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Impact of non-oil tax revenue on economic growth in Anglophone and Francophone countries

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Abstract

This study examined the impact of non-oil tax revenue on economic growth in Anglophone and Francophone countries. Specifically, the study sought to: ascertain the impact of capital-gain tax revenue on economic growth in Anglophone and Francophone countries; determine the impact of custom/excise tax revenue on economic growth in Anglophone and Francophone countries and evaluate the impact of property tax revenue impact on economic growth in Anglophone and Francophone countries. The variables used in the study were capital gain tax revenue (CGT), custom/excise tax revenue (CET), the property tax revenue (PRT) and real GDP growth and were collected over period of 1991 to 2021 from World Bank database (WDI) 2021. Sample of five (5) Anglophone and Francophone countries namely Nigeria, Ghana, Mali, Togo and Burkina-Feso out of twenty (20) Anglophone and Francophone countries were used in the study. The method of data analysis was Generalized panel least square. The empirical results showed that capital gain tax revenue (CGT) has positive and significant impact on economic growth in Anglophone and Francophone countries; property tax revenue (PIT) has positive and significant impact on economic growth in Anglophone and Francophone countries and custom/excise tax revenue (CET) has positive but insignificant impact on economic growth in Anglophone and Francophone countries. The study recommended that Government of Anglophone and Francophone countries should review capital-gain income tax (CGT) collection modality with a view of incorporating public enlightenment programme in respect to capital-gain income tax. The public enlightenment programme should involve awareness campaigns on who should pay, how to compute, where to pay and when to pay CGT.

Keywords: Non-oil Tax Revenue; Property Tax; Capital Gain Tax; Custom/Excise Tax

1. Introduction

Taxation is the key to not only promoting sustainable growth but also reducing poverty in developing countries. It will provide those countries with a stable and predictable much-needed fiscal environment to promote growth and also to finance social and physical infrastructure required for sustainable development. Combined with economic growth, a high tax base should be able to reduce the long-term dependency of those countries on aid and ensure good governance by promoting the accountability of states to their citizens and attaining macroeconomic stability (**Maganya, 2020**). Availability and mobilisation of fiscal resources is the key factor that an economy can control and operate. Tax revenue, regardless of prevailing economic system, is a very important instrument for the government to meet planned expenditures and helps to achieve set growth targets over the years. The nature of direct or indirect taxes in an economy can help forecasting a growth pattern for future planning and policy implementation. The overall tax burden is significant in explaining variations in economic growth (Romer and Romer, 2010).

The extent to which tax revenue stimulates economic performance in an economy especially in developing nations, has continued to attract empirical debate. In 2014, eight African countries - Cameroon, Côte d'Ivoire, Mauritius, Morocco, Rwanda, Senegal, South Africa and Tunisia reported tax revenues as a percentage of gross domestic product (GDP)

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ranging from 16.1 to 31.3% (Revenue Statistics in Africa, 2016). Indeed, all of these countries presented rise in their taxation-to-GDP ratios ranging from 0.9% points in Mauritius to 6.7% points in Tunisia. When compared to the average of Organization for Economic Co-operation and Development (OECD) countries, the increase of 34.4% was only 0.2 percentage points higher in 2014 than in 2000. The revenue data for these eight African countries accounted for almost a quarter of Africa's total GDP (Revenue Statistics in Africa, 2016). Some West African countries are significantly dependent on non-tax revenues, and more specifically on grants such as foreign aid (Kenya) and resource rents from oil (Nigeria and Angola) and Bauxite (Zambia); these countries' economies tend to be highly volatile that their finances could not be stabilized and predictive through tax revenue (Onakoya, Afintinni & Ogundajo, 2017).

The impact of taxation on economic growth is not only a major concern of the policy makers and tax specialists but also of interest to researchers and academicians as well. From practical point of view, tax policy is used for the social and economic purposes, such as resource allocation through higher savings generated internally, stable prices, controlling the production and consumption level indirectly through sales taxes, and increasing growth of the economy. Over decades, economists have been interested in investigating factors causing different countries to grow at different rates and achieve different levels of wealth accumulation. However, several economists agree that taxation is one of the significant factors that determine the productive capacity of the country (Stoilova, 2017). Therefore, the concern of this study is to verify the impact of non-oil tax revenue on economic growth in Anglophone and Francophone countries, the significant position of non-oil tax revenue variables on economic growth if any exist and the type of tax that contributes most to economic growth in Anglophone and Francophone countries.

