



## TAX REVENUE AND ECONOMIC DEVELOPMENT IN SUB-SAHARAN AFRICAN COUNTRIES

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### Abstract

*Developing countries in Africa, especially Sub-Sahara countries have focus on using tax revenue as a source of economic development. This study investigated the impact of tax revenue on economic development in sub-Saharan African countries by focusing on 4 sub-Saharan African countries from 2017 to 2023. Data was collected through the central banks economic report and World Development Indicators (WDI). Collected The data were quarterly data which were collected for period the data were made available from the selected countries and data were examined through cointegration regression. The results indicated that income tax exerts a negative effect on economic development of Ghana (t-statistic: -0.0740, p-value<0.05), Kenya (t-statistic: -0.0077, p-value>0.05) and Tanzania (t-statistic: -0.0315, p-value<0.05), but has a positive impact on that of Nigeria, although similar to the other countries, has no long-term effect on economic development. Similarly, the results indicate that Value Added Tax adversely affects economic development in Ghana and Kenya, while it contributes positively in Tanzania and Nigeria. Customs and Excise Duties, on the other hand, positively influence economic development in Ghana and Kenya but has a negative effect in Nigeria and Tanzania. The study concludes that tax payment has improve economic development in Sub-Sahara Africa countries. This study recommends the African government to improve their tax administration and implementation by ensuring timing payment of tax by the tax payer.*

**Keywords:** VAT, custom & excise duties, economic development, inflation, GDP

JEL Classification: H200, O100

### INTRODUCTION

Taxation is not just a financial tool but also a vital incentive that shapes the direction of economic development and fosters long-term prosperity. Taxation represents one of the primary economic instruments for regulating the economy and mobilizing revenue to finance the budget in pursuit of economic growth, poverty reduction, and social equity (Arvin et al., 2021). It serves as a crucial mechanism for fostering sustainable growth and alleviating poverty in developing nations by providing a stable and predictable fiscal framework that supports growth and funds both social and physical infrastructure essential for development (Maganya, 2020). Taxation, therefore, stands as the most widely used fiscal policy tool that shapes government revenue and expenditure, guiding strategies aimed at achieving sustainable economic growth and development. (Ajeigbe et al., 2023).

Tax revenue serves as a critical instrument for driving and sustaining economic growth in any nation. It offers developing countries a stable and predictable fiscal environment that fosters growth and finances both social and physical infrastructure needs. The structure of a country's tax system largely determines other key macroeconomic indicators. There exists a strong linkage between a nation's tax framework and its level of economic growth and development. Bernard and Anzaku (2021) emphasized that tax revenue mobilization remains one of the most crucial aspects of economic development. It is often argued that whatever is provided by the government must first be generated through taxation. There are limited resources available to society so in order to increase government expenditure normally, there should be a reduction in private spending. According to Bernard and Anzaku (2021), There are various ways for the government to raise revenue including creation of more money, charging for good and services provided and to borrow. While the government often use all the four methods to raise revenue, taxation is by far the most sustainable and relevant source.

Company Income Tax (CIT) is a tax levied on the income or capital of corporations and similar entities, it is usually imposed at the national or federal level but could be imposed at state or local level in some countries, (Innekeputri & Aribowo, 2024). Personal Income Tax (PIT) is levied on the income earned by individuals and its rates are adjusted according to the jurisdiction of each country, (Ho et al., 2023). Value Added Tax (VAT) is a consumption tax levied on the value added at each stage of a product's production and distribution, (Borselli, 2019). Custom and Excise Duties (CED) are taxes levied on goods imported, exported or produced inland, (Messina, 2024).

