

ADFJ ISSN 2522 - 3186.

African Development Finance Journal

VOLUME 9 (IV)

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Date Received: August 05, 2026

Date Published: October 01, 2026

Financial Development, Government Expenditure and Economic Growth in Sub-Saharan Africa: Does the Composition of Public Spending Matter?

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Abstract

This study examines whether government expenditure moderates the relationship between financial development and economic growth in Sub-Saharan Africa (SSA). Financial development was measured by broad money, domestic credit to the private sector and interest rate spread; government expenditure by general government final consumption expenditure and gross capital formation. Six hierarchical interaction models were estimated by panel least squares on an unbalanced panel of 45 SSA countries over 2002–2021. Gross capital formation significantly strengthened the growth effects of both broad money and private sector credit. Government consumption expenditure offset the negative growth effect of broad money but weakened the positive contribution of private sector credit, consistent with crowding out. Neither measure moderated the interest rate spread–growth relationship. Public investment is therefore a complement to financial development, whereas recurrent spending can substitute for it. SSA governments should rebalance budgets toward capital formation and protect private credit markets.

Keywords: *Financial development, economic growth, government expenditure, gross capital formation, government consumption expenditure, moderation, Sub-Saharan Africa.*

1. INTRODUCTION

1.1 Background

The United Nations' 2030 Agenda for Sustainable Development commits countries to decent work and sustained economic growth under Goal 8 (United Nations, 2015). For Sub-Saharan Africa (SSA), where economic disparities persist and post-pandemic growth has slowed, the question of which policy levers reliably deliver growth is pressing. Two such levers dominate the policy conversation. The first is financial development: robust, inclusive financial systems mobilise savings, allocate capital to productive uses, manage risk and lower transaction costs, thereby raising productivity and growth (Ibrahim & Alagidede, 2017; Abbas et al., 2022). The second is government expenditure. Under the expenditure approach to national accounting, public spending

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is a direct component of GDP, and governments in SSA have kept public expenditure above 20% of GDP since 2018 (Statista, 2023). What is much less understood is how the two levers interact—whether the growth dividend of financial development is larger or smaller in economies where the state spends more, and whether it matters what the state spends on.

The theoretical case for interaction is well established. In endogenous growth models, productive public spending on infrastructure, education and health raises the marginal product of private capital and thereby the return to credit intermediated by the financial system (Romer, 1986; Barro, 1990). Public investment can thus be a complement to financial development. Recurrent government consumption, on the other hand, must be financed through taxation or domestic borrowing that competes with the private sector for the same pool of loanable funds, and may crowd out precisely the private credit that drives growth (Devarajan, Swaroop & Zou, 1996). Whether public spending complements or substitutes for financial development is therefore an empirical question that depends on the composition of the budget.

The SSA context makes this question especially salient. Since 2000 the region has seen notable progress in financial development: the median ratio of private sector credit to GDP has doubled in most countries, mobile-money innovations such as M-Pesa have lowered transaction costs, and Pan-African banks have filled gaps left by international lenders (IMF, 2016; Tyson, 2021). Over the same period, fiscal policy has swung between expansion and consolidation. General government final consumption expenditure in the region rose from roughly 14.5% of GDP in the early 2000s to above 16.5% by 2017–2018, before spiking in 2020 with pandemic-related spending, while gross capital formation peaked at about 26% of GDP around 2014 before declining on the back of falling commodity prices and rising debt (World Bank, 2023). These divergent trajectories in recurrent and capital spending provide a natural setting in which to ask whether the composition of public expenditure conditions the finance–growth relationship.

1.2 Problem Statement

Empirical studies confirm that effective, dynamic and modern financial systems boost productivity and foster growth (Ibrahim & Alagidede, 2017; Abbas et al., 2022), and that SSA's improved access to finance contributed to average growth of about 4.6% between 2000 and 2019 (African

Development Indicators, 2023). This trajectory was disrupted by the COVID-19 pandemic, which cut regional growth to 3.6%, with projections of a further decline to 3.1% as aid inflows diminished (World Bank, 2023). In such an environment, government spending is the policy instrument most directly under national control, and the choice between expanding recurrent budgets and protecting public investment is one that every SSA finance ministry confronts. Yet the evidence on how that choice affects the growth payoff from financial development is thin.

The literature on government expenditure and growth remains inconclusive. Nyasha and Odhiambo's (2019) review of four decades of international evidence found effects ranging from positive to negative to insignificant and attributed much of the inconsistency to the failure of many studies to disaggregate spending by type. Studies that do disaggregate consistently find that development (capital) expenditure is more growth-enhancing than recurrent expenditure (Diyoke, Yusuf & Demirbas, 2017; Adedeji, Ajayi & Tizhe, 2019; Chu, Hölscher & McCarthy, 2020). Chen, Lv and Liu (2019) further show that the level of financial development shapes how governments allocate expenditure between productive and unproductive uses, which suggests that finance and fiscal composition are jointly determined and should be studied together. However, existing work treats government expenditure either as an independent driver of growth alongside financial development (Adedeji et al., 2019) or as an outcome of financial development (Chen et al., 2019). No large-scale SSA study has tested whether government expenditure moderates the effect of financial development on growth, let alone whether recurrent and capital spending moderate it differently.