1.1. Statement of the Problem

West African countries remain the region with the largest number of economies below the minimum desirable tax-to-GDP ratio of 15 percent. At that level, revenues are inadequate to finance basic state functions. Non-oil-rich countries in the region saw their tax-to-GDP ratios increase to 16 percent in 2018 from 15.3 percent in 2010. Due to fluctuating oil prices, tax collections are more volatile in oil-rich states. In these countries, tax revenues increased from 9.2 percent of GDP in 2010 to 15.2 percent in 2015, after which taxes fell back to 10.2 percent in 2018. Given the region's relatively large agricultural sectors and less open economies, the capacity to raise tax revenues is also lower. The maximum tax revenue potential for countries in the region is estimated to average 19.6 percent of GDP, which is 7.5 points lower than in the rest of the world. The major challenges facing tax administration in West Africa include frontiers of professionalism, poor accountability, lack of awareness of the general public on the imperatives and benefits of taxation, corruption of tax officials, tax avoidance and evasion by taxing units, connivance of taxing officials with taxing population, high rate of tax, poor method of tax collection, etc. Tax administration and individual agencies suffer from limitations in manpower, money, tools and machinery to meet the ever increasing challenges and difficulties. In fact, the negative attitude of most tax collectors towards taxpayers can be linked to poor remuneration and motivation. There is also the problem of accuracy of tax statistics (Otu, Ekpung & Adejumo, (2013). Ayodele (2006) assert that the neglect of the non-oil revenue despite its potential to create great tax revenue inflow has also contributed to the inadequacy of tax revenue in Nigeria and some other West Africa countries to finance fiscal deficit expenditure give the countries in national debt trap. After a review on 51 empirical studies, it was noticed there were limited studies on impact of non-oil tax revenue on economic growth in West Africa covering 31 years across 6 countries starting from 1990 to 2020. Scholars like Margareta and Åsa, (2012) examined impact taxation of income on Economic Growth in 25 Rich OECD Countries; N'Yilimon, 2014 investigated effect of taxation on economic growth in West Africa Economic and monetary Union; Oboh, Chinonyelum and Edeme, 2018 evaluated the impact of tax revenue on Economic Growth in selected ECOWAS Countries, have paid less attention on area of the research interest taking cognizant cross sectional econometrics study.

Objectives of the Study

The broad objective of the study is to examine the impact of non-oil tax revenue on economic growth in Anglophone and Francophone countries. The specific objectives are to:

- Ascertain the impact of capital-gain tax revenue on economic growth in Anglophone and Francophone countries.
- Determine the impact of custom/excise tax revenue on economic growth in Anglophone and Francophone countries.
- Evaluate the impact of property tax revenue impact on economic growth in Anglophone and Francophone countries.

1.2. Conceptual Literature

1.2.1. Taxes Revenue

Tax policy refers to the choice by a government as to what amounts and on whom tax is to be levied. Tax policies implemented for a variety of reasons, the key objectives, including a source of revenue generation for financing government spending, resource allocation, re-distribution of income and reducing inequalities arising from the distribution of wealth among consumers. Also, Tax is a compulsory levy made by all concerned to the government of a country from which essential services are rendered, without necessarily offering an explanation on how the money generated was spent or equating the services with the money collected. It is an instrument employed by the government for generating public funds (Anyaduba, 2004; Ofoegbu, Akwu & Oliver, 2016).

1.2.2. Economic Growth

Economic growth is defined as a rise in national income or output per capita over a long period of time. It's an economic condition in which the rate of rise in national output must outpace the rate of population growth. Economic growth is the long-term expansion of the economy's productive potential. It entails a gain in Real GDP, which translates to increased national output and wealth. The market worth of all products and services produced in a country during a given time period is known as real GDP. Real GDP is a measure of a society's wealth since it shows how quickly profits can expand and the expected return on investment (Okerekeoti, 2022).

