

Financial development, institutional quality and economic growth in countries in sub-Saharan Africa (SSA)



 Strike Mbulawa ^{(a)*}  Samuel Chingiroi ^(b)

^(a,b) Assist. Prof., Department of Graduate Studies, Botho University, Botho Education Park, Gaborone, Botswana

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ABSTRACT

The main objective of this study was to assess the relationship between financial development, institutional quality, and economic growth. The research questions were centred on whether the huge variations in the growth performances of the economies in SSA could be attributable to differences in institutional quality and financial development levels in these countries. Thus, the study contributes to literature by examining the impact of institutional quality and financial development on economic growth in low- and middle-income countries. Data was obtained from the World Bank and covered the period from 1975 to 2020 for 13 low and 18 middle income SSA countries. The study employed an ARDL model to establish both short and long run dynamics in the two sub samples. The study confirmed both short and long run causality from financial and institutional quality to growth. Institutional quality enhances growth in both low- and middle-income countries in the long run. Whilst the direction of the impact is the same, the magnitude of the impact of institutional quality is different within the two categories. Institutional quality plays a more significant role in low-income countries compared to middle income economies. The study brings out potential financial fragility and systemic risks in financial institutions among countries in SSA. Policies that enhance the quality, consistency, and uniformity of legal reasoning in judicial decisions are ideal. Reducing the risk profile for investments may enhance the flow of credit to the private sector by financial institutions.

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Introduction

This study examines the role of institutional quality and financial development on economic growth of countries in sub-Saharan African (SSA). For a long time, most studies have only explored into the roles of these variables separately, indicating in general, that finance and institutions are important ingredients for growth (Mtar and Belazreg, 2023; Hodijah and Hastuti, 2023). However, recent studies have shown that financial development should be studied in conjunction with institutional quality as the interaction between these variables may dilute their effectiveness in steering growth (Bayraktar *et al*, 2023). Thus, while it has generally been understood that financially developed sectors are likely to channel savings towards investment better, this might be slowed down in economies with weak institutions. Corruption, for example, may induce financial fragility in the economy and negatively impact on economic growth (Abaidoo and Agyapong, 2022). This study, therefore, seek to unravel the interactive roles between institutional quality and financial development and evaluate how this relationship is likely to affect economic growth in SSA.

The region is home to countries with different economic and institutional quality levels. It comprises of 46 dynamic and diverse countries with a myriad of economic activities that are approximated to have a value of about US\$2.05 trillion in nominal GDP as of 2022 fiscal year (World Bank, 2023). Over the years, there has been huge variations in the growth performances of their economies. Whilst these disparities can be attributed to a wide range of factors, it is generally understood that variations in their economic structures explain the capacity for generating growth and absorbing shocks during a recession (United Nations, 2023). For instance, oil exporting countries are projected to recover faster from the global shocks after the COVID-19 pandemic, but other countries, anchored on their own economic structures, have fairly done well. Mauritius, for example, managed to recover from a contraction of

* Corresponding author. ORCID ID: 0000-0003-1324-631X

12% to attain a growth rate of 4% in years 2020 and 2021, respectively (AfDB, 2023). Despite the potential benefits that could accrue from the abundant factor endowments in the region, some countries have failed to grow which worsens unemployment and poverty levels.

Whilst economists call for sound policies promoting sustained growth rates, both financial development and institutional quality retain their importance as drivers of growth (Effiong, 2016; Kaidi, Mensi and Amor, 2019). Data on economic freedom and corruption levels largely suggests that countries that are performing well, on these areas, are more economically prosperous (*Ibid*). The assertion of a direct correlation between institutional quality and economic growth is generally supported by empirical literature. For example, past studies (Scully, 1988, Pinto, 2021, Wandeda *et al*, 2021) argue that countries with strong institutions perform better than those with weaker ones.

Regarding the nexus between growth and financial development, three strands have emerged in literature. The first strand, which focuses on the importance of financial development on economic growth in developing countries and back dates to the work of Patrick (1966), has been substantiated by many authors (Valickova *et al*, 2015; Oroud *et al*, 2023). The second strand emphasises on the contribution of institutions towards economic growth (Singh and Pradhan, 2022). In the third strand, a combined effect of both finance and institutions, hypothesis that financial development transmitted through financial systems and coherent institutions, is positively influential to economic growth. Clearly, the connection between financial development and economic growth is not obvious. More so, Opoku *et al* (2019) support the neutrality hypothesis between financial development and economic growth.

