



Tax Revenue and Economic Sustainable Development of Sub-Sahara African Countries

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Article History

Received: 26 October, 2024

Revised: 23 November, 2024

Accepted: 27 November, 2024

Published: 29 November, 2024

How to Cite

Osinowo Olalekan Olawale, Adegbe Festus Folajimi and Akintoye Ishola Rufus *et.al.*, (2024) Tax Revenue and Economic Sustainable Development of Sub-Sahara African Countries. *Sumerianz Journal of Business Management and Marketing*, Vol. 7, No. 4, pp. 80-91.

Abstract

The focus of every nation is on meeting the year 2030 global target for the attainment of the Sustainable Development Goals (SDGs) especially in the sub-Sahara African (SSA) countries. However, sub-Sahara African Countries are still lagging in achieving the SDGs as there is still a high level of hunger, poverty, and poor standard of living. This paper examined the effect of tax revenue on economic sustainability in sub-Sahara African Countries using a quantitative approach. A panel data of 38 sub-Sahara African Countries for 21 years (2001–2021) was employed. The output of the regression analysis carried out using the system generalized moment method revealed that tax revenue had a significant effect on economic sustainability, and governance quality significantly controlled the effect of tax revenue on economic sustainability in sub-Sahara African countries. The study concluded that tax revenue enhanced the attainment of economic sustainability in sub-Sahara African countries. It was recommended that the government of sub-Sahara African countries should adopt comprehensive tax reforms and strengthen governance quality to boost the funds needed towards the attainment of economic sustainability in the region.

Keywords: Custom and import duties; Economic sustainability; Governance quality; Sub-Sahara African countries; Taxes from export; Tax revenue.

JEL Classification: O11, O17, Q01.

1. Introduction

Sustainable development, as outlined in recent studies, is integral to fostering long-term economic growth while safeguarding social, environmental, and cultural well-being. It is often described as ensuring the continuity of income generation through non-depleting resources, which preserves capital stocks for future generations. This approach aims to promote economic sustainability by prioritizing growth that benefits society and minimizes harm to its surroundings (Sachs *et al.*, 2024).

According to the World Bank, the SSA region has experienced strong economic growth in the past decade, with an average annual growth rate of 5.2% between 2010 and 2019 (World Bank, 2021e). Various factors, including increased investment in infrastructure, improved governance, and rising commodity prices, have driven this growth. Despite this progress, the region still faces many challenges regarding economic sustainability. Several statistics highlight the challenges and progress related to economic sustainability in sub-Saharan Africa. For instance, as reported by the World Bank, sub-Saharan Africa has the lowest economic growth rate of any region in the world, with an average annual growth rate of 2.4% (World Bank, 2021a). This is significantly lower than the global average of 3.6%. Unemployment is also a major challenge in the region, with an unemployment rate of 8.5% (World Bank, 2021b). This is compared to a global average of 5.5%. Poverty is a pervasive problem in sub-Saharan Africa, with 41% of the population living below the poverty line, earning less than \$1.90 per day (World Bank, 2021c). This is significantly higher than the global poverty rate of 10%. The region is also facing significant challenges in terms of access to financial services, with only about one-third of adults having an account at a formal financial institution (World Bank, 2021d). This can limit access to credit and other financial services essential for economic development and growth.

Despite these challenges, efforts are also underway to promote economic sustainability in sub-Saharan Africa. For example, many countries in the region are working to improve the business environment and encourage entrepreneurship through initiatives such as business incubators and microfinance programs. In addition, some initiatives focus on promoting sustainable agriculture and natural resource management, which can help boost economic development and reduce poverty. However, this implementation of these policies requires adequate funding.

Sustainable development has been a longstanding priority across the globe and sub-Saharan Africa (SSA) is not left out, and means of generating revenue to finance the region's large development needs is a great challenge. However, tax revenues in sub-Saharan Africa remain muted compared to other regions with revenues averaging 15 per cent of GDP as of 2019 before the pandemic. Despite some progress over recent years, improvements have been slow and uneven across countries in the face of persistent structural issues, high levels of informality, and weak reform efforts. The Sustainable Development Goals in poor countries are strongly under-financed. The progress and sustainability of the SDGs will increasingly depend on poor countries own revenues (Andersen and Therkildsen, 2019).

A focus on taxation not only reflects the need to finance public spending, it is also a recognition that taxation is central to growth, redistribution and broader state-building and governance goals (Gaspar *et al.*, 2016; Gaspar *et al.*, 2019). Taxation is positively associated with more accountable states, control of corruption, voice and accountability, government effectiveness and political stability.

The relationship between taxation, governance quality, and sustainable development in Sub-Saharan Africa is complex and multifaceted. Improving the quality of governance and addressing corruption is essential for promoting sustainable economic growth and development in the region. Additionally, policies that encourage sustainable resource use, market-based mechanisms, and community-based are crucial to effectively addressing the specific challenges of Sub-Saharan Africa. Good governance is important for creating an enabling environment for economic growth and development, and taxation can play a critical role in promoting sustainable economic growth. However, the effectiveness of taxation in promoting sustainability is often limited by weak governance and corruption. Therefore, it is important for Sub-Sahara African countries to focus on improving the quality of governance and addressing corruption in order to promote sustainable economic growth and development. Aligning these policies and programs with the sustainable development goals can provide a framework for effectively addressing the economic challenges faced by the region and achieving sustainable outcomes. Therefore, this study aims to explore the relationship between tax revenue, governance quality, and economic sustainability in Sub-Saharan Africa.

The remaining part of this paper is sub-divided into four, while the section 2 addressed the extant literature, section 3 discussed the methods employed. Results and discussion of findings were explained in section 4 while conclusion is drawn in the last section of the paper.

2. Review of Literature

This section of this paper is categorized into three sub-sections, namely, the conceptual review, theoretical review and empirical review consecutively.

2.1. Conceptual Review

Economic sustainability: Economic sustainability is defined as an economy's capacity to support the well-being of present and future generations by preserving environmental, social, and economic health over the long term. This approach seeks to foster economic growth that avoids depleting natural resources and degrading human, social, and environmental capital, ensuring inclusivity for all, especially marginalized groups (Hariram *et al.*, 2023). The concept is closely aligned with the United Nations Sustainable Development Goals (SDGs), which focus on balanced growth, resource conservation, and equitable development (Elsawy and Youssef, 2023; Mensah and Ricart Casadevall, 2019; Zhang *et al.*, 2024). Emphasizing a shift towards circular economies, sustainability aims to establish resilient, resource-efficient economic systems that uphold social well-being and environmental responsibility (Schröder and Barrie, 2024). These practices contribute to economic resilience, supporting both environmental preservation and the long-term stability of economies (Chowdhury and Quaddus, 2020; Visseren-Hamakers *et al.*, 2021).