1.3. Theoretical Literature

1.3.1. Laffer Curve Theory of Taxation

The Laffer curve theory of taxation is a theory formalized by supply-side economist Arthur Laffer in 1974 to show the relationship between tax rates and the amount of tax revenue collected by governments. The Laffer curve describes the relationship between tax rates and total tax revenue, with an optimal tax rate that maximizes total government tax revenue. The Laffer curve states that if tax rates are increased above a certain level, then tax revenues can actually fall because higher tax rates discourage people from working. If taxes are too high along the Laffer curve, then they will discourage the taxed activities, such as work and investment, enough to actually reduce total tax revenue. In this case, cutting tax rates will both stimulate economic incentives and increase tax revenue. The Laffer curve is based on the economic idea that people will adjust their behavior in the face of the incentives created by income tax rates. Higher-income tax rates decrease the incentive to work and invest compared to lower rates. If this effect is large enough, it means that at some tax rate, and further increase in the rate will actually lead to a decrease in total tax revenue. For every type of tax, there is a threshold rate above which the incentive to produce more diminishes, thereby reducing the amount of revenue the government receives.

The first presentation of the Laffer curve was performed on a paper napkin back in 1974 when its author was speaking with senior staff members of President Gerald Ford’s administration about a proposed tax rate increase in the midst of a period of economic malaise that had engulfed the country. At the time, most believed that an increase in tax rates would increase tax revenue.

Laffer countered that the more money was taken from a business out of each additional dollar of income in the form of taxes, the less money it will be willing to invest. A business is more likely to find ways to protect its capital from taxation or to relocate all or a part of its operations overseas. Investors are less likely to risk their capital if a larger percentage of their profits are taken. When workers see an increasing portion of their paychecks taken due to increased efforts on their part, they will lose the incentive to work harder. Put together these could all mean less total revenue coming in if tax rates were raised. Laffer further argued that the economic effects of reducing incentives to work and invest by raising tax rates would be damaging in the best of times and even worse in the midst of a stagnant economy. This theory, supply-side economics, later became a cornerstone of President Ronald Reagan’s economic policy, which resulted in one of the biggest tax cuts in history. During his time in office, annual federal government current tax receipts from $344billion in 1980 to $550 billion in 1988, and the economy boomed. The Laffer Curve was used as a basis for tax cuts in the 1980's with apparent success but criticized on practical grounds on the basis of its simplistic assumptions, and on economic grounds that increasing government revenue might not always be optimal.

1.4. Empirical Literature

The link between income tax and economic growth in West African Countries has attracted the attention of the researchers and scholars. This section presents the empirical review of related:

Etim, Nwezeb and Umoffong (2020) investigated the long run relationship existing between petroleum profit and companies' income taxes and economic growth in Nigeria in the period of 1980 to 2018. Specifically, the study examined the impact of petroleum profit and companies' income taxes and economic growth in Nigeria. The number of observations was 39 years period. The analytical tools were Augmented Dickey-Fuller (ADF) unit root-test, Engle Granger Procedure Co-integration test, Parsimonious Error Correction Mechanism (ECM), Durbin-Watson statistic and over parameterized model. The results of the analysis reveal a positively significant association of studied variables with (0.9844) and (0.9471) co-efficients for petroleum profit tax and companies income tax respectively in relation independent variables integrate with the dependent variable at first order. This indicates long run relationship. Also, the parsimonious results shows a positive coefficients of (3.6344) and (2.7644) and (2.7629) for t-values of CIT and PPT on economic growth. In view of the results, government's tactful handling of issues that are tax related was recommends so as to stimulate additional investments, entrepreneurial activities and innovations.

Uket, Wasiu and Etim (2020) investigated the impact of taxation revenue on the development of Nigerian economy (1994-2018). The study explored the impact of three tax income streams – Income tax from companies' profits, income tax from petroleum companies profits and Value Added Tax on economic development represented by Gross Domestic Product (at current basic prices) growth. The study employed exploratory and ex-post facto research designs. The study applied Ordinary Least Square statistical tool with the help of SPSS 20.0. The study revealed a positive relationship with a coefficient of determination of 99.2% of the variation in economic development attributable to the tax income streams studied. Also although the study revealed the existence of significant effect of taxes from companies' profits and Value Added Tax on Gross Domestic Product Growth, there is little or no significant impact of taxes on profits of Petroleum companies on Gross Domestic Product growth in Nigeria due to restriction by Organization of Petroleum Exporting Countries production ceiling on Nigeria's production/sales and the global price shocks of crude oil over the decade. Also the study revealed tax payers apathy to tax payment and presence of tax leakages due to corruption and administrative inefficiencies by the tax authorities. It is recommended that Nigerian government should restructure its petroleum sector by intensifying efforts at processing the crude oil and only selling processed oil to the international market.