Both financial development and institutional quality are crucial in explaining the variation in economic performances. However, there is no agreement on how these variables, whether collectively or individually, affect growth. Thus, differences in the level of financial development and quality of institutions could be among key factors that account for differences in economic growth in SSA among countries at different income levels. There is no agreement on direction of causal in both long and short run. This limits the scope for policy making in the SSA region. Hence, there is need to examine the differences in the growth as explained by finance and institutions. In this study we argue that such dynamics are better understood by grouping countries according to their income level status. As per the World Bank classifications, all SSA economies fall within the Upper Middle Income, Lower Middle Income, and Lower Income levels. This study combines the first two categories into middle-income countries to make comparison with the latter. The rest of the paper is organised as follows: Section 2 provides an overview of the literature on relationships between financial development, institutional quality, and economic growth. Sections 3, 4 and 5 provide the methodology, results & discussion, and conclusions & policy implications, respectively.

Literature Review

Financial Development and Economic Growth

There is vast literature on the effects of financial development on economic growth. However, literature that focuses on testing the four hypotheses of supply led, demand following, feedback, and neutrality, are of significant interest in this article. In the supply led hypothesis, a vibrant financial system should be developed to provide financial services in the economy well ahead of their demand (Patrick, 1966; Redmond & Nasir, 2020). Thus, supply of financial services leads the demand for these services. In that way, development in the financial system induces real economic activity as the funds are channelled into the productive sector. The ultimate outcome of such a drive is sustained economic growth (Ang, 2008; Redmond & Nasir, 2020). The supply-leading hypothesis means that financial development can be used by policy makers as a tool to generate growth (Odhiambo, 2005; Song *et al*, 2021). In more recent years, the hypothesis has been empirically supported by many researchers. For example, Asante *et al* (2023) applied a system-GMM estimation method on 29 SSA countries, covering a period from 2000 to 2019, and finds that financial development has a positive effect on growth. In another study, Taddese and Abebaw (2023) used a two-step system GMM estimation technique on 25 SSA countries for the period 2010 to 2017 and confirms that financial development has a positive and significant impact on economic growth. Similarly, Alhassan *et al* (2023) used a system GMM technique on 44 Asian countries covering the period 1980 to 2017. Their study focuses on the entire Asia, subregions, and groups in accordance with their levels of income. They conclude that although financial development has a positive impact on the entire Asian countries, the effect is greater on higher income countries compared to the lower income countries. Other studies have substantiated the feedback hypothesis (Wesiah and Onyekwere, 2021; Shan, 2001). These findings could be vital in explaining different levels of economic growth in Asian countries and other developing countries in the world.

In contrast to the supply-led, the demand following hypothesis asserts that financial development arises as a response to growth in the real sector for the now needed financial services (Patrick, 1966; Ho & Saadaoui, 2022). According to Patrick (1966), the supply-led hypothesis may be valid only at the early developmental stages of a nation's growth. Later, the demand following hypothesis kicks in. This narrative has been confirmed by different scholars in the 1990s, who examine the finance-growth nexus for advanced economies and conclude that finance drove growth in the early stages of economic development and the role dwindles or disappears at later stages (De Gregorio and Guidotti, 1995; Rousseau and Wachtel, 1998; Rousseau and Sylla, 2005; and Moyo *et al.*, 2018). However, in recent years scholars confirm that demand-following hypothesis can still hold true for some developing countries. Taivan and Nene (2016) examine the causality between finance and growth for 10 Southern African Development Countries (SADC), covering the period 1994 to 2013. Using the Vector Autoregression approach, they find that 50% and 60% of their sample supports

the demand-following hypothesis. Their study uses broad money and direct credit as measures for financial development. Similarly, Chow *et al* (2019) analyse data gathered on 14 developing countries drawn from different continents by employing an assortment of cointegration, bivariate and multivariate linear and nonlinear Granger Causality tests. They conclude that the demand following hypothesis is valid for South Africa and Costa Rica only. The affirmation of the demand-following hypothesis on some developing countries has implications for using financial development as an important vehicle for attaining economic success, suggesting that finance may not be the contributing factor.