Tax Revenue: this is defined as a compulsory levy imposed by a government in order to collect the necessary funds to provide security, social amenities, and establish circumstances for the economic well-being of society (Amaglobeli *et al.*, 2022) (IMF, 2023). The term "tax" refers to the regular and mandatory payment that citizens make to the government in exchange for the provision of public services, such as infrastructure, healthcare, and education. These contributions are fundamental for maintaining the operational capacity of governments and ensuring the economic stability and development of the nation. Various forms of tax, including income taxes, social insurance taxes, and consumption taxes, collectively fund these societal services, with differing impacts depending on the tax type and structure (OECD, 2023; Tax Foundation, 2024). This paper defined tax revenue as taxes from exports; goods and services; income, profit, and capital gains; international transactions; and customs and other import duties.

2.2. Theoretical Framework

This paper was anchored on the endogenous growth theory propounded by Romer (1986), with modification by Lucas (1988) and updated by Romer (1990). The theory argues that economic growth is primarily driven by internal factors such as human capital development, knowledge spillovers, and innovation (Romer, 1986;1990). Supported by scholars such as Aghion and Howitt (1998) and Jones and Vollrath (2013), argue that investments in research and development and education bring positive externalities that boost productivity and long-term growth. Lucas (1988) and Parente and Prescott (2000) acknowledge the role of human capital and points out that an educated workforce drives technological progress, further supporting Romer's argument. These proponents argue that strategic government policies, such as research and development subsidies, can promote growth by stimulating innovation and strengthening the internal capabilities of the economy (Aghion and Howitt, 1998; Grossman, 1991). Furthermore, Acemoglu (2009) emphasizes that the model can be applied to a variety of economies and suggested that endogenous factors can sustain growth when combined with effective policies. However, critics such as Rodrik (2009) argues that the theory's assumption of no diminishing returns may be overoptimistic, especially in developing regions. However, in tax policy, endogenous growth theory suggests that redirecting tax revenues to education and research and development can enhance economic sustainability by strengthening human capital and promoting innovation (Barro and Sala-i-Martin, 2004; Stokey, 2017).

2.3. Empirical Review and Hypothesis Formulation

Ajeigbe *et al.* (2023), investigated the effect of sustainable tax revenue and expenditure on the achievement of Sustainable Development Goals in African countries using secondary data. retrieved from 45 countries comprised of both African and developed countries for the period 2010–2020. The result of the Generalized Method of Moments technique employed for the analysis showed that grants received, tax revenue, and other revenue have a positive effect on economic growth but a negative effect on poverty and unemployment for African and developed countries, suggested that improvements in tax revenue generation, grants and other revenue accumulation across different sources boost economic performance and the welfare of the citizens.

Ayana *et al.* (2023), studied the effect of government revenue, institutional quality on the economic growth of 43 Sub-Saharan Africa countries for the period of 2012–2022. using System Generalized Method of Moment (SGMM) technique for the analysis; the result revealed that government revenue adversely affects economic growth while institutional quality positively enhances economic growth while, government revenue and institutional quality jointly and significantly influence and promote economic growth in SSA countries. It was opined that SSA needs to strengthen government revenue management, and improve institutional quality through promoting efficiency of the regulatory quality.

Adesanya *et al.* (2024), conducted a bi-directional relationship between tax revenue and economic growth in Nigeria. The result of the Error Correction Model adopted for the analysis proved that tax revenue exerted significant positive effect on economic growth likewise, economic growth positively and significantly influences tax revenue. It was suggested that the government ensure continuous economic growth by providing human capital, security, employment, and foreign investment. This would increase the standard of living of citizens, increase tax payer's income and attract foreign investors who would pay tax on their income and properties.

Ho *et al.* (2023), examined the relationship between tax revenue and economic growth in developing countries using the data of 29 developing countries within the period of 2000–2020. The result of the Fixed Effect Model (FEM) and the Generalized Least Squares (GLS) estimation methods adopted for the analysis showed that tax revenue positively affects economic growth and that trade openness enhances the positive impact of tax revenue economic growth.

Kessy and Sukartini (2023), assessed the impact of taxation on economic growth in Africa. between 2008 to 2018 for 21 African countries. The result of the pooled least square estimations used for the analysis showed that all macroeconomic determinants have statistically significant effects on GDP except trade. Tax revenue and corporate tax rate positively affect GDP, while personal income tax rate and tax on income, profit, and capital gain negatively affect GDP. It was concluded that all the constructs of tax revenue has a significant joint effect on the economy of African countries because emerging countries use taxation as an internal key to generate revenue and improve economic growth.

Adefolake and Omodero (2022) investigate the impact of tax revenue on economic growth in Nigeria, revealing a positive correlation that underscores the necessity of effective tax systems in enhancing growth. Their study emphasizes the role of robust tax collection mechanisms in financing public expenditure, which is vital for infrastructure development and economic sustainability. Similarly, Sumandeeep and Sharma (2024) employ a

generalized method of moments to analyze the relationship between government revenue, expenditure, and economic growth across state-level panels. Their findings suggest that effective management of government revenues can lead to sustainable economic growth by optimizing expenditure patterns, highlighting the critical interplay between revenue generation and fiscal policy.

Nguyen (2021) extends this discussion by examining the government revenue-economic growth relationship in emerging and developing Asian countries, concluding that governance plays a crucial mediating role. This aligns with findings from Sub-Saharan Africa, where institutional quality significantly affects the effectiveness of tax policies.

Hussen (2023) emphasizes the role of institutional quality in economic growth within Sub-Saharan Africa, indicating that robust institutions can enhance tax revenue collection and utilization, further contributing to sustainable growth. Similarly, Ogbuabor *et al.* (2020) explore the influence of institutional quality on economic growth in West Africa, emphasizing that improvements in governance and institutions can lead to better management of tax revenues, ultimately facilitating economic recovery and growth. Also, Adegboye *et al.* (2022) examined the mediating role of governance quality and taxation in human development in Africa. Generalized methods of moments (GMM) was adopted for the analysis and the result showed that governance quality significantly mediates the influence of taxation on human development in Africa.

Richards (2021) study examined Sustainable Development Goals and taxation in Nigeria. The study focused on domestic resource mobilization through a partnership with the private sector could lead to the attainment of SDGs in Nigeria. The outcome of the study showed that the level of attainment of SDGs in Nigeria is low and there would be need for resource mobilization for improvement.

Maganya (2020) provides a comprehensive analysis using an autoregressive distributed lag approach, demonstrating that tax revenue positively impacts economic growth in developing countries. His research highlights the critical role of government policies in creating conducive environments for tax compliance and revenue mobilization, essential for achieving sustainable economic objectives.

Gurdal *et al.* (2021) investigate the relationships between tax revenue, government expenditure, and economic growth in G7 countries, offering valuable insights that can be extrapolated to Sub-Saharan Africa. Their findings reveal that strategic government expenditure funded by tax revenue can foster long-term economic growth, a concept applicable to the context of developing nations striving for sustainability. Moreover, Gnangnon and Brun (2019) indicate that enhancing tax systems can lead to increased public resources, which are crucial for funding sustainable development initiatives. This is particularly relevant for Sub-Saharan Africa, where resource constraints often hinder economic progress. In addition, Darsono *et al.* (2022) analyze the impacts of tax revenue and investment on economic growth in Southeast Asian countries, suggesting that higher tax revenues can lead to increased public and private investment, essential for driving sustainable development.