Awa and Ibeanu (2020) ascertained the influence of tax revenue on economic development of Nigeria (1997 to 2018). The specific objectives are; to determine the influence of petroleum profit tax, company income tax and value added tax on economic development proxy by human development index (HDI). The study adopted ex post facto research design. Annual time series data, from CBN and FIRS from 1997 to 2018 were used. The study used regression analysis. The result shows that petroleum profit tax and company income tax have significant effect on economic development while value added tax does not significantly influence economic development. The implication of the finding is that the higher the amount of tax revenue generated, the higher the level of economic development experienced by the economy. The study recommends that tax policy makers such as federal inland revenue services and other tax regulatory bodies should strengthen their regulation on tax compliance mostly on tax that are directly based to curb tax evasion and tax avoidance by tax payers, adopt strategies to improve system of tax administration, by training and re- training of tax administrators through seminars and conferences to be abreast of modern trend in tax administration in order to generate more income for development.

Maganya (2020) investigated the effect of taxation on economic growth in Tanzania using the recently developed technique of autoregressive distributed lag model (ARDL) bounds testing procedure for the period from 1996 to 2019. The study analyzed the relationship between domestic goods and services and Gross Domestic Product (GDP); examined the relationship between income taxes and Gross Domestic Product (GDP). The study adopted ex-post facto research design which gives room to measure the effect or relationship between dependent variable and explanatory variables using time-series secondary data. The methods of data analysis were unit root test, autoregressive distributed lag model (ARDL) bounds testing procedure and pair-wise granger causality analysis. The finding reveals that domestic goods and services (TGS) taxes are positively related to GDP growth and are statistically significant at 1% level. Income taxes, on the other hand, were found to be negatively related to GDP growth and to be statistically significant at 5% level. The pair-wise Granger causality results indicated that there is bidirectional Granger causality between TGS and GDP growth at 1 % significance level. The government should aim at growing, nurturing and sustaining tax base to positively drive economic growth even further.

Olugbemi, Okon, Odu and Utibe (2020) examined tax revenue and economic growth using an econometric approach covering a period of 1991 to 2018. The specific objectives were: to examine the effect of taxation, domestic investment, government expenditure on economic growth in Nigeria. Exploratory design was employed to identify the factors that contribute to tax revenue on economic growth in Nigeria. Secondary sources of data was employed which includes Central Bank Statistical Bulletin .In analyzing the data gathered for this work, multiple regression model was employed to establish the relationship between dependent and independent variables. The result revealed the positive relationship that existed between tax revenue and economic growth using GDP as an index economy. The study

recommends that funds generated from the public should be properly utilized so that the growth of Nigeria economy will be positively affected. Also investment opportunities should be available in order to fostering economic growth. Therefore, government should increase its spending and also spend more s this will promote investment.

Omondi (2019) analyzed the effect of custom and excise duties on economic growth in Kenya for the period 1973 to 2010, The specifically, the study examined the effect of value added tax , personal income tax, excise duty and custom duty on real Gross Domestic Product (RGDP) as proxy for economic growth. The study adopted ex- post facto research design. The data were analysed using Multiple Regression Analyses in line with the research objectives of the study. The empirical results indicate that custom and excise duties are positively correlated with economic growth in Kenya. The study recommends that government should rely more on custom and excise duties than income tax due to its growth prospect and its less distortionary nature, and also utilize the positive relationship between indirect tax and economic growth to realize efficient government investment expenditure that spurs economic growth.

2. Material and methods

This study made use of ex post-facto research design. The pre-estimation and post-estimation tests were descriptive statistics, correlation matrix, ADF-Fisher Unit Root test statistic, Panel Johansen co-integration test, Ramsey Reset test, Jarque Bera, Breuch-Godfrey Serial Correlation LM Test respectively while the data analytical techniques were Hausman test and generalized Panel Ordinary least squares (GOLS) technique. A number of variables were considered in this study. These variables consist of real GDP (RGDP), Capital gain Tax (CGT), Custom/excise Tax (CET) and the property Tax (PRT) were sourced from online World Bank Data indicators. All the variables were sourced for a period of 1991 to 2021 as defined in our model specification. The study samples five (5) Anglophone and Francophone West Africa countries out of twenty (20) West Africa countries. The countries were selected based on availability of detailed data on the study. The study countries were Nigeria, Ghana, Mali, Togo and Burkina-feso. The study employed e-view version (9) statistical application software to analysis the data because it is user- friendly software.

