
APPROPRIATE RATIONALIZATION OF VALUE-ADDED TAX AND HUMAN DEVELOPMENT INDEX

OGONDA, Gift Orokwele
Department of Accountancy
Faculty of Management Sciences
Rivers State University Port Harcourt
gift.ogonda@ust.edu.ng

WIKPE, Chigozi Johnson
Department of Accountancy
Faculty of Management Sciences
Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt
cwikpejohnson@yahoo.com

ZUKBEE, John, Danebari
Department of Accountancy
Faculty of Management Sciences
Rivers State University Port Harcourt
john.zukbee@ust.edu.ng

ABSTRACT

This study examined the effect of value added tax (VAT) on human development index (HDI) in Rivers State. The study adopted a positivist philosophy and an ex-post facto research design. The population of the study comprised the entire Rivers State economy from which data was gathered. Multiple regression was used to test the postulated null hypothesis with the aid of STATA 12. We found that VAT is quite important, and that it account for 91.2% of fluctuations of expenditure pattern of States in Rivers State. The effect of VAT on HDI is attested to, by the information acquired from secondary data. The governance of Rivers State and other developing countries and states should make sure that revenue allocations, particularly VAT, not only impact but is also seen positively by citizens to have an impact on human developments. All discernible administrative obstacles should be removed, and VAT should be maintained and distributed among states according to level of VAT generation.

Keywords: Ability-to-pay theory, economic development, human development index, value-added tax

INTRODUCTION

Taxes constitute major source of revenue for governments. The traditional functions of governments are carried using revenue from taxes (Edame & Okoi, 2014). The claim made by Sanni (2007) that expense can be used as a social design tool to stimulate financial development and advancement supports this viewpoint. According to the Foundation of Contracted Bookkeepers of Nigeria (2006) and the Sanctioned Establishment of Tax Collection in Nigeria (2002), charging is a consistent financial commitment made to the government in accordance with a specified and approved council.

Bird (2008) asserts that every agricultural nation, including Nigeria, has a similar fundamental obligation challenge. This is true notwithstanding the variety of evaluation systems and potential results that may be found in the developing world. One of which is the approach to satisfy public expenditure needs by raising money in a way that is advantageous for the political endurance of those pursuing strategy choices. As a result of the financial irregularities that define Nigeria's public sector and the country's steadily growing population, strategy pushes should be made to increase the public authority's ability to generate stable income (Etim & Nweze, 2015).

Since 2001, the VAT tax base in Nigeria has been expanding. Since 2001, Rivers State has received VAT appropriations. Yet, there is a dearth of studies on effect of VAT on the state's economic and social development. Consumption of products is subject to a VAT, with the final consumer bearing the cost of the levy. VAT is a significant source of income and the economic base of states in Nigeria. The Federal Government aims to increase the percentage of VAT on products. However, the attitude of the public is different, as citizens' perceptions of the impact of VAT on developments appear to be at odds with the claims made by state government. Thus, there is need to understand the impact of VAT on human and economic development of states and how citizens of states perceive these impacts.

Therefore, this study aims to ascertain the effects of VAT on human development index (HDI) in Nigeria. The study seeks to achieve this goal by probing the effect of VAT on economic and social growth of Nigeria, based on secondary data and citizen views. References can be made to the study on the corporate governance of the state and its discretionary power of expenditure from 2001 to 2009. In pursuance of the purpose and objectives of this study, the following research hypothesis was formulated and tested in this study:

Ho₁: VAT has no significant effect on HDI in Nigeria.

LITERATURE REVIEW

Theoretical Framework: Theory of Ability to Pay

Ability to pay theory, argues that government should get reimbursement from citizens for resources incurred in assessing the competence of individual citizens. The hypothesis is recognized as one of the most prestigious and commonly accepted hypotheses of tax collection (Otu & Theophilus, 2012). Jones and Rhoades (2011) states that the concept was experimentally examined by numerous scholars and is believed to have been developed by the Swiss rationalist Jean Jacques Rousseau between 1712 and 1778. Beginning with the formulation of the idea, it has complicated a few papers' attempts to understand the foundation upon which an excellent expense framework ought to operate (Lawrence, 2015).