African countries face challenges in achieving sustainable economic development, often hindered by inadequate mobilization of resources. Although external aid and revenue from natural resources have played significant roles, their volatility and limitations underscore the critical need for robust and reliable internal revenue streams (Orji, 2024). An important dimension of this lies in the efficiency of tax systems in mobilizing adequate revenue to fund vital public services, infrastructure projects, and social programs necessary for sustained economic growth and poverty reduction (Okunogbe & Santoro, 2023). However, many countries in the region battle with structural weaknesses in their tax administration, including tax evasion, avoidance, and inefficient collection mechanisms. Consequently, the potential of taxation as a stable and predictable driver of economic development remains largely untapped, contributing to fiscal deficits, increased reliance on debt, and constrained capacity for transformative investments (Orji, 2024).

The aim of this study is to analyze the effects of tax revenue on economic development in sub-Saharan African countries.

## LITERATURE REVIEW

*Conceptual Review:* Taxation refers to the compulsory levies imposed by governments on individuals and corporate entities. Its primary aim is to provide the public sector with the financial resources needed to carry out its functions and achieve a nation's economic and social objectives. Additionally, taxation serves as a means of redistributing wealth to promote social equity (Murkur & Olugu, 2013). The overarching purpose and key goals of the Nigerian tax system are to enhance and contribute to the socio-economic well-being of its citizens. Thus, taxation can be regarded as a vital policy instrument for attaining both microeconomic and macroeconomic objectives, particularly in developing economies.

Taxation is regarded as a fundamental authority of the state for mobilizing the resources required to fulfill its social responsibilities. Beyond serving as a fiscal policy instrument and a major source of revenue, studies have shown that the interplay of taxation exerts a crucial influence on the economy (Herbert et al., 2018). As taxation is a source of public revenue, tax administration is an important strategic tool in the hands of government since it has the power to impose taxation which also lies in the hands of the government. Nwarogu et al (2016) viewed tax reforms as either progressive or retrogressive and dysfunctional.

Tax represents a necessary shift of resources from the public sector to the private sector because they are levied on all income of individuals, businesses and organizations without the assurance of immediate payback on the money spent in taxes. He also asserts that tax is a responsibility owned by the tax payer and it is reasonable contribution to the money required by the government in order to support the construction of the infrastructure that the citizens of a country require. Poh (2019) defined tax as a legal mandate. He describes it as a calculable amount that a governing body demands to be withheld from an entity in order to pay for the provision of public goods and services. Every government requires more money to fund the achievement of its stated goals, and taxes are a dependable and reliable way to achieve it.

The Nigerian government receives taxes from a variety of sources, including the individual and partnership personal income tax, profits from limited liability companies, value Added Tax (VAT) on goods and services, along with customs and excise levies on imports and locally produced goods. Taxes offer the opportunity to raise funds for government spending. It is also a technique for controlling and preventing specific antisocial habits for regulating the economy by proclaiming economic policies. Taxes are another instrument used by an economy for economic redistribution.

*Theoretical Review:* This study presents a variety of theories related to tax revenue and economic development in sub-Saharan African countries are underpinned by several theoretical frameworks, including the ability-to-pay theory, the benefits-received theory, Keynesian taxation theory, classical taxation theory, and neo-classical taxation theory.

This theory suggests that taxation should be organized in a way that each taxpayer contributes an equal sacrifice and this sacrifice should be in terms of means. The ability to pay theory ensures that taxes should be levied according to a taxpayer's ability to pay.

According to the benefit-received approach, taxation is grounded in a mutually beneficial exchange between citizens and the government, which undertakes the duty of providing essential services and resources. Keynesian Taxation Theory believes that government intervention can stabilize the economy. The Keynesian school of thought maintains that Rapid economic growth should rely on market enlargement and a corresponding rise in consumer demand resulting to government direct investments in social and productive ventures and social security reliefs or reduction in taxes, raises economic activities referred to as the aggregate demand which is measured as the national output. The orthodox theory of fiscal taxation highlights taxes as the primary source of government revenue, to be managed according to the principles of fairness, stability, simplicity, and effectiveness. The neo-orthodox perspective assumes that the state's duty is to eliminate barriers to free market competition, since the market is capable of self-regulation and of attaining economic balance without external interference. The expediency theory states that any tax policy must pass the practicality test. The results of a tax system and the government's goal for social and economic development need to be considered irrelevant.