2.1. Theoretical Framework

The study adopted Laffer curve theory of taxation. The theory explained that taxation cutting tax rates will both stimulate economic growth and increase tax revenue.

$$\mathbf{Y = f\,(Tcr, Tr)} \quad \mathbf{\ldots\ldots\ldots\ldots\ldots\ldots(1)}$$

Where Y stands as economic growth, Tcr is taxation cutting tax rates and Tr is increase tax revenue. The Laffer curve theory of taxation was propounded by a supply-side economist Arthur Laffer in 1974 who established a threshold for tax collection. The Laffer curve is based on the economic idea that people will adjust their behavior in the face of the incentives created by income tax rates. Higher-income tax rates decrease the incentive to work and invest compared to lower rates. The theory shows the relationship between tax rates and the amount of tax revenue collected by governments. The Laffer curve describes the relationship between tax rates and total tax revenue, with an optimal tax rate that maximizes total government tax revenue. The choice for this type of theory among other taxation theories is because the theory was able to establish threshold for tax collection and its resultant effect of any change below and above the threshold point on income tax revenue and economic growth.

2.2. Model Specification

This study specifically adopts the model of Onakoya, Afintinni and Ogundajo, (2017) who investigated the impact of taxation on economic growth in Africa. The functional relationship is expressed as:

$$GDP = (TAXR, FDI, INF) \quad \ldots\ldots\ldots\ldots\ldots (1)$$

Where: *GDP* is the Gross Domestic Product; *TAXR* is the Tax Revenue*,* FDI is the foreign direct investment; *INF* is the inflation rate. Specifically, to achieve the objective of this study and based on the property of the linearity of variables, the functional relationship is modeled in a linear equation to yield Equation 2:

$$GDP_{it} = a_o + \beta_1 \sum_{k=1}^{p} TAXRit + \beta_2 \sum_{k=1}^{p} FDIit + \beta_3 \sum_{k=1}^{p} INFit + \mu it \ldots\ldots\ldots(2)$$

Where: Uit is the error term which denotes other variables that are not specified in the model; i represent the number of countries and t is the number of years.

2.3. Model Specification for the Study

Thus, the model of this study is represented in a functional form as shown below:

$$GDP = F\ (CGT, CET, PRT, EXCHR, INFLA) \ldots\ldots\ldots\ldots(3.1)$$

Where: *GDP* is the Gross Domestic Product; was a dependent variable, CGT is the capital gain Tax, CET is Custom/excise Tax and PRT is the property Tax, exchange rate, inflation rate were independent variables. Specifically, to achieve the objective of this study and based on the perfect linearity of variables, the functional relationship is modeled in a panel linear equation to yield Equation 3.2:

$$LogGDP_{it} = a_o + \beta_1 \sum_{k=1}^{p} LogVATit + \beta_2 \sum_{k=1}^{p} LogCITit + \beta_3 \sum_{k=1}^{p} LogPITit + \beta_4 \sum_{k=1}^{p} EXCHRit + \beta_5 \sum_{k=1}^{p} INFLAit + \mu it \quad \ldots\ldots\ldots\ldots(3.2)$$

3. Results and discussion

Table 1 Descriptive Statistics of the Variables

	RGDP	CGT	CET	PRT	EXCHR	INFLA
Mean	6.66E+10	3.26E+10	1.58E+10	1.00E+10	212.9466	12.23795
Median	7.94E+09	666148.8	19.99074	974.8000	97.01772	7.551911
Maximum	5.47E+11	4.78E+11	1.75E+11	1.19E+11	733.0385	80.75458
Minimum	9.83E+08	0.000000	0.000000	0.000000	0.000000	-7.594284
Std. Dev.	1.30E+11	8.87E+10	3.96E+10	2.74E+10	249.7644	14.73595
Skewness	2.356595	3.051769	2.497804	2.758740	0.661553	2.066083
Kurtosis	7.238292	11.83017	8.164718	9.325254	1.806254	8.429282
Jarque-Bera	207.5826	595.3299	266.7571	363.9989	16.40746	240.5181
Probability	0.000000	0.000000	0.000000	0.000000	0.000274	0.000000
Sum	8.25E+12	4.05E+12	1.95E+12	1.25E+12	26405.38	1517.506
Sum Sq. Dev.	2.08E+24	9.67E+23	1.93E+23	9.22E+22	7673019.	26709.23
Observations	124	124	124	124	124	124

Source: e-view's Result

The table shows descriptive statistics of the variables. In the model established in the study, there is one dependent variable and five independent variables. The descriptive statistics of the variables show the nature and status of mean, median, maximum, minimum, sum of the variable respectively.