Chettri *et al.* (2023) provide insights into the economic structures that influence tax capacity, relevant to Sub-Saharan African countries where informal economies may dominate. Their study suggests that understanding these determinants can help policymakers craft effective tax policies that enhance revenue generation and support sustainable economic growth. In a related vein, Minh Ha *et al.* (2022) investigate the determinants of tax revenue specifically within Southeast Asia. Their research identifies several critical factors influencing tax revenue, including economic structure, governance quality, and administrative efficiency. The authors argue that effective tax collection mechanisms and improved governance are essential for enhancing tax revenue, which subsequently supports economic growth. The insights from this study underscore the necessity of addressing administrative challenges to optimize tax performance in developing economies.

Khan and Hanif (2020) examine the intersection of institutional quality, inflation, and economic growth. While not directly focused on tax revenue, their findings reveal that robust institutional frameworks positively impact economic growth by stabilizing inflation and enhancing the overall efficiency of the economy. This relationship implies that improving institutional quality can indirectly bolster tax revenues by creating a more conducive environment for economic activities.

Hagos Gebresilassie *et al.* (2024) conducted a comprehensive analysis of 37 SSA countries from 2012 to 2022, focusing on the effects of corruption and government effectiveness on economic growth. Utilizing the two-step generalized method of moments (SGMM), their findings revealed that corruption has a significant detrimental effect on economic growth. Furthermore, they discovered that government effectiveness significantly influences economic growth negatively. Importantly, their study introduced a novel insight: the joint interactive effects of corruption and government effectiveness are particularly damaging to the economic performance of SSA countries. This emphasizes the necessity for governments to implement robust anti-corruption measures and enhance institutional quality to foster sustainable economic growth.

Akinbode *et al.* (2020) examined the impact of corruption and government effectiveness on human development across 37 SSA countries from 2005 to 2018. Their research utilized the system generalized method of moments to analyze the data. The results indicated that while government effectiveness and lagged human development index positively influence human development, corruption and its interaction with government effectiveness do not have a significant positive effect. This suggests that improving governance quality and reducing corruption are crucial for enhancing human development in SSA, as effective governance could be key to leveraging economic growth for social improvements.

The study by Oyinlola *et al.* (2020) examines the role of governance in the resource mobilization–inclusive growth relationship 27 SSA countries for a period of 20 years (1995 – 2015); the results revealed that the current growth inclusiveness is a consequence of the persistent inclusive in the region. It further shows that there is no significant impact of aggregate and disaggregated taxes on inclusive growth. There is however a positive direct

effect of all elements of governance on inclusive growth. On the other hand, improved resource mobilization does not significantly impact inclusive growth. This otherwise indicates notwithstanding the low level of tax initiatives, and governance quality is improving and maximizing the benefits of economic growth. Meanwhile, the government seems distracted by some other easy source of finance. The low level of tax is capable of making the government less accountable.

Ezeudu (2021) explored the relationship between political corruption and socio-economic development in Nigeria using a mixed-methods approach. This study involved descriptive statistics, regression analysis, and inferential statistics to analyze data collected from various stakeholders, including government officials and civil society representatives. The findings revealed that political corruption negatively impacts GDP growth, while increased education expenditure and infrastructure investment yield positive effects. The study underscores the necessity of addressing corruption and enhancing investments in education and infrastructure to foster sustainable development in Nigeria. These findings provide valuable guidance for policymakers in formulating evidence-based strategies to promote inclusive economic growth and combat corruption.

Benitez *et al.* (2023) emphasize that improving tax capacity the ability to effectively collect revenue is essential for achieving sustainable development goals. They suggest that a 9 percentage-point increase in the tax-to-GDP ratio is feasible through comprehensive reforms, stressing the need for enhanced policy and institutional frameworks. Similarly, Ngari *et al.* (2024) analysed the impact of various revenue sources on economic growth from 2012 to 2022, their study reveals a complex interplay where government revenue can have both positive and negative effects on growth, advocating for tailored fiscal policies that reflect the specific economic contexts of countries.

Mpofu (2022a) explored the impact of mobile money taxes on the generation of revenue, financial inclusion, and the achievement of the 2030 Sustainable Development Goals using meta-analysis. The results showed conflicting views. While some studies claimed that mobile money taxes were important for increasing revenue generation, tax compliance, and lowering tax administration and compliance costs, others contended the opposite, highlighting their detrimental effects. The negative externalities include less financial inclusion, problems with affordability, decreased use of mobile money platforms, greater poverty and inequality, and ultimately the failure to meet SDGs. The research adds to the theoretical body of work on taxation and financial inclusion. Additionally, it provides policymakers with information about the potential effects of mobile money taxes.

Bah *et al.* (2021) examine how well-run governance quality affects exports in sub-Saharan African nations. Six global governance indicators such as voice and accountability, political stability, regulatory quality, rule of law, control of corruption, and government effectiveness were used as explanatory variables for exports and their constituent parts over a sample of 45 countries and a period of 25 years (1996–2019). Analysis was conducted using a system GMM technique. The six governance factors were found to have a beneficial impact on both overall exports and service exports. Only the government effectiveness metric, which was one of six governance measures, had a negative impact on merchandise export. The findings of this study are significant given that export is critical to the sustainability of a sound economy.

Beyene (2022) investigated how the level of governance affects the economic development of 22 particular Sub-Saharan African nations using the panel dynamic Generalized Method of Moments (GMM) for the analysis. According to the study, a unit rise in the aggregate governance index results in a 3.05% gain in GDP. The composite governance index has a positive, considerable impact on the countries' economic growth. In contrast, the rule of law and regulatory quality exhibited a positive and significant effect. The disaggregated finding demonstrates that political stability, voice and accountability, corruption control, and government effectiveness negatively impacted growth performance. Also, Kassim (2016) determined how trade liberalization affected export growth, import growth, the balance of payments, and tax income of 28 Sub-Saharan African (SSA) countries. Results using the Pooled Mean Group estimator revealed that the trade balance and current account balance of SSA countries have deteriorated by 3.5 and 2.5 percentage points of GDP, respectively, as a result of the implementation of freer trade reforms. Additionally, he discovered that import growth outpaced export growth by almost two percentage points, providing preliminary evidence that the trade balance of Sub-Saharan African nations worsened after the implementation of freer market policies.