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*Empirical Review:* Nguyen & Darsono, (2022) applied pooled OLS models through cross-sectional panel regressions across different time periods; the research investigated how tax revenue and investment affect economic growth in Southeast Asia. The statistical evidence demonstrates that tax revenue exerts a negative influence on growth, as excessive taxation curtails productivity-oriented activities, deters investment accumulation, and diminishes labor participation and working hours in productive areas.

Gbenga & Nicholas, (2023), In their paper, explored taxation's role in Nigeria's economic growth through Regression Analysis with an Error Correction Model (ECM) and Granger Causality technique, based on unit root diagnostics, covering the period 1994–2022. Results indicate that Customs and Excise Duty has an insignificant negative effect on GDP in the short term, while Petroleum Profit Tax also reduces GDP in the short run. On the other hand, Value Added Tax and Company Income Tax significantly promote GDP growth in the short run.

Adeyemi, (2023), examined the influence of tax revenue – namely Company Income Tax (CIT), Customs and Excise Duties (CED), and Value-Added Tax (VAT) – on Nigeria's economic growth, both separately and collectively. An ex-post facto design was employed, analyzing 40 years of data (1980–2020) through the Autoregressive Distributed Lag (ARDL) framework. Findings revealed a long-run association between tax revenue and economic growth, suggesting that efficient mobilization of taxes can significantly boost Nigeria's real GDP over time. Specifically, CED was shown to have a negative and significant long-run effect, while CIT exhibited a positive but insignificant impact. VAT, however, demonstrated a positive and significant contribution to real GDP in the long run. The study concludes that tax revenue plays a critical role in Nigeria's economic performance, and therefore, government should reinforce the tax system to stimulate sustainable growth and development.

Ajeigbe et al., (2023), investigated the influence of sustainable tax revenue and public expenditure on the attainment of the Sustainable Development Goals (SDGs) in African countries, employing secondary data. Information from 45 nations including both African and developed economies covering the period 2010–2020 was analyzed using the Generalized Method of Moments (GMM). Findings indicate that grants, diverse tax categories, and other revenue sources exert a positive impact on economic growth, while simultaneously reducing poverty and unemployment across both African and developed countries.

## METHODOLOGY

This research focused on quantitative approach to generate facts. This facilitate a clearer comprehension of the connection between the variables. It also employ an ex-post facto method to analyze the relevant data collected regarding the impacts of government revenue from taxation and its impact on development in sub-Saharan African nations.

The population of this study includes all 48 sub-Saharan African states, while the selected countries sample comprises 4 countries Ghana, Kenya, Nigeria, and Tanzania by using Non-probability sampling techniques. The criteria for selecting these countries are countries that are members of the Common wealth of nations with a nominal GDP of 30 billion USD and above as at 2023. This study utilizes secondary data sources which is subjected to the quarterly data obtained from the World Development Indicators and the central banks of the selected countries and covers a period of 7 years (2017-2023).

The mathematical function for this study is stated as

$$RGDP = f(INCT, VAT, CED) \dots\dots\dots (I)$$

The functional equation is now transformed in to linear equation as thus:

$$RGDP_t = \alpha_0 + \beta_1 INCT + \beta_2 VAT_t + \beta_3 CED_t + \beta_4 INF_t + \mu \dots\dots\dots (II)$$

Where;

RGDP = Real Gross Domestic Product

INCT= Income Tax

VAT = Value Added Tax

CED = Customs and Excise Duties

INF = Inflation

$\alpha$  = The constant

$\beta_1 - \beta_3$  = Coefficient for each independent variable

t = Time (year)

