monetization, and budget deficits. Our findings show that, in the case of developed countries, the agricultural sector has no significant fiscal relationship because they are not regulated or regulated under. Because of the growth in the 1990s, their study found a major positive effect between the service sector and tax buoyancy. Their research also shows that the increase in monetary growth affects the successful collection of tax revenue, as the increase in monetization induces an increase in the amount of transactions that increases buoyancy. Their report suggests that the budget deficit has a substantial positive impact on the governments' tax collection. Nevertheless, growth in grants is inversely linked to tax collections as governments in developed economies resist controversial measures to increase taxes for mobilization of domestic capital.

Theoretical Framework

A large number of theoretical studies have been done on the determinants of tax collection effort in both developed and developing economies, and a few components have been identified. These include; the general level of development that reflects per capita income and

educational levels, urbanization, communication, etc. The managerial and political constraints on the fiscal system, socio-political principles, indigenous institutional structures, common preferences for government spending, as well as the various components that condition the general eagerness to pay taxes (Taiwo, 1999). Hinrick (1966) said that the general theoretical basis for taxation is based on the capacity of individual nations, the tax assessment goals set by the authorities and the ability of governments to raise taxes in practice.

Theory of LafferCurve

This study adopts the Laffer curve as used by Okoye and Gbegi (2013), Professor ArthrunLaffer has asserted the Laffer curve theory; the theory shows the statistical proof of the relationship between tax-raised government revenues and all possible tax rates. The theory was based on a curve built on experimental tax expenditure and revenue observation. The effect of the high tax rate on taxpayers is the calculation of tax revenue collected at an insane tax rate between 0 per cent and 100 per cent, he concluded that a tax rate between 100 per cent does not raise revenue in the same way that a tax rate of 0 per cent does not raise revenue. This is on the grounds that, at a rate of 100 percent, a discerning taxpayer no longer has the driving power to gain money, the income earned would be 100 percent of nothing along those lines. It takes no less than one rate after that, in the middle of which tax revenue will be a limit. Laffer credited IbnKhalidun and Keynes with the idea that extending tax rates above a certain point would prove counter-beneficial in increasing more tax revenue as a result of lower returns (Laffer, 2004).

Methodology

Study Design

The study will source its data from the Central Banks Statistical bulletin from on time series. Many prior researches use percentage of GDP as tax revenue and it is expressed mainly as the dependent variable and compared with other variables (independent). Although, this analysis would take overall tax revenue as a metric for tax revenue as an independent variable, which in

Nigeria is inclusive of indirect and direct tax. By combining currency, political stability factor and GDP as well as explanatory or controllable variables such as circulating capital, monetization factor, foreign direct investment and total transaction volume.

Source of Data Collection

The study will use both primary and secondary sources of data due to the nature of the report, which is an overview of Nigeria's economic determinants of tax income, political instability, gross domestic product, foreign direct investment, tax revenue and exchange rates, as proxies. For this type of study archival data is mostly required. The data from the time series will span 26 years, from 1990-2017. The purpose of choosing this period is to empirically test the extent or significance to which tax revenue, exchange rate, foreign direct investment, gross domestic product (GDP) and the political stability factor induce tax revenue. The data will be gathered from Central Bank of Nigeria Statistical Bulletin as at the end of 2017.

Data Analysis Method

The data analysis method used to estimate the relationship between the components of foreign trade and Nigerian economic development. The Ordinary Least Square (OLS) technique is used to obtain the statistical estimates of various equations coefficients. The Ordinary Least Square method is selected because of it is an essential component of other analysis techniques, it's fairly simple, and it's computational process and its optimal properties. The approximate duration is for the period 1970 to 2015.

Model Specification

The model for the study is given below. First, the model will be specified in its functional form as given below:

$$\text{TAXREV} = f(\text{EXCR}, \text{FDI}, \text{GDP}, \text{DPOL}, \text{MS}, \text{TTVALUE})$$

Expressing the model econometrically is given below;

$$\text{TAXREV} = \beta_0 + \beta_1 \text{EXCR} + \beta_2 \text{FDI} + \beta_3 \text{GDP} + \beta_4 \text{DPOL} + \beta_5 \text{MS} + \beta_6 \text{TTVALUE} + \varepsilon_n$$

Where:

TAXREV = tax revenue

EXRT = exchange rate of return

GDP = gross domestic product used to proxy economic growth

DPOL = Political instability where civilian regime is assigned '1' while a military regime is assigned '0'.