Recent African evidence on the finance–growth nexus is also narrow in scope. Three studies examined single countries (Gashirayi, 2017; Puatwoe & Piabuo, 2017; Pinshi, 2020), and the one region-wide study by Asante, Takyi and Mensah (2023) considered institutional quality as the conditioning factor while leaving fiscal policy aside. This study addresses that gap by asking: does government expenditure moderate the relationship between financial development and economic growth in Sub-Saharan Africa, and does the answer depend on whether spending takes the form of recurrent consumption or capital formation? The remainder of the introduction reviews the theoretical and empirical literature on which the study builds and sets out the conceptual

framework and hypotheses. Section 2 describes the methodology, Section 3 presents the results and Section 4 discusses them, draws conclusions and suggests directions for further research.

1.3 Theoretical Review

Following Stewart and Sambrook (2011), theory is used here to clarify concepts and the expected relationships among them. The study draws on the Endogenous Growth Theory, the theory of productive government expenditure, and the Classical Theory of Financial Intermediation. The Neoclassical Growth Theory (Solow, 1956) provides the point of departure: long-run growth is driven by capital, labor and exogenous technological progress, and public policy, including fiscal policy, can affect only the level of output, not its long-run growth rate. Its limitation is that it treats both technology and government as external to the growth process and so offers no mechanism through which fiscal choices could alter the returns to financial development.

The Endogenous Growth Theory (Romer, 1986) internalizes growth by attributing it to knowledge, innovation and human capital, all of which are accumulated through investment that the financial system finances. Barro (1990) extended this framework by placing government spending directly in the production function. In his model, productive public expenditure—infrastructure, education, public health—raises the marginal product of private capital, so that a given quantity of credit intermediated by banks generates more output when it is deployed in an economy with complementary public capital. Unproductive government consumption, financed by distortionary taxation, has the opposite effect. Devarajan, Swaroop and Zou (1996) showed that the composition of expenditure, not merely its size, determines whether public spending is growth-enhancing, and that in developing countries an excess of what is conventionally regarded as productive spending can itself become unproductive at the margin. These contributions provide the theoretical basis for expecting gross capital formation to strengthen, and government consumption to weaken or leave unchanged, the growth effect of financial development.

The Classical Theory of Financial Intermediation (Allen & Santomero, 1996) explains why financial development matters in the first place: intermediaries reduce information asymmetries, pool and diversify risk and lower transaction costs, thereby channeling savings to productive investment. Critics such as Scholtens and Wensveen (2000) note that globalization has reduced

information frictions, yet intermediation persists and, in SSA, is expanding through mobile-based platforms. The theory also clarifies the channel through which government consumption may crowd out private credit: when the state absorbs a larger share of domestic savings through borrowing from the banking system, the volume and price of credit available to the private sector deteriorate, and the growth payoff from a given level of financial depth is reduced. Together these theories motivate a moderation framework in which government expenditure conditions, rather than merely adds to, the effect of financial development on growth.

1.4 Empirical Review

Diyoke, Yusuf and Demirbas (2017) examined government expenditure, investment and growth in lower-middle-income SSA countries and found that while both spending and investment influence growth, government expenditure was negatively associated with growth in the short run. They recommended disaggregating expenditure into capital and recurrent components and advocated increased capital expenditure for long-run growth. Their study did not, however, incorporate financial development, leaving open whether the effect of public spending differs across levels of financial depth.

Adedeji, Ajayi and Tizhe (2019) analysed disaggregated public expenditure and financial development indicators in Nigeria using annual time-series data from 1981 to 2016 and ordinary least squares. Variables included real GDP, government capital and recurrent expenditure, domestic credit, private sector credit and liquid liabilities. Most indicators had significant positive effects on growth, but private sector credit and recurrent expenditure had negative effects. The study treated finance and fiscal variables as additive determinants of growth and did not test whether one conditions the other.

Chen, Lv and Liu (2019) approached the finance–fiscal relationship from the opposite direction, asking how financial development shapes the composition of government expenditure. Using an endogenous growth model and a 25-year dataset for 105 countries, with financial development measured as bank deposits to GDP and government expenditure as the share of productive spending in total spending, they found that countries with higher financial development allocate less to productive expenditure, because efficient private finance reduces the need for the state to

fill the investment gap. The finding implies that finance and fiscal composition are interdependent, but the study did not examine their joint effect on growth.

Nyasha and Odhiambo (2019) reviewed the empirical literature on government size and economic growth across developed and developing countries and methodologies. Their central conclusion was that the effect of government expenditure on growth is not definite: it ranges from positive to negative to insignificant depending on the country, period, expenditure category and estimation technique. They identified the failure to distinguish spending types as a principal source of the inconsistency, which motivates the disaggregated approach adopted here.

Chu, Hölscher and McCarthy (2020) compared the effects of productive and non-productive government expenditure in high-income and low- to middle-income economies using pooled OLS and GMM. They found that growth is higher where governments prioritize development expenditure over recurrent expenditure, and that increased government expenditure is associated with higher capital inflows. Their work establishes that the composition of spending matters for growth but does not model financial development, and so cannot say whether the composition of spending also affects the returns to financial deepening.