$\mu$  = Error term

**Table 1: Variable Description**

Variables	Meaning	Type	Description Source	Source
GDP	Gross Domestic Product	Dependent	The aggregate financial worth of all final goods and services generated.	Gbenga & Nicholas, (2023).
INCT	Income Tax	Independent	Income Tax in this study refers to Company Income Tax. Company Income Tax are taxes levied on the income or capital of corporations.	Innekeputri & Aribowo, (2024).
VAT	Value Added Tax	Independent	Duties imposed on the incremental value created at successive stages of production and distribution.	Borselli, (2019).
CED	Custom and Excise Duties	Independent	Taxes levied on goods imported, exported or produced inland.	Messina, (2024).
INF	Inflation	Independent	The long-term growth in the aggregate price level of commodities and services	Orji, (2024).

Source: Author’s compilation (2025)

## RESULT AND DISCUSSION

**Table 2: Unit root test**

Null hypothesis: Unit root

Series: INCT, VAT, CED, INF, GDP

Years: 2017-2023

Augmented test results (ADF)

Ghana		
Variables	ADF Test	Order of Integration
INCT	-1166110	I(2)
VAT	-9.674119	I(2)
CED	-8.193936	I(1)
INF	-5.042925	I(2)
GDP	-5.234371	I(1)
Kenya		
INCT	-4.777284	I(2)
VAT	-4.026884	I(2)
CED	-3.277010	I(1)
INF	-4.697077	I(1)
GDP	-5.392306	I(1)
Nigeria		
INCT	-6.575483	I(1)
VAT	-8.265371	I(1)
CED	-3.408682	I(0)
INF	-6.319290	I(2)
GDP	-4.900655	I(1)
Tanzania		
INCT	-7.574614	I(1)
VAT	-5.065480	I(1)
CED	-7.312759	I(1)
INF	-4.501267	I(1)
GDP	-40.77809	I(2)

Source: Author's Computation (2025)

Unit root helps to test validity of statistical inference and reveal whether there are temporary or permanent shocks.

Table 2 shows the time series unit root test of INCT, VAT, CED, INF and GDP. Using 5% significance level, the result shows that in Ghana, INCT, VAT and INF are significant at 2<sup>nd</sup> difference while CED and GDP are significant at 1<sup>st</sup> difference. In Kenya, INCT and VAT are significant at 2<sup>nd</sup> difference while CED, INF and GDP are significant at 1<sup>st</sup> difference. In Nigeria, INF is stationery at 2<sup>nd</sup> difference, INCT, VAT, and GDP are stationery at 1<sup>st</sup> difference while CED is stationery at level. In Tanzania, INCT, VAT, CED and INF are stationery at 1<sup>st</sup> difference while GDP is stationery at 2<sup>nd</sup> difference. Table 2 shows mixed integration orders across variables and selected countries. This means that cointegration test needs to be considered. It also shows that

inflation in Ghana and Nigeria revealed high temporary shocks while exchange in Nigeria show permanent shock.

**Table 3: Correlation Matrix**

The table below illustrates the relationship between INCT, VAT, CED, INF and GDP for Ghana, Kenya, Nigeria and Tanzania.

GHANA					
	INCT	VAT	CED	INF	GDP
INCT	1.000000				
VAT	0.718909	1.000000			
CED	0.198182	0.402317	1.000000		
INF	-0.059332	-0.042148	-0.317790	1.000000	
GDP	-0.379121	-0.256425	0.003099	-0.087057	1.000000
KENYA					
INCT	1.000000				
VAT	0.999435	1.000000			
CED	0.838226	0.838039	1.000000		
INF	0.113499	0.113153	0.145274	1.000000	
GDP	-0.091799	-0.080711	0.159694	-0.080541	1.000000
NIGERIA					
INCT	1.000000				
VAT	0.112135	1.000000			
CED	-0.075066	0.113397	1.000000		
INF	0.016594	0.443355	0.169251	1.000000	
GDP	0.074982	0.051251	-0.119007	0.057716	1.000000
TANZANIA					
INCT	1.000000				
VAT	-0.151116	1.000000			
CED	0.065923	0.383502	1.000000		
INF	0.017750	-0.068978	-0.042059	1.000000	
GDP	-0.140223	0.031604	-0.393265	0.202602	1.000000