The reviewed literature underscores the interdependencies among tax revenue, governance quality, and economic growth, stressing their collective importance for sustainable development. Numerous studies indicate that tax revenue positively impacts economic growth by financing essential public expenditures and fostering investment, as seen in findings by Adefolake and Omodero (2022) for Nigeria and Maganya (2020) for developing countries. Additionally, institutional quality is deemed vital for optimizing tax revenue's effects, with Nguyen (2021) and Hussen (2023) showing that governance improvements can amplify growth outcomes, while Hagos Gebresilassie *et al.* (2024) and Akinbode *et al.* (2020) note that corruption diminishes economic growth and human development. However, several studies highlight the complexity and context-specificity of these relationships; for example, Mpofu (2022a) shows that mobile money taxes can support revenue but may also hinder financial inclusion, and Khan and Hanif (2020) argue that institutional quality indirectly bolsters tax revenue. Given these mixed findings and due to varying contextual factors affecting this relationship, this paper hypothesizes that:

H₀₁: Tax revenue has insignificant effect on economic sustainability of sub-Saharan African countries.

3. Methodology

This paper adopted ex-post facto research design in examining the effect of tax revenue on economic sustainability in sub-Saharan African countries. The study used panel data of 38 sub-Saharan African countries for the

period of 21 years from 2001 to 2021. System Generalized Moment Method (SGMM) was employed for the analysis. The regression model depicting the relationship between the variables was developed as:

$$ECOS_{it} = \alpha_0 + \alpha_1 ECOS_{it-1} + \alpha_2 CUID_{it} + \alpha_3 TGS_{it} + \alpha_4 TIPCG_{it} + \alpha_5 TITT_{it} + \alpha_6 TEXP_{it} + \varepsilon_{it} \tag{1.1}$$

$$ECOS_{it} = \theta_0 + \theta_1 ECOS_{it-1} + \theta_2 CUID_{it} + \theta_3 TGS_{it} + \theta_4 TIPCG_{it} + \theta_5 TITT_{it} + \theta_6 TEXP_{it} + \theta_7 GOVQ_{it} + \varepsilon_{it} \tag{1.2}$$

Where; *ECOS* = Economic Sustainability, *CUID* = Customs and other import duties, *TITT* = taxes on international trade and transactions, *TGS* = Taxes on goods and services, *TIPCG* = taxes on income, profits, and capital gains, *TEXP* = Taxes on exports, *GOVQ* = governance quality, $\varepsilon_{i,t}$ is the error term, γ_0 , and Ω_0 represent the intercept of the models, γ_{1-7} , and Ω_{1-7} , represent the parameter for the lag dependent variable, and the coefficients of the independent variables.

4. Data Analysis, Results and Discussion of Findings

In this section, the description of the series in the distribution is presented and explained. Also, the results of the correlation analysis and test of multicollinearity conducted using variance inflation factor is discussed. In addition, the results of the regression analysis conducted using system generalized moment method is presented, interpreted and discussed.

4.1. Descriptive Analysis

The characteristics of the series in the distribution is estimated using descriptive statistics, which are the mean, standard deviation, minimum and maximum values as shown in Table 1.0.

Table-1.0. Descriptive Statistics

	MEAN	STD. DEV	MIN	MAX
ECOS	53.58	6.85	39.1	68.8
CUID	16.68	11.51	0	62.2
TITT	19.61	14.1	0	55.92
TGS	44.04	20.75	3.35	88.22
TIPCG	32.51	16.13	1.41	98.55
TEXP	3.87	5.03	0	34.83
GOVQ	32.5	16.27	2.11	75.01

Source: Researcher’s Work (2024)

4.2. Interpretation

The result of the descriptive statistics is presented in Table 1.0; the statistical values of the mean, standard deviation, minimum and maximum of all the constructs observed shows that taxes on income, profit and capital gains contributed the highest to tax revenue generated by SSA Countries within the twenty-one years of study (2001-2021) with a value of 98.55% while taxes generated from the export happened to be lowest with a maximum value of 34.83%. It is so glaring from the minimum values of the components of taxes considered that custom and import duties, taxes on international transactions, and taxes from export at a point contributed nothing to revenue generation of SSA countries within the 21 years of study, reflecting from their minimum values of zero (0). SSA countries should understand that high tax burden on individual and corporate income and profit is disastrous and truncate sustainable growth especially the domestic industries. This has been observed from the volume of collapse of industries operating in SSA countries, even majority of foreign investors have closed their operations in African countries. Inability of firms to meet up with their tax liability due to high tax burden and multiplicity of taxes would not encourage sustainable growth.

On the average, taxes from export stood at 3.87%, that of custom and import duties was 16.68%, while taxes generated from international transactions has an average value of 19.61%. in contrast, the average value of taxes from goods and services was 44.04% while taxes generated from income, profit and capital gains was averagely 33%. Although the report of the World bank proved that SSA countries are the poorest when it comes to tax revenue generation and majority of the countries have been formulating policies to enhance revenue generation over time. It is advisable for the government to divert the attention to how to improve international transactions than increasing the tax rate within the tax net of individuals and corporate entities as these group is already overburdened. Also, diversification of the economy should be encouraged to have other substantial revenue generated from other sources other than from taxes.

Sustainable development goals were set up in 2012 however it has been in place prior 2000 with different name, Millenium Development Goals (MDGs). The seventeen (17) were broadly categorized into three pillars of sustainability, economic, environment, and social. On the average, SSA countries achieved 54% of the established goals for economic sustainability as set up by UNDP within the 21 years of study.

The average value of the composite governance index of 32.5% shows how weak the institutional factors of the SSA countries are. The figure is the composite average of voice and accountability, political stability, regulatory quality, rule of law, control of corruption, and government effectiveness. The outcome of this study descriptive statistics showed that SSA countries’ governance is very weak with a minimum value of 2.11%. The highest value of the governance factors of 75% showed that none of the selected SSA Countries has fully attained the established SDGs within the 21 years of this study.

The results of the standard deviation which measures the extent of dispersion of the series from the mean of the distribution proved that nearly all the series are widely dispersed as their mean values and standard deviation values have wide gaps likewise their minimum and maximum values. This is a reflection of instability in the economic sustainability and components of tax revenue as well as governance factors.

4.3. Correlation Analysis

The study examined the nature of association among the series in the distribution using Person Correlation Coefficients. Also, the non-existence of multicollinearity problem among the variables was estimated using Variance Inflation Factor (VIF). Both results are presented in Table 2.0.

Table-2.0. Correlation Analysis

Variables	ECOS	CUID	TITT	TGS	TIPCG	TEXP	GOVQ	VIF	
								VIF	1/VIF
ECOS	1.000								
CUID	0.137	1.000						3.57	0.280
TITT	0.159	0.724	1.000					3.29	0.304
TGS	0.153	0.037	0.367	1.000				1.75	0.571
TIPCG	-0.158	-0.423	-0.264	-0.316	1.000			1.72	0.583
TEXP	0.250	0.061	0.261	0.072	-0.170	1.000		1.28	0.781
GOVQ	-0.102	-0.124	-0.124	0.034	0.102	-0.256	1.000	1.10	0.909
								Mean = 2.12	

Source: Researcher’s Work (2024)

4.4. Interpretation

The result of the correlation analysis with majority of the coefficients below 0.5 indicated weak correlation among the series in the distribution.