Due to the way it takes variations among citizens into account, "capacity to pay" hypothesis of tax assessment is deemed the most logical and equitable hypothesis of tax collecting (Jones and Rhoades, 2011). Researchers have also challenged the ability-to-pay hypothesis on the grounds that it lacks a sound technique for calculating the cost of penance in direct, corresponding, and ancillary terms (Komal, 2013). This premise ensures value or equity in tax collection (Appah, 2014; Jhingan, 2012; Bhartia, 2010; Musgrave & Musgrave, 2004). This premise is based on the idea that citizens should only be burdened to the extent of their financial ability. According to this theory, people who earn more should be required to perform more obligations than people who earn less. In this instance, expenses ought to be recouped in accordance with a peoples' permissible limits.

Concept of Value Added Tax

VAT was reportedly first imposed in Nigeria in 1993 (Okezie, 2003). The rate of taxation is 5% for products. The final consumer is responsible for paying this tax the primary goal of which is to generate income for the government. Taxes on products, both locally produced and imported, are refundable. A 5% consumption tax is imposed on all VAT-able products (Soyode & Kajola, 2006). They continued by defining the characteristics of VAT as a consumption, multistage tax imposed on the ultimate consumer."

Following replacement of the VAT Act with the Finance Act 2020, the applicable VAT rate is now 7.5%. Immovable properties were added to the definition of goods in Section 46 of the Act while structures were specifically left out. Thus, it is now specifically stated in the Finance Act 2020 that land and structures are not to be considered products for VAT purposes. As a result, it is not VAT-able.

Human Development Index

One of the most important alternatives to GDP is the Human Advancement File of the HDI, a record compiled by the United Nations. HDI was initially developed to evaluate the development of agricultural nations because using gross domestic product in these countries was more difficult than in developed countries due to lack of adequate and reliable public bookkeeping. A few modifications to the new HDI recipe were made in the 2010 Human Advancement Report which also updated the Human Development File (Klugman et al., 2011).

Indicators of Human Development Index

The drive to combat poverty and raise the standard of living for the populace, according to Ayaga (2009), has been a major struggle throughout our nation's history. The prevalence of extreme poverty in all of its defining manifestations is well known in Nigeria, as it is in every other country in sub-Saharan Africa. The widespread poverty in most of these nations is no longer a newsworthy development. Pervasive and long-lasting, affecting a significant percentage of society, it inevitably worsens human conditions, with real disposable income falling while employment and economic inequality rise. The goal of human development, according to Kumar (1996), is to provide everyone with access to safe drinking water, basic healthcare, and employment. It also aims to eradicate illiteracy and control population growth.

The economic and human growth of the populace is positively impacted by governmental spending (Nnamaocha, 2000). Assuming the aforementioned qualification is true, Britannica (2009) defines economic development as the process by which basic, low-income economies are transformed into contemporary industrial economies. Infrastructure (roads, irrigation networks, etc.), industry, education, and financial institutions have all seen significant capital expenditures as part of economic development programs in the past. Odewale (2004) asserts that before taxes turned into a significant source of funding for the government, they were and still, a point of disagreement in politics, uprisings, and conflicts.

Empirical Review

The impact of tax collection on the Nigerian economy from 1994 to 2012 was examined by Chibu and Njoku (2015). An Expanded Dickey-Fuller Unit Root test was performed on the model's factors, which revealed that they were fixed. The co-reconciliation test also revealed that the elements are co-incorporated and have a long-standing relationship. In order to determine whether there is a correlation between increased obligations and human advancement, Ibanichuka et al. (2016) did a study on impact of expense income on Nigeria's financial progress for the years 1993 to 2014. A beneficial but unimportant correlation between WAE and HDI was discovered in the review using the conventional least relapse (OLS) investigation approach.