Source: Author's Computation (2025)

Table 3 shows the direction (either positive, negative, or zero relationship) and strength (strong or weak) of the relationship between variables. A positive correlation between two variables indicates that movements in one variable are accompanied by movements in the same direction of the other. Conversely, a negative correlation implies that when one variable increases, the other decreases, and vice versa. According to the study's findings, INCT has a positive correlation with VAT in Ghana (0.718909), a positive correlation with VAT in Kenya (0.999435), a positive correlation with VAT in Nigeria (0.112135), and a negative correlation with VAT in Tanzania (-0.151116). This suggests that while VAT falls in Tanzania, it rises in Ghana, Kenya, and Nigeria in tandem with INCT. INCT was shown to have a negative association with CED in Nigeria (value of -0.075066), but a positive link with CED in Ghana, Kenya, and Tanzania (values of 0.198182, 0.838226, and 0.065923, respectively). This indicates that whereas CED rises in Ghana, Kenya, and Tanzania as INCT rises, CED falls in Nigeria as INCT rises. Additionally, the results indicate that INCT has a negative relationship with INF in Ghana (value -0.059332), a positive relationship with INF in Kenya (value 0.113499), a positive relationship with INF in Nigeria (value 0.016594), and a positive relationship with INF in Tanzania (value 0.017750). This indicates that whereas INF rises in Kenya, Nigeria, and Tanzania, it falls in Ghana as INCT rises. With values of -0.379121, -0.091799, and -0.140223, respectively, INCT was found to have a negative relationship with GDP in Ghana, Kenya, and Tanzania. This means that an increase in INCT will cause GDP to decrease, but it will increase GDP in Nigeria, where there is a positive correlation of 0.074982 with GDP.

The findings indicate that in Ghana, VAT has a negative association with INF and GDP (values of -0.042148 and -0.256425) and a positive link with CED (value of 0.402317). In Kenya, VAT has a negative correlation with GDP (-0.080711) and a positive correlation with CED and INF (0.838039 and 0.113153). In Nigeria, VAT has a positive correlation with GDP, CED, and INF, with respective values of 0.051251, 0.443355, and 0.113397. In Tanzania, VAT has a negative correlation with INF (-0.068978) and a positive correlation with CED and GDP (0.0383502 and 0.031604, respectively). INF falls in Ghana and Tanzania but rises in Kenya and Nigeria, while GDP falls in Ghana and Kenya but rises in Nigeria and Tanzania when VAT and CED rise in these countries.

Additionally, the findings indicate that CED has a negative correlation with INF (-0.317790) and a positive correlation with GDP (0.003099) in Ghana, a positive correlation with INF and GDP (0.0145274 and 0.159694) in Kenya, a negative correlation with INF and GDP (0.0169251 and -0.119007) in Nigeria, and a negative correlation with INF and GDP (-0.042059 and -0.393265) in Tanzania. Consequently, GDP rises and INF falls in Ghana as CED rises, INF and GDP rise in Kenya, INF rises and GDP falls in Nigeria, and both INF and GDP fall in Tanzania.

Additionally, the results indicate that INF has a negative correlation with GDP in Ghana and Kenya (values of -0.087057 and -0.080541, respectively), whereas it has a positive correlation with GDP in Tanzania and Nigeria (values of 0.057716 and 0.202602). Accordingly, a rise in INF will cause GDP in Nigeria and Tanzania to rise while it will fall in Ghana and Kenya.

In summary, table 3 shows tax revenue and economic development is highly country specific. Nigeria' Tax system appears economic development supportive while Ghana, Kenya and Tanzania shows mixed reactions by highlighting differences in fiscal policy effectiveness.