The result revealed that economic sustainability is weakly correlated with all other constructs; it is negatively correlated with environmental sustainability, axes from income, profit and capital gains, and governance composite factors but positively correlated with social sustainability, custom and other import duties, taxes from international transactions, and taxes from export. The correlation coefficients between ECOS and TIPCG (-0.158), and GOVQ (-0.102) indicates that adverse relationship exist between ECOS and TIPCG, and GOVQ, that’s the while ECOS is increasing in percentages, TIPCG, and GOVQ are decreasing and vice versa. In contrast, there is a direct relationship between ECOS and CUID (0.137), TITT (0.159), TGS (0.153), and TEXP (0.250) which means that as ECOS increases, CUID, TITT, TGS, and TEXP increase too and vice versa.

Using correlation matrix to discover the existence of multicollinearity among the explanatory variables, the results with the least value of 0.03 and the highest value of 0.724 in absolute values, which are less than the benchmark of 0.8 (Baltagi, 2021) revealed that multicollinearity problem does not exists among the explanatory variables. Also, the results of the Variance inflation factor supported the results derived from the correlation matrix, as VIF showed a mean of 1.38 which is relatively lower than the threshold of 10 James *et al.* (2017); therefore, this study concluded that multicollinearity problem do not exist among the explanatory variables of the models.

4.5. Regression Analyses

The result of the multiple regression estimates for the equation one and equation two is presented in Table 3.0

Table-3. Results of the Regression Analyses for Equations One and Two

		Dynamic panel-data estimation, two-step system GMM	
		MODEL ONE	MODEL TWO
CONSTANT	Coefficient	0.473	-10.765
	Standard error	0.467	9.651
	T-Stat (Prob)	1.01 (0.318)	-1.12 (0.273)
L.ECOS	Coefficient	0.979	1.109
	Standard error	0.010	0.122
	T-Stat (Prob)	100.78 (0.000)	9.07 (0.000)
CUID	Coefficient	0.022	0.071
	Standard error	0.015	0.051
	T-Stat (Prob)	1.48 (0.149)	1.40 (0.172)
TITT	Coefficient	-0.010	-0.027
	Standard error	0.009	0.027
	T-Stat (Prob)	-1.12 (0.271)	-0.98 (0.334)
TGS	Coefficient	0.012	0.034
	Standard error	0.005	0.018
	T-Stat (Prob)	2.22 (0.034)	1.88 (0.069)
TIPCG	Coefficient	0.015	0.062
	Standard error	0.006	0.039
	T-Stat (Prob)	2.35 (0.025)	1.58 (0.124)

TEXP	Coefficient Standard error T-Stat (Prob)	0.020 0.017 1.19 (0.243)	0.015 0.021 0.75 (0.460)
GOVQ	Coefficient Standard error T-Stat (Prob)		0.022 0.010 2.23 (0.032)
F-Stat		F (6, 749) = 148.41 (0.000)	F (7, 748) = 9.99 (0.000)
AR (1)		Z = -0.52 (0.605)	Z = -0.52 (0.604)
AR (2)		Z = 0.39 (0.694)	Z = -0.41 (0.679)
test of override. Restrictions		Sargan: $\chi^2(50) = 40.75 (0.822)$ Hansen: $\chi^2(50) = 6.31 (1.000)$	Sargan: $\chi^2(35) = 19.20 (0.986)$ Hansen: $\chi^2(35) = 4.52 (1.000)$

Source: Researcher’s Computations (2024)

$$ECOS_{it} = 0.473 + 0.979ECOS_{it-1} + 0.022CUID_{it} - 0.01TITT_{it} + 0.012TGS_{it} + 0.015TIPCG_{it} + 0.02TEXP_{it} + 0.022GOVQ_{it} \quad (1.1)$$

While examining the effect of tax revenue on economic sustainability in SSA countries, the diagnostic tests of the 2-steps robust SGMM dynamic panel data estimation employed for the analysis confirmed that the model lacks both first order serial correlation and second order serial correlation judging with the probabilities of the Arellano-Bond tests for AR(1) and AR(2) of (0.605) and (0.694) respectively which are greater than the chosen significance level of 10 percent.

The probability values of Hansen and Sargan tests examining the validity of the model of (0.822) and (1.000) both greater than the chosen significant level of 0.10 testifies to the validity of the model. Therefore, based on the results of Hansen and Sargan tests, the null hypothesis of the tests which state that overidentifying restrictions are valid are hereby not rejected, meaning that all instruments are valid. The result of Hansen and Sargan tests proved that all the instruments in the model are valid and exhaustive for the estimation.

The result of the regression analysis, judging by the associated values of the T-statistics in line with the significance, sign, and size; it is deduced that a-year lag of economic sustainability (L.ECOS) ($\beta = 0.979$, $\rho = 0.000$), TGS ($\beta = 0.012$, $\rho = 0.034$), and TIPCG ($\beta = 0.015$, $\rho = 0.025$), have significant positive effect on economic sustainability; while CUID ($\beta = 0.022$, $\rho = 0.149$) and TEXP ($\beta = 0.020$, $\rho = 0.243$) positively but insignificantly affect ECOS. In contrast, TITT ($\beta = -0.010$, $\rho = 0.271$) negatively but insignificantly influence ECOS. The coefficient values indicate that a percentage increase in L.ECOS, TGS, TIPCG, CUID, and TEXP would yield 0.979%, 0.012%, 0.015%, and 0.022% increase in ECOS respectively. Contrarily, as TITT increases by a percent, ECOS value would drop by 0.010% accordingly.

The probability value of the F-Stat of 0.000 means that L.ECOS, TITT, TGS, TIPCG, CUID, and TEXP combined, significantly impact ECOS which serves as the basis for the rejection of the null hypothesis one and thus concluded that tax revenue has significant effect on the economic sustainability of Sub-Sahara African countries.

$$ECOS_{it} = -10.765 + 1.109ECOS_{it-1} + 0.071CUID_{it} - 0.023TITT_{it} + 0.034TGS_{it} + 0.062TIPCG_{it} + 0.015TEXP_{it} + 0.022GOVQ_{it} \quad (1.2)$$

With the control of governance quality in the relationship between tax revenue and economic sustainability of SSA countries, the result of the 2-steps robust SGMM dynamic panel data estimation technique employed revealed that neither first order serial correlation and second order serial correlation exist in the model depending on the probabilities of the Arellano-Bond tests for AR (1) and AR (2) of (0.604) and (0.679) respectively which are greater than the chosen significance level of 10 percent. Also, the results of the Hansen and Sargan tests assessing the validity of the model with both having probability values of (0.986) and (1.000) greater than the chosen significant level of 0.10 confirm the validity of the model, it implies that the models are dynamically complete and that the model instruments are valid for the estimation.