Slightly related to the demand-following hypothesis in seeking to use finance as a policy variable for economic growth is the neutrality hypothesis, which stipulates that finance has no significant effect on growth. Mtari and Belazreg (2021) explore into the causality between financial development, financial innovation and economic growth using the panel Vector Autoregression estimation technique on 27 OECD countries for the period 2001 to 2016. Their study confirms the neutrality hypothesis of finance to growth. Odhiambo *et al* (2019) find some mixed results on English and French-speaking African countries. They develop and estimate a trivariate-panel Granger-causality model over a 25-year period 1990-2014 with three proxies for financial development to examine the connection with economic growth. The proxies are the liquidity liabilities, deposit money bank assets, and bank deposits. The neutrality hypothesis is upheld when deposit money bank assets is used as the measure of financial development for English-speaking countries. Equally, Opoku *et al* (2019) find that despite there being some evidence for supply-leading, demand following, and the feedback hypotheses in Africa, the neutrality hypothesis is also valid in some countries. Loayza and Ranciere (2006) estimate a short run and long run effects model using the Pooled Mean Group that the positive long run relation between finance and growth coexists with the negative short run relation between the two variables. Evidence show that the finance-growth question needs caution as findings are usually dependent upon the methodological approach and proxy variables used in the study. Also, the mixed results demonstrate that the link between finance and growth remain a complex equation that requires the consideration of some mediating variables such as the institutional quality. Hence, the current study aims to close this gap.

Institutional Quality and Economic Growth

The World Bank (2002) opines that the nexus between institutional framework and economic growth is vital for the success of every economic policy orientation. There seem to be a consensus in the literature that an efficient institutional framework promotes economic growth and development (Valeriani and Peluso, 2011). However, researchers have approached this area from different angles of interpretation of what constitutes institutional frameworks.

Some studies have explored into the impact of formal and informal institutions on economic growth. Formal institutions refer to the formally written down rules and regulations of doing business and how they are enforced and thus conform to property rights, governments, and legal systems (Dobler, 2011). On the other hand, informal institutions refer to a country's social values as embodied in its cultural characteristics, beliefs, norms, morals, and conventions, among others (Dobler, 2009). Although much work has so far mainly focused on the effect of formal institutions on economic growth due to availability of data, a growing body of literature on informal institutions is emerging buoyed on survey data. In a case study that seek to analyse the differences between GDPs per capita in the Western states and the Arab region of Middle Eastern and Northern Africa, over a 20-year period commencing from 1980, Dobler (2011) highlights that both formal and informal institutions are responsible for disparities in economic performance between the regions. In another paper, Dobler, (2009) uses a two-stage least squares regression analysis on a sample of 55 to 72 countries drawn from across the world to examine the effects of formal and informal institutions on growth. Findings show that both informal and informal institutions have major impacts on per capita income. Chan *et al* (2015) evaluate the role of formal and informal institutions on China's miracle growth. The paper took advantage of China's different provincial quality of institutions and growth rates and utilises the World Bank's 2006 opinion survey on the effectiveness of city governance. Results demonstrate that informal institutions are superior to formal institutions in contributing towards the country's accelerated economic growth rates.

Some studies have concentrated on the varying degrees of freedom or institutions as a key determinant of growth. The thrust for these studies has been to investigate which regimes are likely to offer a more supportive environment for growth. Barro (1999) observes that the relationship is not linear, argue that increases in democracy are more beneficial to political regimes with weak liberties than those with already stronger liberties. However, in a paper that covers 57 countries drawn from different continents over 11 years (1990 to 2000), Saurabh (2023) concludes that freedom and political regimes have unique results per each continent. Employing a pooled cross sectional and time series methodology, the paper concludes that autocracy in Africa, democracy in Asia, and bureaucracy in Latin America fosters economic growth. Similarly, Glaeser *et al* (2004) find that developing countries progress out of poverty through good policies that are implemented under dictatorship but would then move on to adopt democracy afterwards. Their study utilises some multi-stage OLS and Instrumental Variables approaches over a period stretching from 1960 to 2000, with observations that range from 47 to 55. The critical point that came out of their study is that economic growth significantly depends on the quality of institution that a country has. Azam *et al* (2021) report similar findings by employing the fixed effects and the systems Generalised Moment Method on panel data involving 66 developing countries over a 35-year period, 1984 to 2019. They find that institutional quality is higher and has greater impact, the higher the income levels of the developing countries.