Table 2 Result of Correlation Matrix

	RGDP	CGT	CET	PRT	EXCHR	INFLA
RGDP	1.000000	-0.150629	-0.168896	-0.172161	-0.287710	-0.034670
CGT	-0.150629	1.000000	0.975298	-0.134822	0.028935	-0.222994
CET	-0.168896	0.975298	1.000000	-0.147227	0.112819	-0.246198
PRT	-0.172161	-0.134822	-0.147227	1.000000	0.020651	-0.249062
EXCHR	-0.287710	0.028935	0.112819	0.020651	1.000000	-0.353223
INFLA	-0.034670	-0.222994	-0.246198	-0.249062	-0.353223	1.000000

Source: e-view's Result

This correlation matrix presents a table showing correlation coefficients between sets of variables. This result of correlation matrix helps to identify which pairs of variables have the highest correlation. This test is to detect whether exact or perfect relationship exist among explanatory variables (multicollinearity). The result of correlation matrix showed that every explanatory variable in the study is linearly independent of each other.

3.1. Unit Root Test using Augmented Dickey-Fuller Fisher Test

Table 3 Results of Stationarity (Unit root) test

Variables	ADF-Fisher Chi-Square Statistics	P-Value	Lag Number	Order of integration
RGDP	63.6159	0.0000	1	I (1)
CGT	57.3919	0.0000	1	I (1)
CET	44.3572	0.0000	1	I (1)
PRT	63.6159	0.0000	1	I (1)
EXCHR	57.4320	0.0000	1	I (1)
INFLA	51.4271	0.0000	1	I (0)

Source: Author's computation

In the table 3, the variables that were tested with unit root are shown, the values for Fisher Augmented Dickey Fuller (ADF) Fisher statistics are presented, the lag level of each variable was identified, and the P-values at 5% level of significant were pointed out. The order of integration of each variable was enumerated. The test detected that Real GDP (RGDP), Company Gain Tax (CGT), Custom/Excise Tax (CET), Property Tax (PRT), Exchange Rate (EXCHR), were stationary at difference one while Inflation (INFLA) was stationary at level. It is now referable to use Hausman test to identify best panel model specification to estimate the parameters.

3.2. Co-integration Test Results

Ho = There is no co-integration (no long run relationship among Variable)

Table 4 Co-integration Test Results

Johansen Fisher Panel Cointegration Test				
Series: RGDP CGT CET PRT EXCHR INFLA				
Date: 10/13/22 Time: 11:49				
Sample: 1991 2021				
Included observations: 155				
Trend assumption: Linear deterministic trend				
Lags interval (in first differences): 1 1				
Unrestricted Cointegration Rank Test (Trace and Maximum Eigenvalue)				
Hypothesized	Fisher Stat.*		Fisher Stat.*	
No. of CE(s)	(from trace test)	Prob.	(from max-eigen test)	Prob.
None	107.1	0.0000	68.59	0.0000
At most 1	48.87	0.0000	29.46	0.0003
At most 2	25.35	0.0014	13.50	0.0957
At most 3	16.51	0.0357	10.91	0.2066
At most 4	11.47	0.1765	12.42	0.1335

At most 5	5.375	0.7169	5.375	0.7169
* Probabilities are computed using asymptotic Chi-square distribution.				

Source: E-view Results

The co-integration results in table 4.2.1 for the model (CET, CGT, PRT, EXCHR, INFLA) reveals that both trace test and the Max-eigenvalue test indicates 3 co-integrating equation(s) at the 5 percent level of significance. Thus there is a long-run relationship among the variables (CET, CGT, PRT, EXCHR, INFLA). We therefore reject the null hypothesis of no co-integration amongst the variables and accept the alternative hypothesis.

3.3. Estimation (Hausman Test)

- Null Hypothesis: Random Effects are independent of explanatory variables.
- Alternative Hypothesis: Null hypothesis is not true.

Table 5 Results of Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test period random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	51.724063	5	0.0000
** WARNING: estimated period random effects variance is zero.			

The Hausman Test (also called the Hausman specification test) detects endogenous regressors (predictor variables) in a regression model. Endogenous variables have values that are determined by other variables in the system. The Hausman test helps to choose between fixed effects model or random effects model. The null hypothesis is that the preferred model is random effects. The alternate hypothesis is that the model is fixed effects. In the test above, the Chi-square statistics was 51.72 and P-value was (0.000). Owing to the result, the null hypothesis was rejected and alternative hypothesis was accepted that null hypothesis is not true because the p-value of Chi-square statistics (51.72) was small (less than 0.05). It means that fixed effect model was the best model specification.