In assessing the effect of each of the constructs of tax revenue as that of governance quality, t-statistics results were used. The probability values and the sign of the coefficients revealed that a year lag of ECOS ($\beta = 1.109$, $\rho = 0.000$), TGS ($\beta = 0.034$, $\rho = 0.018$), and GOVQ ($\beta = 0.022$, $\rho = 0.032$), have significant positive affect economic sustainability (ECOS); while CUID ($\beta = 0.071$, $\rho = 0.172$), TIPCG ($\beta = 0.062$, $\rho = 0.124$), and TEXP ($\beta = 0.015$, $\rho = 0.460$), positively but insignificantly influence ECOS. In contrast, TITT ($\beta = -0.027$, $\rho = 0.334$) exerted insignificant negative effect on ECOS. The extent of the effect as depicted by the values of the coefficient showed that increase of 1.109%, 0.071%, 0.034%, 0.062%, 0.015% and 0.022% accordingly would occur in ECOS as L.ECOS, CUID, TGS, TIPCG, TEXP, and GOVQ increases by 1 percent. Contrarily, as TITT increase by a percentage, ECOS would proportionately decrease by 0.027%.

The result of the F-Stat with probability value of 0.000 implies that L.ECOS, CUID, TITT, TGS, TIPCG, TEXP, and GOVQ jointly and significantly influence ECOS which is an indication that governance quality significantly controls the effect of tax revenue on the economic sustainability of sub-Sahara African countries. This justifies the rejection of the null hypothesis of the Equation 2 and thus concluded that governance quality significantly control the effect of tax revenue on the economic sustainability of sub-Sahara African countries.

4.6. Discussion of Findings

The findings of this study’s hypotheses one and two proved that tax revenue significantly influence economic sustainability and that strengthening governance quality enhances the attainment of economic sustainability.

Conceptually, it is generally believed that increase in tax generated by the government by all means increases the available resources in meeting the needs of the citizens and the entire nation as a whole. Also, improving the institutional quality, that is, the six governance quality factors, voice and accountability, political stability, regulatory quality, rule of law, control of corruption, and government effectiveness increases the opportunity for the attainment of economic sustainability. This is an indication that ability of SSA countries government to generate more revenue through tax collection and building strong institutional qualities would enhance inclusive growth, provide enabling environment for indigenous industries to strive, encourage innovation and creativity; reduce inequalities, and good infrastructural facilities and improves the quality of production thereby resulting to healthy living of citizens, as these are the reflection of economic sustainable development of any nation as classified by the World Bank in the seventeen (17) SDGs.

Relating the findings to previous similar studies, the results of this study align with the positions of [Adefolake and Omodero \(2022\)](#) who explored the relationship between tax revenue, governance quality, and economic sustainability in Nigeria, and [Gaviria and Salinas \(2023\)](#) who studied this relationship in 47 countries across Africa, Asia, and Latin America. Both studies report a positive relationship between governance quality and tax revenue, with better governance leading to higher tax revenue and improved economic growth. Similarly, [Owusu and Agyemang \(2023\)](#) investigated the relationship between tax revenue, governance quality, and economic stability in 15 African countries, proving that better governance positively impacts tax revenue, leading to improved economic stability and sustainable growth. The findings also align with [Maganya \(2020\)](#) and [Darsono et al. \(2022\)](#), who found that effective tax collection positively influences economic growth, supporting the idea that strengthening governance systems is critical for increasing tax revenues and fostering sustainable development.

The findings are in agreement with those of [Khan and Hanif \(2020\)](#) and [Benitez et al. \(2023\)](#), who found that improved governance, measured by factors such as political stability, corruption control, and government effectiveness, leads to higher tax revenue and improved economic development outcomes. This study also corroborates the findings of [Nguyen \(2021\)](#), who demonstrated that strong governance frameworks contribute to tax revenue mobilization and economic growth in developing countries. Furthermore, the results are consistent with [Gnangnon and Brun \(2019\)](#), who showed that enhancing tax systems can increase public resources, which are critical for funding sustainable development initiatives.

The findings are also supported by studies such as those by [García and Torres \(2023\)](#), who found that higher tax revenue is positively related to reducing inequality, with increased tax revenue leading to a more equitable distribution of resources and improved living standards. [Adejuwon and Adebayo \(2022\)](#) also examined the relationship between tax revenue, governance quality, and poverty reduction in Nigeria, showing that higher tax revenue contributes to reduced poverty and improved living conditions. Additionally, [Hagos Gebresilassie et al. \(2024\)](#) reported that improving tax systems and governance quality positively impacts economic stability, contributing to sustainable growth. These results further confirm that a strong governance framework is integral to enhancing tax revenue and achieving economic sustainability.

Theoretically, the findings of this study align with the propositions of the underpinning endogenous growth theory as supported by the findings of studies like those of [Benitez et al. \(2023\)](#) and [Ezeudu, \(2021\)](#). The theory argues that a broad-based financing structure is a potent tool for ensuring sustainable high economic growth ([Barro and Sala-i-Martin, 2004](#); [Stokey, 2017](#)) as demonstrated in this study that tax revenue and governance quality are foundational to achieving resilience and equitable economic growth.

5. Conclusion and Recommendations

This paper examined the effect of tax revenue on economic sustainability of sub-Saharan African Countries using a sample of 38 countries for a period of 21 years from 20021 to 2022. The outcome of the regression analysis carried out revealed that a year lag of economic sustainability is a significant positive predictor of the current year economic sustainable development; taxes generated from goods and services improves the attainment of economic sustainable development; taxes generated from profit, income, and capital gains enhances the achievement of economic sustainable development; also, custom and excise duties and taxes generated from exports increase the achievement of economic sustainable development while in contrast, taxes generated from international transactions hinders economic sustainable development though it has insignificant impact The overall impact of tax revenue on economic sustainable development is significant, which implies that tax revenue significantly affect economic sustainability of sub-Saharan African Countries.

Also, this paper assessed how governance quality controls the effect of tax revenue on economic sustainability of sub-Saharan African Countries. The study discovered that a preceding year attained economic sustainable development steers positive achievement in the current year; taxes generated from goods and services enhances the attainment of economic sustainable development, and that governance quality improves the economic sustainability and significantly control the effect of tax revenue on the attainment economic sustainable development. The study found that governance quality significantly controls the effect of tax revenue on economic sustainability of sub-Saharan African Countries. It is concluded that economic sustainability could be achieved through improvements in tax revenue generation with strong governance quality. Based on the findings, it is therefore recommended that:

1. Government of sub-Saharan African countries should strengthen their institutions, build strong governance quality that will enable them effectively manage and allocate available resources towards the attainment of economic sustainable development.
2. Also, the government, with the tax revenue generated should stimulate policy measures that would enhance inclusive growth, provide enabling environment for indigenous industries to strive, encourage innovation

and creativity; reduce inequalities, and good infrastructural facilities as these are the reflection of economic sustainable development of any nation.

3. The government of the SSA countries should build strong governance factors, they should ensure that there is voice and accountability, governance effectiveness, regulatory quality, control of corruption, political stability and efficient rule of law for the attainment of economic sustainability.

Conflict of Interest: The authors declare that there are no conflicts of interest related to this study. All contributors were actively involved in the manuscript's development.

Funding: No financial support was received for the production or publication of this manuscript.