Le and Suruga (2005) provided one of the few studies to model public expenditure and capital inflows jointly. Using a theoretical growth model and panel evidence, they found that public capital expenditure enhances growth, but that excessive public spending can diminish the growth benefits of foreign investment. Their results point to a threshold beyond which public spending becomes a substitute rather than a complement for private and external capital—an insight that this study extends to the domestic financial system.

In sum, the literature establishes that (i) financial development promotes growth, (ii) the growth effect of government expenditure depends on its composition, and (iii) financial development and fiscal composition are interdependent. What remains untested at the SSA level is the moderating effect implied by these three findings: whether recurrent and capital spending differentially alter the growth payoff from financial development.

1.5 Conceptual Framework and Hypotheses

The conceptual framework is presented in Figure 1. Financial development is the independent variable, measured through three indicators representing the depth, access and efficiency dimensions of the financial system: broad money as a percentage of GDP, domestic credit to the private sector as a percentage of GDP, and interest rate spread. Government expenditure is the moderating variable, measured by general government final consumption expenditure (recurrent spending) and gross capital formation (investment spending), both as percentages of GDP. Economic growth, measured as the annual growth rate of real GDP, is the dependent variable. The framework posits that government expenditure alters the strength or direction of the effect of each financial development indicator on growth, and that the moderating effect differs between recurrent and capital spending.

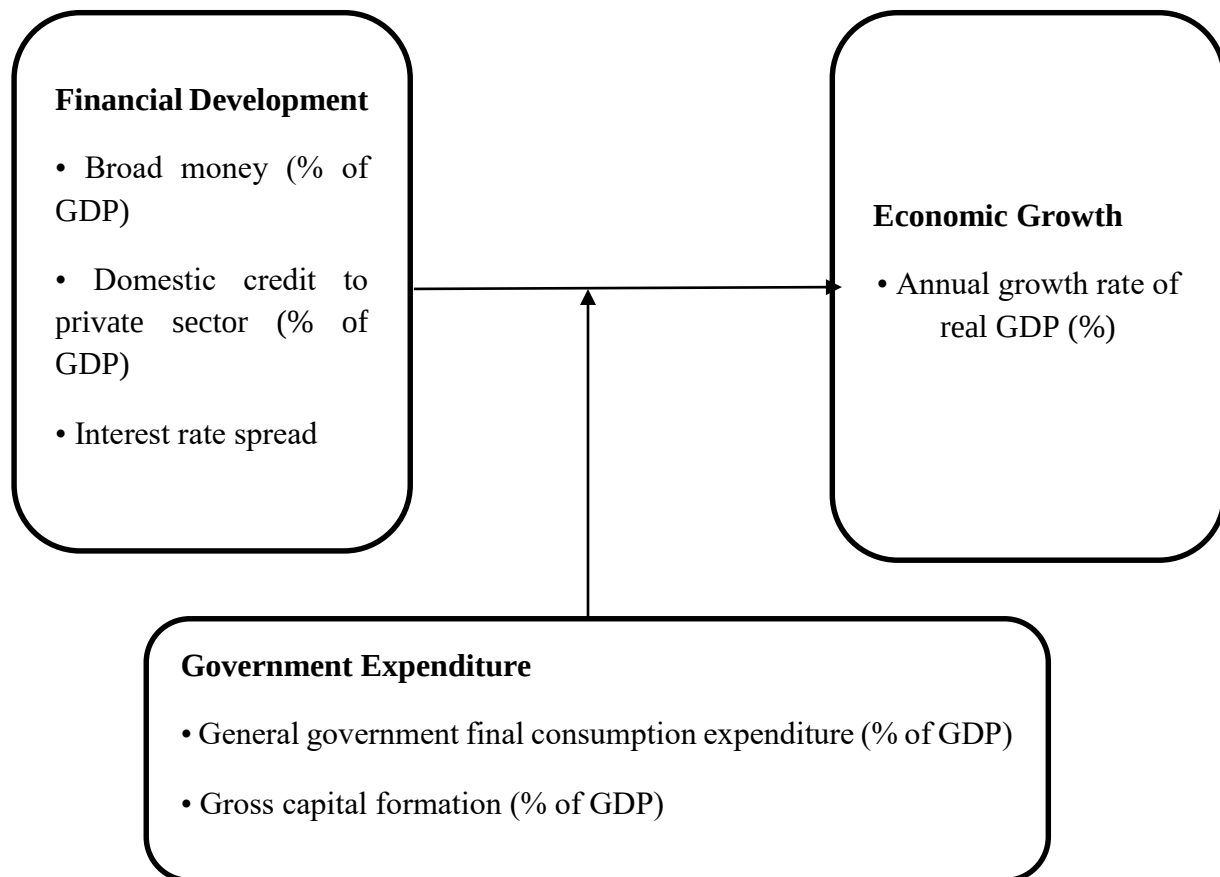


Figure 1: The Conceptual Model

The following null hypotheses were tested:

H₀₁: Government expenditure has no significant moderating effect on the relationship between financial development and economic growth among Sub-Saharan Africa countries.