Some researchers focus on the effects governance as one of the key indicators of institutional quality. Good governance has been understood to be multifaceted in the literature. The absence of violence and presence of political stability are used as predictors for a stable government that is unlikely to be dethroned by unconstitutional means and raises investor confidence in the government's

commitment (Fabro and Aixalá, 2009). In other words, unstable governance is likely to signal weak protection and enforcement of property rights that destabilises the growth processes of the country. It has also been defined as a complex system that enforces control to manage the affairs and resources of a country (Fayissa and Nsiah, 2013). In a study that focuses on 39 SSA countries, Fayissa and Nsiah (2013) use the Fixed, random, and Allerano-Bond models on data spanning from year 1995 to 2004 and conclude that good governance or lack of it is a significant factor for explaining differences in economic performance. Ndilito and Bilame (2023) perform a causal relationship examination between institutional governance and economic growth in Tanzania over a 25-year period extending from 1996 to 2021. They find that good governance drives economic growth and any deterioration in the state of institutional governance would deter growth. Correspondingly, Alimi and Ben (2023) analyse the effect of governance on economic growth of 48 developing countries over the 2002-to-2020-year period. They use the governance components indices to represent effectiveness of governments, political stability, corruption control, and regulatory quality of the countries. They find that efforts to enhance governance not backed by adequate resources obstruct growth. They strongly recommend policymakers to first boost economic growth and reserve resources for improving governance for sustained growth.

Institutional Quality and Financial Development

The relationship between institutional quality and financial development is a subject matter that has attracted the attention of many researchers. So far, the literature has not reached any conclusive evidence for a symmetrical interlinkage between the two variables. Khan *et al* (2019) investigate the significance of natural resource management under institutional quality on financial development in the United States of America. Using Autoregressive Distributed Lag and the Vector Error Correction Granger causality mechanisms, they show that institutional quality has a moderating effect on financial development and natural resource rent. They recommend that policymakers should always consider the importance of institutions when addressing financial development and natural resource rent nexus. In another study, Khan *et al* (2020) scrutinise the impact of institutional quality on financial development of emerging and growth leading economies. Using a 2-Stage Least Square estimation technique, the findings confirm that institutional quality is a crucial factor contributing towards financial development in emerging economies. In yet another study, Khan *et al* (2022) examine institutional quality and financial development in 189 developing and emerging countries. They find that institutional quality is key requirement for financial development in these countries. The study specifically mentions that controls on corruption, regulatory quality, and political facilitate financial development. Abaidoo and Agyapong (2022) reinforces the finding that institutional quality is essential for financial development in SSA economies. Based on the Limited Maximum Likelihood estimation techniques they establish that enhanced institutional quality improves the pace of financial development.

Although most of the researchers focusing only on finance and institutions do not involve data on economic growth, they still assume that financial development propels economic growth. Nonetheless, the literature provided above clearly shows that the interlinkages of institutions and finance, institutions and growth, and finance and growth are not that seeming. As a result, it is necessary to test the intermediating hypothesis of institutional quality between finance and growth by postulating that institutions expedites financial development, which then improves economic growth in Africa. Correspondingly, institutions directly impact on economic growth and this effect is further enhanced when the economy experiences some financial development. This study is interested in examining whether institutional quality and financial development are determinants responsible for differences in the level of economic growth in SSA.

Institutional Quality, Financial Development and Economic Growth

Strong institutions strengthen the credibility of the financial sector and raise the confidence levels of local and international investors. As alluded to in the literature discussed above, robust, and well-run institutions curtail corruption, protect property rights of investors, enforce contractual terms, and creates an environment conducive for the implementation of sound financial and macroeconomic policy management. Asante *et al* (2023) undertook to verify if institutional quality matter on relationship between financial development and economic growth in SSA. They use 29 countries as a case study, drawing data from 2000 to 2019, and applying the systems Generalised Moments methods. They find that the positive effect of financial development on economic growth is magnified when institutional quality was reinforced. Analogous results are reported in the case of South Asia. Ahmed *et al* (2022) evaluate the effects of institutional quality and financial development on sustainable economic growth over the period 2000 to 2018. Based on panel cointegration tests, fully modified least squares, and dynamic ordinary least squares, the researchers conclude that financial development and institutional quality are the driving force for sustainable growth South Asia. This is also proven by Pradhan *et al* (2023) who show that the three variables complement each other in short run. In the long run, financial development, and institutional quality boost economic growth, with institutional quality playing a greater role than financial development.

However, Appiah and Frowne (2020) find inconclusive results when they apply a similar study the ECOWAS countries, a subregion of the SSA. Their study concentrates on 15 merging countries with data from 1996 to 2017 and applied 2-step systems Generalised Moments Method. They conclude that financial development has no significant impact on economic growth in region, and that institutional quality variables have opposing effects on growth. Direct control of corruption slows down growth, while regulatory quality accelerates it. It can be seen from this finding that the debate on institutions, finance, and growth is far from over. The current paper contributes to this ongoing debate by paying attention on differences in income levels of countries in the SSA region and investigating if financial development and institutional quality have any effect on economic performance between this dividing line.