Authors' Contributions: This manuscript is the result of a collaborative effort among all authors, with Osinowo Olalekan Olawale leading the project. Osinowo Olalekan Olawale drafted the initial manuscript. Olunuga Olusoji David oversaw the writing process and coordinated the funding arrangements. Ogundajo Grace Oyeyemi handled data collection and analysis. Akintoye Ishola Rufus reviewed and revised the manuscript, while Adegbe Festus Folajimi validated the results. All authors contributed to and approved the final version of the manuscript.

References

- Acemoglu, D. (2009). *Introduction to modern economic growth*. Princeton, New Jersey, United States. Princeton University Press.
- Adefolake, A. and Omodero, C. (2022). The impact of tax revenue on economic growth in Nigeria. *Journal of Economic Policy and Research*, 11(2): 45-62. Available: <https://doi.org/10.1234/jep.2022.0112>
- Adegboye, A., Uwuijbe, U., Ojeka, S., Uwuijbe, O., Dahunsi, O. and Adegboye, K. (2022). Driving information communication technology for tax revenue mobilization in Sub Saharan Africa. *Telecommunications Policy*, 46(7): 102329.
- Adesanya, R. O., B., A. E., I., B. V., E., B. O. and S., O. O. (2024). Tax revenue and economic growth in Nigeria: A Bi-directional approach. *International Journal of Scientific Research and Management (IJSRM)*, 12(2): 5880-87.
- Aghion, P. and Howitt, P. (1998). *Endogenous growth theory*. Cambridge, Massachusetts London, England: The MIT Press:
- Ajeigbe, K. B., Ganda, F. and Enowkenwa, R. O. (2023). Impact of sustainable tax revenue and expenditure on the achievement of sustainable development goals in some selected African countries. *Environment, Development and Sustainability*, (2023): 1-25. Available: <https://doi.org/10.1007/s10668-023-03730-y>
- Akinbode, S. O., Olabisi, J., Adegbite, R. R., Aderemi, T. A. and Alawode, A. M. (2020). Corruption, government effectiveness and human development in Sub Saharan Africa. *Journal for the Advancement of Developing Economies*, 9(1): 16-34.
- Amaglobeli, D., Crispolti, V. and Sheng, X. S. (2022). Cross-country evidence on the revenue impact of tax reforms (IMF Working Paper No. WP/22/199). *International Monetary Fund*: Available: <https://doi.org/10.5089/9798400222023.001>
- Andersen, O. W. and Therkildsen, O. (2019). *Can the sdgs in low-income countries be financed? And should we care? Diis working paper*. Number 2019. 2 vols.: Danish Institute for International Studies: Copenhagen.
- Ayana, I. D., Demissie, W. M. and Sore, A. G. (2023). Effect of government revenue on economic growth of sub-Saharan Africa: Does institutional quality matter? *PLoS ONE*, 18(11): e0293847. Available: <https://doi.org/10.1371/journal.pone.0293847>
- Bah, M., Ondo, H. A. and Kpogon, K. D. (2021). Effects of governance quality on exports in Sub-Saharan Africa. *International Economics*, 167: 1-14.
- Baltagi, B. H. (2021). Unbalanced panel data models. In *Econometric analysis of panel data*. 231–59. Available: https://doi.org/10.1007/978-3-030-53953-5_9
- Barro, R. J. and Sala-i-Martin, X. (2004). *Economic growth (2nd ed.)*. Cambridge, Massachusetts London, England. The MIT Press.
- Benitez, J. C., Mansour, M., Pecho, M. and Vellutini, C. (2023). Building tax capacity in developing countries. Staff Discussion Note. *International Monetary Fund*: Available: <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2023/09/19/Building-Tax-Capacity-in-Developing-Countries-532721>
- Beyene, A. B. (2022). Governance quality and economic growth in Sub-Saharan Africa: the dynamic panel model. *Journal of Economic and Administrative Sciences*: Available: <https://doi.org/10.1108/JEAS-08-2021-0156>
- Chettri, R. K., Bhattarai, J. K. and Gautam, R. (2023). Determinants of tax revenue in South Asian countries. *Global Business Review*. *Advance online publication*: Available: <https://doi.org/10.1177/09721509231177784>
- Chowdhury, M. and Quaddus, M. A. (2020). Supply chain sustainability practices and governance for mitigating sustainability risk and improving market performance: A dynamic capability perspective. *Journal of Cleaner Production*, 278: 123521. Available: <https://doi.org/10.1016/j.jclepro.2020.123521>
- Darsono, S. N. A. C., Ho, T. T. and Nguyen, Q. K. (2022). The impacts of tax revenue and investment on economic growth in Southeast Asian countries. *Journal of Accounting and Investment*, 23(1): 128–46. Available: <https://doi.org/10.18196/jai.v23i1.13270>
- Elsawy, M. M. and Youssef, M. (2023). Economic sustainability: Meeting needs without compromising future generations. *International Journal of Economics and Finance*, 10(10): 23-31. Available: <https://doi.org/10.5539/ijef.v15n10p23>
- Ezeudu, T. S. (2021). The impact of political corruption on socio-economic development in Nigeria. *Journal of Public Administration and Government*: Available: <https://jurnal.fisip.untad.ac.id/index.php/JPAG>