MS = money in supply which takes into account market responses to stock price movement

TTVALUE = Total trade volume of transactions

= β_0 the intercept term

= $j\beta$ the estimated betas from the time series analysis

= ε_n the disturbance term

4. Data Analysis, Interpretation and Discussion of findings

Table 1: Correlation Matrix

	TAXREV	EXCR	FDI	GDP	DPOL	MS	TTVALUE
TAXREV	1						
EXCR	0.7392	1					
FDI	0.7314	0.6147	1				
GDP	0.6299	0.8749	0.8550	1			
DPOL	0.7061	0.8202	0.3733	0.5791	1		
MS	0.7602	0.8691	0.8445	0.9863	0.5164	1	
TTVALU E	0.5425	0.4584	0.5966	0.4692	0.6585	0.4752	1

Source: Authors' computation, 2020

The results of the correlation analysis are presented in Table 2. The correlation statistics exhibited positive coefficients (EXCR and TAXREV (0.7392); FDI and TAXREV (0.7314); GDP and TAXREV (0.6299); DPOL and TAXREV(0.7062) and MS and TAXREV (0.7602) The strength of the relationship between variables measured by the Pearson product moment correlation showed that the association between the variables is relatively small and were below

the threshold of 0.80, suggesting the absence of the problem of multicollinearity in the predictor variables (Aifuwa&Embele, 2019; Saidu&Aifuwa, 2020; Studenmund, 2000).

Table 2: Multicollinearity

Variance Inflation Factors

Date: 03/12/20 Time: 10:21

Sample: 1990 2017

Included observations: 27

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1039891.	14.78287	NA
EXCR	0.110007	11.06791	6.164049
FDI	1.857235	11.69692	4.150741
GDP	0.003786	10.01049	3.137126
DPOL	0.277652.	12.80349	4.557140
MS	0.162241	13.09374	5.115190
TTVALUE	0.000421	14.24124	3.906038

Source: Authors' computation, 2020

To further strengthen the results from the correlation matrix on multicollinearity, the inflation factor test for variance was done. As a result, as shown in the table above, none of the variables tested indicate the presence of multicollinearity as the centered VIF of the variables were all below 10 as indicated by (Aifuwa&Embele, 2019; Studenmund, 2000).

Table 3: Model Misspecification Test

Ramsey RESET Test

Equation: UNTITLED

Specification: TAXREV C EXCR FDI GDP DPOL

MS TTVALUE

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	0.480196	19	0.2054
F-statistic	0.013255	(1, 19)	0.1054
Likelihood ratio	1.159722	1	0.1487

Source: Authors' computation, 2020

The Ramsey RESET Test was conducted to test for model Specification. The result of the analysis revealed the absence of model Misspecification, $F(1, 19) = 0.4802$, $p > .05$. This implies that our model was correctly specified (Studenmund, 2000).

Table 4: Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.171787	Prob. F(2,18)	0.1429
Obs*R-squared	1.248780	Prob. Chi-Square(2)	0.0725

Source: Authors' computation, 2020

Table 5 reveals the serial correlation result, using the Breusch-Godfrey serial correlation (LM) test. The null hypothesis of no serial correlation was accepted at $F(2,18) = 0.1718$, $p > .05$

Table 5: Constant Residual Error Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.580265	Prob. F(6,20)	0.2045
Obs*R-squared	8.683486	Prob. Chi-Square(6)	0.1922
Scaled explained SS	11.39084	Prob. Chi-Square(6)	0.0770

Source: Authors' computation, 2020

The Breusch-Pagan-Godfrey heteroskedasticity test was conducted for checking the serial correlation of the error word. The study results showed a lack of heteroskedasticity, $F(6,20) = 1.5803$, $p > .05$. This suggests that the residual error is constant in the series (Studenmund, 2000).