## Cointegration Regression Analysis

### Bounds Test and ECM Results

**Table 4: Bounds Test Results**

Ghana			
Test Statistic	Value	Lower Bounds	Upper Bounds
F-statistic	4.42898	2.2	3.09
Kenya			
F-statistic	5.149587	2.2	3.09
Nigeria			
F-statistic	5.756205	2.2	3.09
Tanzania			
F-statistic	174.9204	2.2	3.09

Source: Author's Computation (2025)

A bounds test is conducted to assess whether the independent variables exert a long-term or short-term influence on the dependent variable. The result of this bounds test shows that with a lower bound of 2.2 and an upper bound of 3.09, cointegration exists among the variables for all four countries. The F-statistics with a value of 4.42898 for Ghana, 5.149587 for Kenya, 5.756205 for Nigeria and 174.9204 for Tanzania is above the upper bounds with a value of 3.09. This suggests the presence of cointegration among the variables, implying a meaningful long-term association. Consequently, the findings necessitated the application of the Error Correction Model.

**Table 5: Error Correction Model Results**

GHANA		
Variable	Coefficient	P-value
INCT	-0.005479	0.7677
INCT(-1)	-0.241223	0.0004
cINCT(-2)	-0.072397	0.0042
VAT	0.167386	0.0036
VAT(-1)	0.134554	0.0079
CED	0.020238	0.3186
CED(-1)	0.290001	0.0006
CED(-2)	0.214446	0.0007

INF	-0.016324	0.2125
INF(-1)	0.066412	0.0047
R-squared	0.953164	
Adjusted R-squared	0.896962	
S.E. of regression	0.007035	
<b>KENYA</b>		
INCT	-0.007693	0.8430
CED	-0.073456	0.1666
CED(-1)	-0.286440	0.0000
INF	-0.063754	0.3448
INF(-1)	0.284395	0.0031
INF(-2)	0.153063	0.0376
R-squared	0.863998	
Adjusted R-squared	0.815998	
S.E. of regression	0.010039	
<b>NIGERIA</b>		
CED	-0.005045	0.5734
INF	-0.185377	0.1634
INF(-1)	0.542172	0.0012
INF(-2)	0.703546	0.0006
R-squared	0.756235	
Adjusted R-squared	0.702066	
S.E. of regression	0.023655	
<b>TANZANIA</b>		
INCT	0.013014	0.2018
INCT(-1)	-0.031479	0.0045
R-squared	0.996165	
Adjusted R-squared	0.995312	

S.E. of regression	0.002501
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Source: Author’s Computation (2025)

Table 5 presents the outcomes of the Error Correction Model. For Ghana, the contemporaneous effect of INCT on GDP is statistically insignificant (p-value = 0.7677). However, both the first and second lags of INCT exert negative effects on GDP, with coefficients of -2.41223 and -0.072397, and p-values of 0.0004 and 0.0042, respectively. This implies that prior increases in INCT significantly hinder GDP growth. Conversely, VAT demonstrates a positive and significant influence on GDP growth, with coefficients of 0.167386 and 0.134554, and p-values of 0.0036 and 0.0079 for the current and first lag. This indicates that VAT supports GDP expansion in the short run. Regarding CED, the immediate impact is insignificant, but the first and second lags yield positive and significant coefficients (0.290001 and 0.214446) with p-values of 0.0006 and 0.0007, suggesting that CED contributes to GDP growth over time rather than instantly. Finally, INF shows a significant positive effect in the first lag (coefficient = 0.066412; p-value = 0.0047), though the contemporaneous effect remains insignificant. This finding suggests that past inflation trends can influence GDP performance in Ghana.