H_{01a}: General government final consumption expenditure has no significant moderating effect on the relationship between broad money and economic growth.

H_{01b}: General government final consumption expenditure has no significant moderating effect on the relationship between domestic credit to the private sector and economic growth.

H_{01c}: General government final consumption expenditure has no significant moderating effect on the relationship between interest rate spread and economic growth.

H_{01d}: Gross capital formation has no significant moderating effect on the relationship between broad money and economic growth.

H_{01e}: Gross capital formation has no significant moderating effect on the relationship between domestic credit to the private sector and economic growth.

H_{01f}: Gross capital formation has no significant moderating effect on the relationship between interest rate spread and economic growth.

2. METHODOLOGY

2.1 Research Design and Data

The study adopted a positivist philosophy and a panel longitudinal design. The target population was all 48 countries geographically classified in Sub-Saharan Africa; the final analytical panel comprised 45 countries for which comparable observations were available over the 20-year period 2002–2021. The starting year coincides with the launch of the African Union, which reoriented the continent toward economic integration and growth. The panel was unbalanced: all available country-year observations were retained rather than deleting countries with intermittent missing values, yielding 900 observations for most variables and 700 observations (35 countries) for interest rate spread.

Secondary data were drawn from the International Monetary Fund's International Financial Statistics (IFS) for the financial development indicators and from the World Bank's World

Development Indicators (WDI) for government expenditure and economic growth. Broad money was measured as M2 as a percentage of GDP; domestic credit to the private sector as a percentage of GDP; and interest rate spread as the lending rate minus the deposit rate. General government final consumption expenditure (% of GDP) captures all current government spending on goods and services, including compensation of employees, and proxies recurrent spending. Gross capital formation (% of GDP) captures outlays on additions to fixed assets and proxies' development or investment spending. Economic growth was measured as the annual percentage growth rate of real GDP. Because the study used publicly available macroeconomic data, no human participants were involved; a research permit was obtained from the National Commission for Science, Technology and Innovation (NACOSTI).

2.2 Model Specification and Estimation

Moderation was tested using hierarchical regression following the Baron and Kenny (1986) framework. In Step 1, the financial development indicator and the government expenditure measure were entered as main effects; in Step 2 their product term was added. The estimated specification for each pairing was:

$$EGit = \beta_0 + \beta_1 FDit + \beta_2 GEit + \beta_3 (FDit \times GEit) + \mu_i + \lambda_t + \varepsilon_{it}$$

where EGit is economic growth for country *i* in year *t*; FDit is the financial development indicator (broad money, domestic credit to the private sector, or interest rate spread); GEit is the government expenditure measure (general government final consumption expenditure or gross capital formation); μ_i captures country-specific effects; λ_t captures time effects; and ε_{it} is the error term. A statistically significant β_3 indicates that government expenditure moderates the relationship between financial development and economic growth; its sign indicates whether the moderator strengthens (same sign as β_1) or weakens (opposite sign to β_1) the underlying relationship. Six interaction models were estimated—three for each expenditure measure—using panel least squares in EViews 13. Descriptive statistics, unit root (Augmented Dickey-Fuller), Kao residual cointegration, normality, heteroscedasticity and variance inflation factor diagnostics were run prior to estimation, and VIFs were reviewed for the interaction models. The 5% level of significance was used for hypothesis decisions.

3. RESULTS

3.1 Descriptive Results

Table 1 summarizes the study variables. Economic growth averaged 1.82% with a median of 2.10% but ranged from -30.70% to 19.94% with a standard deviation of 4.38%, reflecting the diversity of economic conditions across the region. Broad money averaged 33.88% of GDP and domestic credit to the private sector 22.76% of GDP, both with wide dispersion and strong right skew, indicating that a few countries—notably Mauritius, South Africa and Cabo Verde—have far deeper financial systems than the regional norm. Interest rate spread averaged 9.51 percentage points with a median of 7.41, and its extreme maximum and kurtosis reflect outlier episodes of macroeconomic instability in a small number of countries.

The two government expenditure measures are notably better behaved. General government final consumption expenditure averaged 15.47% of GDP (median 14.27%), ranging from 0.95% to 46.26%, with moderate skewness. Gross capital formation averaged 23.53% of GDP (median 22.06%), ranging from 1.53% to 57.18%, and with skewness of 0.81 and kurtosis of 3.88 was the closest of all variables to a normal distribution. On average, therefore, SSA governments spend more on capital formation than on recurrent consumption relative to GDP, though the gap narrowed over the study period as consumption spending trended upward and investment spending declined after 2014.