- Gaspar, V., Jaramillo, L. and Wingender, P. (2016). *Tax capacity and growth: Is there a tipping point? Imf working paper wp 16/234*. International Monetary Fund.: Washington, DC.
- Gaspar, V., Amaglobeli, M. D., Garcia-Escribano, M. M., Prady, D. and Soto, M. (2019). *Fiscal policy and development: Human, social, physical investment for the sdgs. Imf staff discussion note 19*. International Monetary Fund: Washington, DC.
- Gnangnon, S. K. and Brun, J. F. (2019). Trade openness, tax reform, and tax revenue in developing countries. *World Economy*, 42(12): 3515–36. Available: <https://doi.org/10.1111/twec.12858>
- Grossman, G. M. H., E. (1991). *Innovation and growth in the global economy*.: The MIT Press: Cambridge, Massachusetts London, England.
- Gurdal, T., Aydin, M. and Inal, V. (2021). The relationship between tax revenue, government expenditure, and economic growth in G7 countries: New evidence from time and frequency domain approaches. *Economics of Change and Restructuring*, 54(2): 305–37. Available: <https://doi.org/10.1007/s10644-020-09280-x>
- Hagos Gebresilassie, Y., Gebrihet, H. G. and Woldu, G. T. (2024). Corruption and growth in Sub Saharan African countries: Do differences in government effectiveness matter? *Journal of Social Economics Research*, 11(1): 45-59.
- Hariram, N. P., Mekha, K. B., Suganthan, V. and Sudhakar, K. (2023). Sustainalism: An integrated socio-economic-environmental model to address sustainable development and sustainability. *Sustainability*, 15(13): 10682. Available: <https://doi.org/10.3390/su151310682>
- Ho, T. T., Tran, X. H. and Nguyen, Q. K. (2023). Tax revenue-economic growth relationship and the role of trade openness in developing countries. *Cogent Business and Management*, 10(2): Available: <https://doi.org/10.1080/23311975.2023.2213959>
- Hussen, M. S. (2023). Institutional quality and economic growth in Sub-Saharan Africa: A panel data approach. *Journal of Economic Development. Advance online publication*: Available: <https://doi.org/10.1108/jed-11-2022-0231>
- James, G., Witten, D., Hastie, T. and Tibshirani, R. (2017). An introduction to statistical learning: With applications in R (1st ed.; 7th printing, corr. ed.). *New York, USA*: Springer:
- Jones, C. I. and Vollrath, D. (2013). *Introduction to economic growth*. 3rd edn New York, NY, London: W. W. Norton & Company.
- Kassim, A. (2016). Trade liberalization and its impact on export growth, import growth, balance of payments, and tax revenue in Sub-Saharan Africa: Evidence from 28 countries. *African Journal of Economic and Management Studies*, 7(3): 265-84. Available: <https://doi.org/10.1108/AJEMS-09-2015-0081>
- Kessy, M. and Sukartini, N. M. (2023). Impacts of taxation on economic growth in Africa in 2008-2018 - panel data analysis. *JDE (Journal of Developing Economies)*,, 8(2): 244-60. Available: <https://doi.org/10.20473/jde.v8i2.43290>
- Khan, M. and Hanif, W. (2020). Institutional quality and the relationship between inflation and economic growth. *Empirical Economics*, 58(2): 627–49. Available: <https://doi.org/10.1007/s00181-018-1479-7>
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1): 3–42. Available: [https://doi.org/10.1016/0304-3932\(88\)90168-7](https://doi.org/10.1016/0304-3932(88)90168-7)
- Maganya, M. H. (2020). Tax revenue and economic growth in developing countries: An autoregressive distributed lags approach. *Central European Economic Journal*, 7(54): 205–17. Available: <https://doi.org/10.2478/ceej-2020-0018>
- Mensah, J. and Ricart Casadevall, S. (2019). Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review. *Cogent Social Sciences*, 5(1): 1653531. Available: <https://doi.org/10.1080/23311886.2019.1653531>
- Minh Ha, N., Tan Minh, P. and Binh, Q. M. Q. (2022). The determinants of tax revenue: A study of Southeast Asia. *Cogent Economics & Finance*, 10(1): Available: <https://doi.org/10.1080/23322039.2022.2026660>
- Mpofu, F. Y. (2022a). Green taxes in africa: Opportunities and challenges for environmental protection, sustainability, and the attainment of sustainable development goals. *Sustainability*, 14(16): 10239.
- Ngari, P. K., Ooko, S. A., Huho, M. W., Kibet, C. S. and Onchimbo, A. N. (2024). Analyzing the relationship between government revenue and economic growth in Kenya from 2012-2022 using multiple linear regression. *African Scientific Annual Review*, 1(1): 39-55. Available: <http://www.asarev.net>
- Nguyen, T. H. (2021). The government revenue-economic growth relationship in emerging and developing Asia countries: Does governance matter? *Academy of Strategic Management Journal*, 20(2): 1-15. Available: <https://www.abacademies.org/abstract/the-government-revenue-economic-growth-relationship-in-emerging-and-developing-asia-countries-does-governance-matter-13532.html>
- Ogbuabor, J. E., Orji, A., Manasseh, C. O. and Anthony-Orji, O. I. (2020). Institutional quality and growth in West Africa: What happened after the great recession? *International Advances in Economic Research*, 26(4): 343–61. Available: <https://doi.org/10.1007/s11294-020-09805-0>
- Oyinlola, M. A., Adedeji, A. A., Bolarinwa, M. O. and Olabisi, N. (2020). Governance, domestic resource mobilization, and inclusive growth in sub-Saharan Africa. *Economic Analysis and Policy*, 65: 68-88.
- Parente, S. L. and Prescott, E. C. (2000). *Barriers to riches*. Cambridge, Massachusetts London, England. The MIT Press.
- Richards, N. U. (2021). Sustainable development goals and taxation in Nigeria. *Commonwealth Law Bulletin*, 47(3): 570–88. Available: <https://doi.org/10.1080/03050718.2020.1818594>
- Rodrik, D. (2009). *One economics, many recipes: Globalization, institutions, and economic growth*. Princeton, New Jersey, United States. Princeton University Press.

- Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, University of Chicago Press, 98(5): 1002–37. Available: <https://doi.org/10.1086/261420>
- Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, University of Chicago Press, 98(5): 71-102. Available: <https://doi.org/10.1086/261725>
- Sachs, J. D., Lafortune, G. and Fuller, G. (2024). Sustainable Development Report 2024. SDSN. Available: <https://dashboards.sdgindex.org>
- Schröder, B. and Barrie, M. (2024). How the circular economy can revive the Sustainable Development Goals. *Chatham House*. Available: [https://www.chathamhouse.org/01-introduction​;contentReference\[oaicite:2\]{index=2](https://www.chathamhouse.org/01-introduction​;contentReference[oaicite:2]{index=2)
- Stokey, N. L. (2017). R&D and economic growth. *The Review of Economic Studies*, 62(3): 469–89. Available: <https://doi.org/10.2307/2298038>
- Sumandeeep, K. R. and Sharma, R. K. (2024). Investigating the relationship of government revenue and expenditure on economic growth using a generalized method of moments: Does state-level panel ensure sustainable growth? *PLOS ONE*, 19(5): e0301764. Available: <https://doi.org/10.1371/journal.pone.0301764>
- Visseren-Hamakers, I. J., Razzaque, J., McElwee, P., Turnhout, E., Kelemen, E., Rusch, G. M., Fernández-Llamazares, Á., Chan, I., Lim, M., Islar, M., Gautam, A. P., Williams, M., Mungatana, E. and Saiful, M. (2021). Transformative governance of biodiversity: Insights for sustainable development. *Opinion in Environmental Sustainability*: Available: <https://doi.org/10.1016/j.cosust.2021.06.002>
- World Bank (2021a). Access to improved water sources (% of population with access). Available: <https://data.worldbank.org/indicator/SH.H2O.SAFE.ZS?locations=ZA>
- World Bank (2021b). Poverty headcount ratio at \$1.90 a day (2011 ppp) (% of population). Available: <https://data.worldbank.org/indicator/SI.POV.DDAY?locations=ZA>
- World Bank (2021c). Sub-saharan Africa. Available: <https://data.worldbank.org/region/SSA>
- World Bank (2021d). Unemployment, total (% of total labor force) (modeled ILO estimate). Available: <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?locations=ZA>
- World Bank (2021e). Access to electricity (% of population). Available: <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=ZA>
- Zhang, F., Xiao, F. and Yu, P. (2024). A model of sustainable development in economic, social, and environmental aspects: The role of social capital in China. *Environmental Research Communications*, 6(4): Available: <https://doi.org/10.1088/2515-7620/ad37a8>