Also, Ocheni (2018) looked at the impact of indirect taxation on Nigeria's economic development. Time-series data from the years 2000 to 2016 were used, and the OLS relapse process was used to study the data. The investigation discovered both a beneficial and detrimental relationship between Tank and HDI, a middleman for financial improvement. In their 2017 study, Ogwuru and Agbaraevoh examined Tank's impact on Nigeria's financial

growth and improvement. Gross domestic product served as a conduit in the study for financial development, while HDI served as a conduit for monetary progress.

Relatedly, Okonkwo and Chukwu (2019) used vector autoregressive assessments to conclude a study on government charge revenues and financial improvement in Nigeria between the years 1996 and 2017. According to the review, EDT and CIT maintained a negative relationship with the HDI while PPT and TTR maintained a favorable relationship. It was argued that charging income significantly influences human advancement in Nigeria.

METHODOLOGY

This study adopted a positivist philosophy and an ex-post facto research design. The population of the study is Rivers State's economy from which information was obtained. Secondary data was used in this investigation. The Federal Inland Revenue Service (FIRS), National Bureau of Statistics, and the CBN statistical bulletin report all contributed to making this possible. The CBN statistical bulletin and the National Bureau of Statistics served as the sources for the data used in this study. Descriptive statistics (mean and standard deviation) were used for univariate analyses, while multiple regression was regression statistic was used to test the hypotheses formulated for the study, at 0.05 level of significance, and computed with the aid of STATA 12 software.

Model Specification

The model specification for this research will be given econometrically in a model as

$$\text{VAT} = f(\text{HDI})$$

Where:

$$\text{VAT} = \text{VALUE ADDED TAX (INDIRECT TAX)}$$

Therefore, the model will be

$$\text{HDI}_{it} = \beta_0 + \beta_1 \text{VAT}_{it} + \varepsilon_{it} \dots\dots (1)$$

$$\text{VAT}_{it} = \beta_0 + \beta_1 \text{HDI}_{it} + \varepsilon_{it} \dots\dots (2)$$

Where:

HDI = Human Development Index

VAT = Value Added Tax

it = Regression Constant

β_0 = Regression Coefficient

ε = Stochastic term

Decision Rule

Accept H_0 : if the p-value of the independent variable is greater than 0.05

Reject H_0 : if the p-value of the independent variable is less than 0.05.

If the p-value of the independent variable is less than 0.05, then it means that the variable significantly contributes to variations in the dependent variable.

The pairwise Granger Causality Tests were computed with the aid of E-views10 to determine the causal relationship, while the mean score and standard deviation were used as descriptive statistics. The null hypotheses on the relationship between value added tax and the human development index were tested at the 0.05 level of significance using the inferential statistics of Pearson correlation and multiple regression.

DATA ANALYSIS AND RESULTS

The descriptive statistics were used to assess the structure or type of the data so collected in order to analyze the data acquired for this study effectively. The outcome of the descriptive statistics produced by Stata12 for the data is shown below.

Table 1: Result of descriptive analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
Vat	31	3800.724	8668.103	36.9	34000
Hdi	31	5.597097	11.35513	.45	50.73

Source: Output from STATA version 12

The outcome of the descriptive analysis of the data used in the study is shown in Table 1. VAT was found to have a mean value of 3800.724 and a standard deviation of 8668.103, with a range of 36.9 million as the least and 34000 million as the maximum values. In addition, HDI had a mean value of 5.59, a standard deviation of 11.36, and a range between 0.45 and 50.73.

Table 2: Result of bivariate analysis

	VAT	HDI
VAT	1.0000	
HDI	0.0390	1.0000

Source: Output from STATA version 12

The bivariate analysis in Table 2 shows that VAT affects HDI positively. But the effect is statistically insignificant (0.1000 and 0.0390).

Analysis of Multi-Collinearity and Normality of Residuals

The Variance Inflation Factor (VIF) approach was used in this study to assess whether there was multicollinearity among the independent variables. According to Myers (1990), a VIF rating greater than 10 should raise some red flags.