Table 1: Summary of Descriptive Statistics

Variable	N	Mean	Median	Max.	Min.	Std. Dev.	Skew.	Kurt.
Economic growth (real GDP growth, %)	900	1.824	2.096	19.939	-30.702	4.381	-1.341	12.108
Broad money (% of GDP)	900	33.876	26.520	159.949	2.917	22.482	2.054	8.247
Domestic credit to private sector (% of GDP)	900	22.759	16.121	142.422	0.002	23.663	2.726	10.986
Interest rate spread (percentage points)	700	9.514	7.414	457.450	-3.850	23.643	13.093	219.539

Variable	N	Mean	Median	Max.	Min.	Std. Dev.	Skew.	Kurt.
General government final consumption (% of GDP)	900	15.467	14.267	46.262	0.950	7.298	1.361	5.229
Gross capital formation (% of GDP)	900	23.530	22.061	57.180	1.525	9.369	0.811	3.877

Source: Authors' computation from IMF IFS and World Bank WDI data, 45 SSA countries, 2002–2021.

3.2 Moderating Effect of General Government Final Consumption Expenditure

Table 2 reports the three interaction models in which general government final consumption expenditure (GGFCE) is the moderator. In Model 1, broad money has a negative but insignificant main effect ($\beta = -0.0320$, $p = 0.1253$) and GGFCE a negative, marginally insignificant main effect ($\beta = -0.0810$, $p = 0.0752$). The interaction term is positive and significant ($\beta = 0.0025$, $p = 0.0194$). Since broad money exerts a negative direct effect on growth in SSA (Masila, Nyamute & Kisimbii, 2025a), the positive interaction indicates that GGFCE offsets part of that negative effect. The model explains 32.4% of the variation in growth and is jointly significant ($F = 7.37$, $p < 0.001$). H01a is therefore rejected.

Model 2 tests whether GGFCE moderates the relationship between domestic credit and growth. The main effects of private sector credit ($\beta = 0.0405$, $p = 0.2226$) and GGFCE ($\beta = -0.0231$, $p = 0.5755$) are both insignificant once the interaction is included, but the interaction term is negative and significant ($\beta = -0.0312$, $p = 0.0079$). Because private sector credit has a positive direct effect on growth in SSA, the negative interaction means that higher levels of GGFCE weaken that positive effect. The model explains 32.2% of the variation in growth and is jointly significant ($F = 6.75$, $p < 0.001$). H01b is rejected.

Model 3 tests the interest rate spread pairing. Neither the main effect of interest rate spread ($\beta = -0.0128$, $p = 0.2483$), nor that of GGFCE ($\beta = -0.0281$, $p = 0.2614$), nor their interaction ($\beta = -0.0011$, $p = 0.3349$) is significant, and the model explains only 1.7% of the variation in growth despite being jointly significant at conventional levels. GGFCE therefore does not significantly moderate the relationship between interest rate spread and growth. H01c cannot be rejected.

Table 2: Financial Development, General Government Final Consumption Expenditure and Economic Growth

Variable	Model 1: Broad money	Model 2: Domestic credit to private sector	Model 3: Interest rate spread
Financial development indicator (FD)	-0.0320 (0.0209) t = -1.534; p = 0.1253	0.0405 (0.0332) t = 1.221; p = 0.2226	-0.0128 (0.0111) t = -1.156; p = 0.2483
General government final consumption expenditure (GGFCE)	-0.0810 (0.0455) t = -1.782; p = 0.0752	-0.0231 (0.0412) t = -0.560; p = 0.5755	-0.0281 (0.0250) t = -1.124; p = 0.2614
Interaction term (FD × GGFCE)	0.0025 (0.0011) t = 2.349; p = 0.0194**	-0.0312 (0.0148) t = -2.105; p = 0.0079***	-0.0011 (0.0012) t = -0.965; p = 0.3349
Constant	4.0623 (0.7076) p = 0.0000***	2.7537 (0.6277) p = 0.0000***	2.5287 (0.4082) p = 0.0000***
R-squared	0.3241	0.3221	0.0170
Adjusted R-squared	0.3108	0.3188	0.0128
F-statistic (Prob.)	7.374 (0.0001)	6.755 (0.0002)	4.024 (0.0075)
Durbin-Watson	1.376	1.365	1.544
Observations / cross-sections	900 / 45	900 / 45	700 / 35
Decision on null hypothesis	H01a rejected	H01b rejected	H01c not rejected

*Dependent variable: real GDP growth (%). Panel least squares, 2002–2021. Standard errors in parentheses. *** $p < 0.01$; ** $p < 0.05$. Source: Authors' estimation.*

3.3 Moderating Effect of Gross Capital Formation

Table 3 reports the three interaction models in which gross capital formation (GCF) is the moderator. In every model gross capital formation has a positive and significant main effect on growth— $\beta = 0.1357$ ($p < 0.001$) in Model 4, $\beta = 0.1444$ ($p < 0.001$) in Model 5 and $\beta = 0.0406$ ($p = 0.0466$) in Model 6.

In Model 4, the interaction between broad money and gross capital formation is positive and significant ($\beta = 0.0021$, $p = 0.0016$), indicating that gross capital formation strengthens the effect of broad money on growth. The model explains 36.6% of the variation in growth ($F = 21.05$, $p < 0.001$). H01d is rejected.