Table 6: Ordinary Least Squares

Dependent Variable: TAXREV
Method: Least Squares
Date: 03/12/20 Time: 10:17
Sample: 1990 2017
Included observations: 27

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	115.2451	1019.750	0.113013	0.9111
EXCR	-9.221077	29.47882	-0.312803	0.7577
FDI	0.127354	1.362804	0.093450	0.9265
GDP	0.191752	0.061526	3.116579	0.0054
DPOL	2586.372	2697.712	0.958728	0.3491
MS	-0.646184	0.402792	-1.604263	0.1243
TTVALUE	0.043719	0.020510	2.131597	0.0456
R-squared	0.893471	Mean dependent var	4233.713	
Adjusted R-squared	0.861512	S.D. dependent var	3703.313	
S.E. of regression	1378.150	Akaike info criterion	17.51328	
Sum squared resid	37985924	Schwarz criterion	17.84924	
Log likelihood	-229.4293	Hannan-Quinn criter.	17.61318	
F-statistic	27.95701	Durbin-Watson stat	1.467860	
Prob(F-statistic)	0.000001			

Source: Authors' computation, 2020

The result of the Ordinary Least Squares Regression as presented in Table 6 shows that there exist a negative relationship though insignificant between exchange rate and tax revenue, Quality $t(1, 27) = -0.3128$, $\beta_1 = -9.922$, $p = 0.7577$. This implies that a unit increase in exchange rate will not reduce tax revenue by -9.922 . The result, therefore, accepts the null hypothesis that there is no significant relationship between exchange rate and tax revenue in Nigeria. This finding is dissonance with the work of Agbeyegbe et al (2004), that exchange rate positively affects tax revenue. Slightly similar to the first result, there exist a statistical insignificant but positive relationship between Foreign direct investment and tax revenue, $t(1, 27) = 0.093$, $\beta_2 = 0.1274$, $p = 0.9265$. This implies that a unit increase in foreign direct investment will not increase tax revenue by 0.1274 . The study, therefore, accepts the null hypothesis that there is no significant relationship between foreign direct investment and tax revenue in Nigeria.

Thirdly, we found gross domestic product had a significant and positive relationship with tax revenue, $t(1, 27) = 3.116$, $\beta_3 = 0.1918$, $p = 0.3491$. This implies that a unit increase in gross domestic product will increase tax revenue by 0.1918 . Therefore, we failed to accept the null hypothesis that there is no significant relationship between gross domestic product and tax revenue in Nigeria. This result is in contrast with the work of Hafiz, et al., (2016) and Gupta (2007) that per capita GDP, share of GDP in agriculture and open trade are significant and solid determinants of revenue output.

Contrary to the third hypothesis above, there exist an insignificant positive relationship between political factors and tax revenue, $t(1, 27) = 0.958$, $\beta_4 = 2586.372$, $p = 0.3491$. The result, therefore, accepted the null hypothesis that there is no significant relationship between political factor and tax revenue in Nigeria. Also, money had no significant relationship on tax revenue, $t(1, 27) = -1.6043$, $\beta_5 = -0.646$, $p = 0.1243$. Lastly, we discovered that total trade volume of transaction had positive and significant relationship on tax revenue, $t(1, 27) = 2.132$, $\beta_6 =$

2586.372, $p = 0.3491$. This finding is in line with the work of Agbeyegbe et al (2004), that terms of trade have a positive effect on aggregate tax revenue.

The Adjusted R-squared stood at 0.862, suggesting that about 86% of the systematic variation in the dependent variable was explained by the independent variables, while remaining 14% of the systematic variation were caused by variables not considered in the study, however were captured by the standard error (1378.15) of the regression. Furthermore, the F statistics value of 27.95 was statistically significant at 5%, consequently implying that all slope coefficients except the constants are zero, this simply implies the joint significance of our model in the study.

5. Conclusion, Recommendations and Suggestions for Future Research

The study's specific objective was to investigate Nigeria's economic determinant of tax revenue, and its effect on the general economy. Some economic determinants such as the exchange rate, foreign direct investment, gross domestic product, political factors, money supply and total transaction volume were considered. Based on the findings of the study, we concluded that the economic determinant of tax revenue in Nigeria are gross domestic product and total trade volume of transaction. This was justified as a result of other variables studied having no significant relationship on tax revenue.

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