3.4. Fixed Effect Panel Data Estimation

Table 6 Results of Fixed Effect Panel Data Estimation

Dependent Variable: Log RGDP				
Method: Panel Least Squares				
Date: 10/13/22 Time: 11:54				
Sample: 1991 2021				
Periods included: 31				
Cross-sections included: 4				
Total panel (balanced) observations: 124				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LogCGT	0.407233	0.132115	3.082409	0.0025
LogCET	0.247429	0.203671	1.214845	0.2264
LogPRT	0.907055	0.270291	3.355849	0.0010
EXCHR	-1.44E+08	45222139	-3.177841	0.0018

INFLA	-1.32E+09	5.18E+08	-2.541241	0.0121
C	1.68E+11	2.60E+10	6.477272	0.0000
	Effects Specification			
Period fixed (dummy variables)				
R-squared	0.814812	Mean dependent var		6.66E+10
Adjusted R-squared	0.721839	S.D. dependent var		1.30E+11
S.E. of regression	1.07E+11	Akaike info criterion		53.86758
Sum squared resid	1.01E+24	Schwarz criterion		54.68637
Log likelihood	-3303.790	Hannan-Quinn criter.		54.20019
F-statistic	9.667795	Durbin-Watson stat		0.270923
Prob(F-statistic)	0.000113			

Source: E-view Results

The fixed effect model specification was carried out to examine parameters estimates. In testing this hypothesis, Company Gain Tax (CGT), Custom/Excise Tax (CET), Property Tax (PRT), Exchange Rate (EXCHR), and Inflation (INFLA) were regressed against Real GDP (RGDP).

The empirical result shows that the coefficient of Company Gain Tax (CGT) has positive significant impact on Real GDP (RGDP) because [P-value (0.0025) was less than its significant value (0.05]. The Custom/Excise Tax (CET) has positive insignificant impact on Real GDP (RGDP) because [P-value (0.2264) was greater than its significant value (0.05]. The Property Tax (PRT) has positive significant impact on Real GDP (RGDP) because [P-value (0.0010) was less than its significant value (0.05]. The result of the F – statistical test shows that the overall regression of the variables was statistically insignificance. This is because observed values of the F – statistics (9.6677) was greater than its critical value (3.830). Again, our empirical result shows that the R-squared (R^2) is 0.8144.

3.5. Econometric /Second Order Test

The null hypothesis; No cross-section dependence (correlation) in residuals

Table 7 Result of Breuch-Pagan LM Test

Test	**Statistic**	**d.f.**	**Prob.**
Breusch-Pagan LM	0.81021	6	0.6778
Pesaran scaled LM	0.73267		0.6780
Pesaran CD	0.677410		0.4981

Source: E-view Results

The Breuch-Pagan Serial correlation LM Test was used to identify whether the model suffers from cross section dependence (correlation) in residuals problem. The result of Breuch-Pagan LM Test was 0.81021 and it P-value (0.6778 > 0.05), we conclude that the model is free from cross section dependence (correlation) in residuals problem. This denotes that prediction base of the Ordinary Least Square estimates were efficient and unbias.

4. Summary of Findings

The following are the major findings of the study**:**

Capital gain tax revenue (CGT) has positive and significant impact on economic growth in Anglophone and Francophone countries (P-value 0.0025 < 0.05). Capital gain tax revenue (CGT) has 40 percent positively significant impact on economic growth in Anglophone and Francophone countries. A percent change in Capital gain tax revenue (CGT) tax result to 40 percent increase in economic growth in Anglophone and Francophone countries.

Custom/excise tax revenue (CET) has positive but insignificant impact on economic growth in Anglophone and Francophone countries (P-value 0.2264 > 0.05). Custom/excise tax revenue (CET) has 24 percent positively insignificant impact on economic growth in Anglophone and Francophone countries. A percent change in custom/excise tax revenue (CET) result to 24 percent increase in economic growth in Anglophone and Francophone countries.

Property tax revenue (PIT) has positive and significant impact on economic growth in Anglophone and Francophone countries (P-value 0.0010 < 0.05). Property tax revenue (PIT) has 90 percent positively significant impact on economic growth in Anglophone and Francophone countries. A percent change in property tax revenue (PIT) results to 90 percent increase in economic growth in Anglophone and Francophone countries.