Model 5 yields the strongest result in the study. Domestic credit to the private sector has a positive, marginally significant main effect ($\beta = 0.0423$, $p = 0.0573$), gross capital formation has a strong positive effect ($\beta = 0.1444$, $p < 0.001$), and their interaction is positive and significant ($\beta = 0.0031$, $p = 0.0026$). Gross capital formation thus amplifies the positive effect of private sector credit on growth, and the model explains 45.6% of the variation in growth—the highest explanatory power of the six models ($F = 17.66$, $p < 0.001$). H01e is rejected.

Table 3: Financial Development, Gross Capital Formation and Economic Growth

Variable	Model 4: Broad money	Model 5: Domestic credit to private sector	Model 6: Interest rate spread
Financial development indicator (FD)	-0.0102 (0.0177) $t = -0.574$; $p = 0.5662$	0.0423 (0.0222) $t = 1.903$; $p = 0.0573^*$	-0.0278 (0.0105) $t = -2.655$; $p = 0.0081^{***}$
Gross capital formation (GCF)	0.1357 (0.0252) $t = 5.392$; $p = 0.0000^{***}$	0.1444 (0.0230) $t = 6.269$; $p = 0.0000^{***}$	0.0406 (0.0203) $t = 1.994$; $p = 0.0466^{**}$
Interaction term (FD $\times$ GCF)	0.0021 (0.0006) $t = 3.275$; $p = 0.0016^{***}$	0.0031 (0.0010) $t = 3.024$; $p = 0.0026^{***}$	0.0013 (0.0010) $t = 1.315$; $p = 0.1891$
Constant	0.1143 (0.6437) $p = 0.8591$	-0.6029 (0.5358) $p = 0.2607$	0.8748 (0.4721) $p = 0.0643^*$
R-squared	0.3658	0.4558	0.2272
Adjusted R-squared	0.3427	0.4427	0.2030
F-statistic (Prob.)	21.048 (0.0000)	17.662 (0.0000)	Significant ($p < 0.01$)
Durbin-Watson	1.450	1.445	—
Observations / cross-sections	900 / 45	900 / 45	700 / 35
Decision on null hypothesis	H01d rejected	H01e rejected	H01f not rejected

*Dependent variable: real GDP growth (%). Panel least squares, 2002–2021. Standard errors in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$. Source: Authors' estimation.*

In Model 6, interest rate spread has a negative and significant main effect ($\beta = -0.0278$, $p = 0.0081$), confirming that wide spreads depress growth, and gross capital formation has a positive main effect. The interaction, however, is positive but insignificant ($\beta = 0.0013$, $p = 0.1891$). Gross

capital formation does not significantly moderate the relationship between interest rate spread and growth. H01f cannot be rejected.

3.4 Summary of Moderation Results

Taken together, the six models reject the overall null hypothesis H01 that government expenditure has no moderating effect on the finance–growth relationship in SSA: four of the six interaction terms are significant at the 5% level. Table 4 summarizes the pattern of results. Gross capital formation strengthens the growth effect of both the depth (broad money) and access (private sector credit) indicators, and in both cases the interaction is positive. General government final consumption expenditure offsets the negative effect of broad money but weakens the positive effect of private sector credit. Neither expenditure measure moderates the efficiency indicator (interest rate spread).

Table 4: Summary of Moderation Results

Financial development indicator	Moderator: General government final consumption expenditure	Moderator: Gross capital formation
Broad money (depth)	Positive, significant ($p = 0.019$) — offsets negative effect of broad money	Positive, significant ($p = 0.002$) — strengthens effect of broad money
Domestic credit to private sector (access)	Negative, significant ($p = 0.008$) — weakens positive effect of credit (crowding out)	Positive, significant ($p = 0.003$) — strengthens positive effect of credit (complementarity)
Interest rate spread (efficiency)	Insignificant ($p = 0.335$)	Insignificant ($p = 0.189$)

Source: Authors' summary of Tables 2 and 3.

4. DISCUSSION

4.1 Government Consumption Expenditure as a Moderator

The positive interaction between broad money and GGFCE in Model 1 indicates that recurrent government spending offsets part of the negative direct effect that monetary depth has on growth in SSA (Masila, Nyamute & Kisimbii, 2025a). One interpretation is that in economies where

monetary expansion is not efficiently intermediated into productive credit, public consumption provides an alternative channel through which liquidity is converted into aggregate demand. The negative and marginally insignificant main effect of GGFCE in the same model is consistent with the view that recurrent spending on its own does little to raise growth (Diyoke et al., 2017; Nyasha & Odhiambo, 2019).

The negative interaction between private sector credit and GGFCE in Model 2 is the crowding-out result anticipated by the Classical Theory of Financial Intermediation and by Devarajan et al. (1996). When governments finance recurrent spending through domestic borrowing, they compete with private firms for the same pool of loanable funds, raising the cost and lowering the growth productivity of the credit that does reach the private sector. The result is consistent with Adedeji et al. (2019), who found recurrent expenditure to be negatively associated with growth in Nigeria, and it complements Chen et al. (2019): if financially developed economies allocate less to productive spending, and if consumption spending in turn erodes the growth productivity of private credit, then a country that expands its financial system while allowing recurrent spending to grow may find the two policies working against each other. The results here provide the SSA-level evidence for that risk.