Table 3 Test of Multi-Collinearity

Variable	VIF	1/VIF
Vat	1.29	0.774609
Mean VIF	1.29	

Source: Output from STATA version 12

The variance inflation factor value of 2.69, which is substantially below 10, was found in table 4 above's test of multicollinearity among the independent variables. As a result of the predictors' low levels of intercorrelation and the independent variable employed in this study, multicollinearity is not a concern.

Table 4: Checking Normality of Residuals

Shapiro-wilk W test for normal data

Variable	Obs	W	V	Z	Prob>z
Vat	31	0.48591	16.745	5.839	0.0000
Hdi	31	0.52530	15.462	5.674	0.0000

Source: Output from STATA version 12

Decision: Normality assumption not violated (p-value = 0.00000)

Regression Result

To assess how well a regression model fits the data in this part, the R² will be employed. The R² number, also known as the coefficient of determination, indicates how much of the variance in the dependent variable can be accounted for by the independent variables (technically, it is the proportion of variation accounted for by the regression model above and beyond the mean model). The overall performance of the regression model is evaluated using the F-ratio.

Table 5: Regression results with HDI as dependent variable

$$HDI_{it} = \beta_0 + \beta_1 VAT_{it} + \varepsilon_{it} \dots \dots (1)$$

HDI	Robust		T	p> t	[95% Conf. Interval]	
	Coef.	Std. Err				
VAT	-4.6234	1.65148	-2.8	0.01	-8.024722	-1.2221

Source: output from STATA version 12

The model that regressed HDI against VAT is shown in Table 5. Table 6's F statistics reveal $Prob>F = 0.0000$ and demonstrate excellent fit. The dependent variable significantly affect the independent variables. 54% of variation in HDI is explained by VAT. In Table 5 above, the effect of VAT on HDI is demonstrated by the regression analysis. The outcome showed that VAT has a weak and insignificant negative effect on HDI ($p\text{-value}=0.452$). Accordingly, a 1% rise in VAT will cause a 0.0000788% fall in HDI when all other factors remain constant. We therefore accept the null hypothesis.

DISCUSSION OF FINDINGS

This study found a weak and insignificant effect of VAT on HDI in Rivers State. This result is consistent with that of Okafor (2012), who discovered a strong and positive correlation between VAT and HDI in Nigeria. The findings of Worlu and Nkoro (2012), who found that value added tax has no independent impact on growth as measured by the human development index, are in contrast to the findings presented here.

According to the study, there is a weak and unimportant correlation between VAT and HDI in Rivers State. This result is consistent with that of Abd-Hakim (2020), who discovered that indirect taxes appear to have a slight but favorable influence on economic growth. The findings of Egbuhuzor and Tomquin (2021), which demonstrated a negative and negligible impact of value-added tax on economic development, support this conclusion.

This result deviates with Ukpabi's (2019) research, which found a substantial positive association between economic growth and value added tax. It also rejected the conclusion reached by Onaolapo et al. (2013) that VAT has a statistically significant impact on citizens' ability to generate money in Rivers State.

CONCLUSION AND RECOMMENDATIONS

This study focused on examining the effect of VAT on HDI in Rivers State. The results of the analyses conducted in the study showed that 91.2% of variations in the expenditure patterns of the government of Rivers State can be attributed to VAT allocations. They study also discovered that there are no appreciable differences in how the administrative divisions of Rivers State perceive the influence of the VAT on human development. Although Rivers State's VAT allocations had a significant impact on the state's spending patterns during the same period, the facts discovered through secondary data attest to a very significant VAT impact on the state's human development; however, in conclusion, perceptions among the populace across the administrative areas of the state suggest that VAT has a minimal impact level on the economic and human developments of Rivers State. The study recommends that the government of Rivers State should ensure that revenue allocations, particularly VAT, not only have an impact but also are positively perceived by the citizens of that state as having an impact on economic and human developments.