The findings for Kenya indicate that the contemporaneous impact of INCT on GDP is statistically insignificant (p-value = 0.8430), implying that variations in INCT do not significantly influence short-run GDP growth. Similarly, the immediate effect of CED on GDP is insignificant; however, in the first lag, CED exerts a negative and highly significant effect (p-value = 0.0000). This suggests that while short-term changes in CED have no immediate effect, they impose a delayed adverse influence on GDP growth. With respect to inflation, the contemporaneous effect on GDP is also insignificant, but the first and second lags are positively significant, with coefficients of 0.284395 and 0.153063 and p-values of 0.0031 and 0.0376, respectively. This indicates that although inflation does not affect GDP growth instantly, it exerts a substantial positive effect in subsequent periods.

The findings for Nigeria reveal that CED exerts no statistically meaningful effect on GDP, with a coefficient of -0.005045 and a p-value of 0.5734. This implies that fluctuations in CED do not significantly influence GDP growth in the short run. Similarly, the contemporaneous impact of inflation on GDP is insignificant; however, inflation becomes positively significant in the first and second lags, with coefficients of 0.542172 and 0.703546 and p-values of 0.0012 and 0.0006, respectively. This indicates that while inflation has no immediate effect, it strongly drives GDP growth in subsequent periods. Furthermore, VAT and INCT were excluded from the ECM due to their lack of statistical significance, signifying that these variables do not meaningfully contribute to either the short-run dynamics or the long-run equilibrium.

The findings for Tanzania indicate that the contemporaneous effect of INCT on GDP is positive yet statistically insignificant, with a coefficient of 0.013014 and a p-value of 0.2018. In contrast, the first lag shows a coefficient of -0.031479 and a p-value of 0.0045, reflecting a significant negative influence. This implies that the effect of INCT on GDP is lagged, whereby an increase in income tax in the preceding period dampens current GDP growth. The exclusion of the remaining variables stems from their lack of statistical significance, suggesting they do not meaningfully contribute to either the short-run dynamics or the long-run equilibrium.

## Discussion of Findings

In Ghana, current income tax (INCT) is insignificant, but lagged INCT(-1) and INCT(-2) are highly significant (negative coefficients). This implies that past tax revenues strongly influence current dynamics, suggesting fiscal inertia. In Kenya, income tax insignificant contemporaneously. Likewise in Tanzania, income tax (INCT(-1)) is significant, showing lagged tax revenue adjustments. In Ghana, VAT and VAT(-1) are positive and significant. This means VAT revenues stimulate short-run economic activity, possibly through government spending financed by VAT collections. In Kenya, Nigeria, Tanzania, VAT not reported in ECM results.

Ghana exchange rate (CED) for CED(-1) and CED(-2) are positive and significant. The implication is that exchange rate depreciation has lagged stimulative effects, possibly through export competitiveness. Kenya and Tanzania reported negative and significant effect. This result means exchange rate depreciation hurts Kenya's and Tanzania's economy, likely due to import dependence. Tax revenue shocks do not immediately affect the economy but have delayed effects. This aligns with fiscal theory that tax policy impacts aggregate demand gradually. In Ghana, VAT is a strong short-run driver of GDP, consistent with Keynesian fiscal theory where taxation and spending affect demand. Exchange rate effects differ by country structure based on export-oriented economies benefit, import-dependent economies suffer. This aligns with elasticity approach to exchange rates. Inflation persistence in Ghana, Kenya, and Nigeria reflects structural rigidities and weak monetary transmission.

## CONCLUSION AND RECOMMENDATION

The unit root tests justified ECM results as the basis of interpretation. Variable-by-variable analysis shows fiscal income tax, VAT-driven growth (Ghana), exchange rate asymmetries, and inflation persistence (Kenya, Nigeria, Ghana). These findings align with Keynesian and monetarist theories and confirm previous empirical results in African economies

The study recommends that Ghana should leverage VAT revenues for growth but manage inflation persistence. Kenya must stabilize exchange rates to avoid growth losses. Nigeria needs stronger monetary policy credibility to break inflation inertia. Tanzania shows fiscal discipline (high R<sup>2</sup>, significant INCT(-1)), suggesting effective tax management. Lagged effects dominate that policymakers must anticipate delayed impacts of fiscal and monetary shocks.

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