The absence of any moderating effect of GGFCE on the interest rate spread–growth relationship (Model 3) indicates that recurrent spending neither aggravates nor relieves the growth cost of inefficient intermediation, a point returned to below.

4.2 Gross Capital Formation as a Moderator

The consistently positive and significant main effect of gross capital formation across Models 4 to 6 confirms that investment in fixed assets is an independent driver of growth in SSA, in line with Juma, Ouyang and Cai (2018) and Chu et al. (2020). More importantly for this study, the positive interaction with broad money (Model 4) shows that where investment in productive capacity is high, monetary depth is more readily translated into output, presumably because additional liquidity finds productive projects to finance rather than fueling inflation or capital flight.

The positive interaction between private sector credit and gross capital formation (Model 5) is direct evidence for the complementarity between public capital and private finance posited by Barro (1990): credit is more growth-productive in economies where complementary infrastructure and capital stock raise the return to private investment. That Model 5 has the highest explanatory power of the six models underlines the centrality of the credit–investment channel to growth in the region. The findings extend Chu et al. (2020) and Diyoike et al. (2017), who showed that capital expenditure is more growth-enhancing than recurrent expenditure, by demonstrating that the difference also operates through the financial system.

As with GGFCE, gross capital formation does not moderate the effect of interest rate spread (Model 6). Taken together with Model 3, this indicates that fiscal policy—whether recurrent or capital—cannot compensate for inefficient intermediation. Wide spreads reflect structural features of banking markets such as concentration, high operating costs, credit risk and information asymmetry. These are addressed through competition and regulatory reform rather than through the budget, and the results suggest that the growth cost of wide spreads persists regardless of how governments spend.

4.3 Implications for Theory and Literature

The composition of public spending matters for the finance–growth nexus, not just its size. This result speaks directly to the inconclusiveness that Nyasha and Odhiambo (2019) identified in the aggregate literature: when expenditure is disaggregated, the ambiguity resolves into a clear distinction between investment spending, which complements financial development, and consumption spending, which can substitute for it. From a theoretical standpoint, the findings support the Endogenous Growth Theory’s emphasis on internal drivers of growth and provide empirical support, in an SSA setting, for Barro’s (1990) proposition that productive public expenditure raises the return to private capital. They also qualify the Financial Market Theory of Development’s presumption that market liberalization reduces reliance on government spending: in SSA, public investment appears to be a precondition for financial development to deliver growth rather than a substitute for it.

4.4 Conclusion and Recommendations

This study sets out to establish whether government expenditure moderates the relationship between financial development and economic growth in Sub-Saharan Africa and whether the answer depends on the composition of spending. It concludes that it does. Gross capital formation significantly strengthens the growth effects of both broad money and domestic credit to the private sector, making public investment a complement to financial development. General government final consumption expenditure plays a mixed role: it offsets the negative growth effect of broad money but weakens the positive effect of private sector credit, indicating that recurrent spending crowds out the very channel through which financial development most reliably delivers growth. Neither form of expenditure moderates the effect of interest rate spread, so the growth cost of inefficient intermediation must be tackled directly.

Three recommendations follow for policymakers. First, budgets should be rebalanced toward capital formation. Finance ministries should protect development votes for infrastructure, energy, transport and human capital during fiscal consolidation, since these are the expenditures that raise the growth productivity of the financial system. Public-private partnerships and regional development banks can supplement scarce public resources for large-scale projects. Second, the financing of recurrent expenditure should be managed so as to minimize crowding out of private credit. Where governments borrow domestically to fund consumption spending, central banks and treasuries should monitor the share of banking-system assets absorbed by the public sector and set limits that preserve credit space for private firms; over the medium term, broadening the tax base is preferable to domestic borrowing as a source of recurrent financing. Third, interest rate spreads should be narrowed through measures that fiscal policy cannot deliver: promoting competition and entry in banking, strengthening credit information systems and collateral registries, improving loan recovery frameworks and reducing the operating costs of lenders through digital channels.

For financial practitioners, the results underline that the growth impact of lending depends on the investment environment in which borrowers operate. Banks and development finance institutions should align credit products with public investment programmes, for example, by financing contractors, suppliers and downstream enterprises in sectors where public capital formation is concentrated—so that private credit and public capital reinforce one another.

4.5 Limitations and Suggestions for Further Research

This study opens several avenues for further inquiry. First, the moderation framework could be extended to the quality rather than the quantity of public spending: measures of public investment efficiency, procurement transparency or governance would help establish whether the complementarity between capital formation and financial development depends on how well public capital is deployed. Second, the crowding-out result for recurrent expenditure warrants a threshold analysis to identify the level of government consumption beyond which the erosion of private credit's growth effect becomes material, using panel smooth transition or threshold regression models. Third, the analysis could be repeated for sub-regional groupings—resource-rich versus resource-poor economies, or monetary unions such as WAEMU and CEMAC versus countries with independent monetary policy—where fiscal–financial interactions may differ. Finally, dynamic panel estimators such as system GMM would help address the potential endogeneity of both financial development and government expenditure with respect to growth and complement the model-based relationships reported here with evidence that is more robust to reverse causality.