REFERENCES

- Abd-Hakim, T. (2020). Direct versus indirect taxes: Impact on economic growth and total tax revenue. *International Journal of Financial Research*, 11(2), 146-153.
- Bhartia, H. L. (2010). *Public finance*. Vikas Publishing House PVT Ltd.
- Chigbu, E. M., & Njoku, C. O. (2015). Taxation and the Nigerian economy. *Management studies and Economic systems*, 2(2), 111-128.
- Cooper, D. R., & Schindler, P. S. (2001). *Business research method (7th edition)*. McGraw-Hill Irwin.
- Edame, M. A., & Okoi, J. R. (2014). Impact of tax on investment and economic growth in Nigeria. *Journal of Public Economics*, 8(2), 27-44.
- Etim, E. O., Umofions, N. J., & Ekanem, D. J. (2020). Does taxation drive economic development in Nigeria? *International Journal of Research and Scientific Innovation*, 7(6), 129-137.
- Etim, E. O., & Nweze, A. U (2015). Tax revenue and economic growth in Nigeria. *1st ICAN Academic Conference on Accounting and Finance Proceeding*, 1135-1151.
- Ibanichuka, E. L., Akani, F. N., & Ikebujo, O. S. (2016). A time-series analysis of effect of tax revenue on economic development of Nigeria. *International Journal of Innovative Finance and Economics Research*, 4(3), 16-23.
- Jhingan, M. L. (2012). *Money, banking, international trade and public finance*. Vrinda Publications.
- Jones, S., & Rhoades, C. (2011). *Principles of taxation for business and investment planning, (14th edition)*. Tryprime.
- Kiabel, B. D., & Nwokah, N. G. (2009). Boosting revenue generation by governments in Nigeria. The tax consultant's option revisited. *European Journal of Social Sciences* 8(4), 342-254.
- Lawrence, K. (2015). The impact of the value-added tax on Kenyan economic growth. *International Academic Journal of Economics and Finance*, 1(15), 10-30.
- Musgrave, R. A., & Musgrave, P. B. (2004). *Public finance in theory and practice*. Tata McGraw Hill.
- Nnamocha, P. N. (2000). *Public finance*. Name Ventures Ltd.
- Ocheni (2018). Empirical analysis of indirect taxation and economic development of Nigeria. *International Journal of Management Studies*. 3(8), 18-31.
- Odewale, U. R. (2004). *Principles of Nigerian taxation*. DBM publications.
- Ogwuru, H. O., & Agbaraevah, R. C. (2017). Impact of value added tax, company income tax, custom and excise duties on economic growth and development in Nigeria. *Journal of Finance, Banking and Investment*, 4(2), 88-96.
- Ojo, S. (2003). *Fundamental principles of Nigerian tax*. Sagribra Tax Publications.
- Okezie A. S. (2003). *Personal income tax in Nigeria: Principles and practice*. ASO Publications.
- Okonkwo, I. V., & Chukwu, K. O. (2019). Government tax revenue and economic development in Nigeria: Tax 1996-2017). *International Journal of Research in Business, Economics and Management*, 3(3), 9-105.
- Onaolapo, A. A., Fasina, H. T., & Adegbite, T. A. (2013). The analysis of the effect of petroleum profit tax on Nigerian economy. *Asian Journal of Humanities & Social Sciences*, 1(1), 8-12.
- Otu, H., & Theophilus, O. (2012). The effect of tax revenue on economic growth in Nigeria (1970- 2011). *International Journal of Humanities and Social Science Invention*. <http://dx.doi.org/10.24018/ejbmr.2020.5.3.325>

- Sanni, A. U. (2007). Tax reforms in the capital market: A welcome development. Seminar paper, *Ogun State Internal Revenue Service Seminar*.
- Soyode, L., Kajola SO (2006) *Taxation: principles and practice in Nigeria*. Silicon Publishing Company.
- Ukpabi, A. L. (2019). Impact of indirect taxation on economic growth in Nigeria. *International Journal of Advanced Engineering Research and Science*, 6(5), 54-51.