5. Conclusion

This study concludes that there is positive and significant impact of non-oil tax revenues on economic growth in Anglophone and Francophone countries. Non-oil tax revenues contribute on the average 38 percent increase in economic growth in Anglophone and Francophone countries. The capital gain tax and property income tax have positive and significant impact on economic growth in Anglophone and Francophone countries while custom/excise income has positive but insignificant impact on economic growth in Anglophone and Francophone countries. The study provided empirical evidence to support that capital gain tax and property income tax are most important sources of revenue capable of boosting economic growth in Anglophone and Francophone countries while custom/excise income tax is yet to be developed to give maximum income contribution to economic growth in Anglophone and Francophone countries.

The study provided empirical evidence to support of position of Laffer curve theory of taxation who explained that reduce tax rates will both stimulate economic growth and increase tax revenue. The Laffer curve is based on the economic idea that people will adjust their behavior in the face of the incentives created by income tax rates. Higher-income tax rates decrease the incentive to work and invest compared to lower rates. If this effect is large enough, it means that at some tax rate, and further increase in the rate will actually lead to a decrease in total tax revenue. For every type of tax, there is a threshold rate above which the incentive to produce more diminishes, thereby reducing the amount of revenue the government receives. With the help of this theory, it is assumed that personal income tax and custom/excise income tax that is not significant in the study is attributed to absent of reduce tax rates to stimulate economic growth and increase tax revenue.

Recommendations of the Study

Based on the findings of this study, the following recommendations were made.

- Government of Anglophone and Francophone countries should review capital-gain income tax (CGT) collection modality with a view of incorporating public enlightenment programme in respect to capital-gain income tax. The public enlightenment programme should involve awareness campaigns on who should pay, how to compute, where to pay and when to pay CGT. Tax authorities of West Africa countries should embark on training and retraining of its personnel so that they would be equipped with the knowledge of the CGT Act which will help them in understanding how to assess and collect the tax. The tax authorities of West Africa countries should also engage in the development of database for all individuals who act as agent for the sale of land, houses, cars, used electronics, furniture, etc. within the state. This is ensure that tax operators are all registered with the tax authorities of West Africa countries and have government recognition in order to enable tax authority know when such transactions take place and the gains, if any, made for taxing.
- Government of Anglophone and Francophone countries should promulgate legislations and sustain full implementation of reforms concerning prevention of loopholes for tax avoidance. The reforms will help to eradicate tax evasion and tax avoidance by importers and entrepreneurs. West Africa countries are losing a large amount of money through tax evasion and avoidance which have been made possible by the conspiracy of the staff of the services with the importers and smugglers. Tax authorities of West Africa countries should strengthen immigration and custom patrols in order block leaking borders and also fish out bad-eggs who use their positions for personal benefits because custom/excise income tax customs and excise duties leak away at the borders, wharfs, airports and seaports through the activities of customs officials and other security agents at such places. This will help to enhance revenue collection through customs and excise duties. The issue of corruption, fraud and financial malpractices need to be checked with the institution of some penal measures. There should be a policy that anybody found in the act will be charge to the court of law to determine the enormity of the case against the state of the nation. Assets acquired through this act should be forfeited to the government. The Tax authorities of West Africa countries should embark on a major shake-up by relieving all corrupt officials of their duties. Corrupt free and efficient administrative personnel will be adequately trained,

well-equipped and motivated. This will help tax authorities of West Africa countries to make appreciable progress in revenue diversification. Tax administration machinery should have an effective redress and refund system so that disputes can be settled easily and corruption checked.

- Government of Anglophone and Francophone countries should review the administrative structure of property income tax (PRT) to be an efficiency tax base. Government of West Africa countries should start and sustain use computer-based technical know-how such as Geographic Information System (GIS) mapping to generate more accurate records on properties. Geographic Information System (GIS) mapping helps to increase the number of property capturing. The tax authorities of West Africa countries should also embark on training of staff to upgrade in valuation techniques and carry out regular update in property registration and valuation rolls. Government of West Africa countries should improve in property income tax collection rate by promoting public awareness programmes to help increase compliance as well as by strengthening the enforcement measures. Government of West Africa countries should support and strengthen fiscal decentralisation by giving more autonomy to local government to administer property tax collection if the aim is to improve local service provision.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest among the authors.

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