REFERENCES

- Abbas, Z., Afshan, G., & Mustifa, G. (2022). The effect of financial development on economic growth and income distribution: An empirical evidence from lower-middle and upper-middle income countries. *Development Studies Research*, 9(1), 117–128.
- Adedeji, A., Ajayi, J., & Tizhe, M. T. (2019). Effects of public expenditure and financial development on economic growth: Empirical evidence from Nigeria. *Journal of Economics, Management and Trade*, 22(4), 1–12.
- African Development Indicators. (2023). *Africa Development Indicators DataBank*. The World Bank Group. <https://databank.worldbank.org/source/africa-development-indicators>
- Allen, F., & Santomero, A. M. (1996). *The theory of financial intermediation* (Wharton Financial Institutions Center Working Paper). <https://ssrn.com/abstract=7716>
- Asante, G. N., Takyi, P. O., & Mensah, G. (2023). The impact of financial development on economic growth in Sub-Saharan Africa: Does institutional quality matter? *Development Studies Research*, 10(1), 2156904.

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Barro, R. J. (1990). Government spending in a simple model of endogenous growth. *Journal of Political Economy*, 98(5), S103–S125.
- Chen, Z., Lv, B., & Liu, Y. (2019). Financial development and the composition of government expenditure: Theory and cross-country evidence. *International Review of Economics & Finance*, 64, 600–611.
- Chu, T. T., Hölscher, J., & McCarthy, D. (2020). The impact of productive and non-productive government expenditure on economic growth: An empirical analysis in high-income versus low- to middle-income economies. *Empirical Economics*, 58(5), 2403–2430. <https://doi.org/10.1007/s00181-018-1616-3>
- Devarajan, S., Swaroop, V., & Zou, H. (1996). The composition of public expenditure and economic growth. *Journal of Monetary Economics*, 37(2), 313–344.
- Diyoke, K., Yusuf, A., & Demirbas, E. (2017). Government expenditure and economic growth in lower middle income countries in Sub-Saharan Africa: An empirical investigation. *Asian Journal of Economics, Business and Accounting*, 5(4), 1–11.
- Gashirayi, C. (2017). *Relationship between financial market development and economic growth in Kenya* [Unpublished master’s research project]. University of Nairobi.
- Ibrahim, M., & Alagidede, P. (2017). Financial sector development, economic volatility and shocks in sub-Saharan Africa. *Physica A: Statistical Mechanics and Its Applications*, 484, 66–81. <https://doi.org/10.1016/j.physa.2017.04.142>
- International Monetary Fund. (2016). *Financial development in Sub-Saharan Africa: Promoting inclusive and sustainable growth*. IMF.
- Juma, R. S., Ouyang, H., & Cai, J. (2018). The effect of government expenditure on economic growth: The case of Tanzania using VECM approach. *Journal of Economics and Sustainable Development*, 9(2), 1–9.
- Le, M. V., & Suruga, T. (2005). *The effects of FDI and public expenditure on economic growth: From theoretical model to empirical evidence* (GSICS Working Paper Series No. 2). Kobe University.

- Masila, J. M., Nyamute, W. I., & Kisimbii, J. M. (2025a). Financial development and economic growth: Evidence from Sub-Saharan Africa. *IOSR Journal of Economics and Finance*, 16(3), 34–40. <https://doi.org/10.9790/5933-1603013440>
- Masila, J. M., Nyamute, W., & Kisimbii, J. (2025b). Financial development, foreign direct investment and economic growth: Evidence from Sub-Saharan Africa. *International Journal of Economics, Commerce and Management*, 13(6), 137–148.
- Nyasha, S., & Odhiambo, N. M. (2019). Government size and economic growth: A review of international literature. *SAGE Open*, 9(3), 1–12. <https://doi.org/10.1177/2158244019877200>
- Pinshi, C. (2020). *On the causal nature between financial development and economic growth in the Democratic Republic of the Congo: Is it supply leading or demand following?* Kinshasa.
- Puatwoe, J. T., & Piabuo, S. M. (2017). Financial sector development and economic growth: Evidence from Cameroon. *Financial Innovation*, 3(1), 1–18.
- Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, 94(5), 1002–1037.
- Scholtens, B., & van Wensveen, D. (2000). A critique on the theory of financial intermediation. *Journal of Banking and Finance*, 24(8), 1243–1251.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics*, 70(1), 65–94.
- Statista. (2023). *Sub-Saharan Africa: Ratio of government expenditure to gross domestic product (GDP) from 2018 to 2028*. <https://www.statista.com/statistics/805575/>
- Stewart, J., & Sambrook, S. (2011). What is theory? *Journal of European Industrial Training*, 35(3), 221–229. <https://doi.org/10.1108/03090591111120386>
- Tyson, J. (2021). *Financial-sector development and inclusive and sustainable economic growth in sub-Saharan Africa* (ODI Research Series for Financial Development in Africa). Overseas Development Institute.
- United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. United Nations.
- World Bank. (2023). *The World Bank in Africa: Overview*. <https://www.worldbank.org/en/region/afr/overview>