Research Methodology

Estimation technique and Model Specification

The study employs an autoregressive distributed lag (ARDL) model in testing relationships. This model takes care of any lags for both dependent and independent variables. The model works best with stationary variables or I(0) and those that are stationary after first differencing or I(1). The presence of the latter would require that we test for cointegration. The ARDL model is dynamic and tests for both long and short run relationships. With panel data there are three methods for estimating the average long run effects (Hsiao et al, 1999). The first method is the mean group (MG) which involves estimating separate regressions for each group and averaging the long run effects. The second method involves pooling separate regressions by applying a common slope. This allows the use of fixed or random effects pooled regression to estimate long run linkages, known as the dynamic fixed effects (DFE). The third method involves estimating aggregate time series regressions based on group averages (PMG). Pesaran et al (1999) show that the PMG allows short run coefficients to vary across countries while maintaining the same long run coefficients. It is mainly applicable with the Solow growth model that assumes countries being exposed to similar technologies and hence long production functions. It is best applied where variables are I(0) or I(1) and is suitable where cross sections and time frames are large. However, Pesaran et al (1999) opine that it can still be applied where panels have small periods and cross sections. Hausman specifications would need to be applied to choose between PMG and MG. The former is more efficient than the latter where assumptions for homogeneity are valid. The study applies this model and all variables are defined in Table 1:

$$GDPG_{it} = \gamma_i + \sum_{j=1}^p \beta_0 GDPG_{i(t-j)} + \sum_{j=0}^q \beta_1 CPS_{i(t-j)} + \sum_{j=0}^q \beta_2 BM_{i(t-j)} + \sum_{j=1}^p \beta_3 DS_{i(t-j)} + \sum_{j=0}^q \beta_4 REM_{i(t-j)} + \sum_{j=0}^q \beta_5 POLITY_{i(t-j)} + \sum_{j=1}^p \beta_6 EFI_{i(t-j)} + \mu_{it} \quad (1)$$

Where γ is a constant and β are parameters to be estimated; i and t represent country and time components. The error correction term (ECT) is obtained by re-parameterization of equation (1) to obtain,

$$\Delta GDPG_{it} = \gamma_i + \delta_i (GDPG_{i(t-j)} - \phi_1 CPS_{i(t-j)} - \phi_2 BM_{i(t-j)} - \phi_3 DS_{i(t-j)} - \phi_4 REM_{i(t-j)} - \phi_5 POLITY_{i(t-j)} - \phi_6 EFI_{i(t-j)}) + \sum_{j=1}^{p-1} \phi_1 \Delta GDPG_{i(t-j)} + \sum_{j=0}^{q-1} \phi_2 \Delta CPS_{i(t-j)} + \sum_{j=0}^{q-1} \phi_3 \Delta BM_{i(t-j)} + \sum_{j=0}^{q-1} \phi_4 \Delta DS_{i(t-j)} + \sum_{j=0}^{q-1} \phi_5 \Delta REM_{i(t-j)} + \sum_{j=0}^{q-1} \phi_6 \Delta POLITY_{i(t-j)} + \sum_{j=0}^{q-1} \phi_7 \Delta EFI_{i(t-j)} + \mu_{it} \quad (2)$$

The short and long run coefficients respectively, are ϕ and φ are and the speed of adjustment is δ .

In testing for multicollinearity, the study employs Pearson correlation to estimate the size of coefficients for independent variables. In testing for stationarity, the study employs the method by Im, Pesaran and Shin (IPS) (2003). Cointegration is tested using methods by Westerlund (2006) and Kao (1999). In testing the hypothesized relationships, the study considers the probability value (p-value) of the coefficients of explanatory variables. Once the p-value is below 0.05, the variable is said to be significant in explaining the dependent variable. The importance of institutional quality on the relationship between financial development and growth is determined by considering the changes in the p-values and sizes of coefficients.

Data and Variables

The study employs annual data obtained from World Bank for the period 1975 – 2020 for thirty (31) countries in SSA. The World Bank database provides standard definitions of all variables, except institutional quality variables, and these have been adopted in this study. All variables from the World Bank are provided as percentages of GDP. The sample period is chosen based on availability of data and relevance. Variables are selected based on their usage in literature and their applicability in this context. The dependent variable is the annual percentage of growth in GDP which is captured as GDPG (Boamah et al, 2018). The main independent variables are the two measures of financial development namely broad money (BM) and domestic credit to the private sector by banks (CPS) (Demetriades et al, 2016, Takyi and Obeng, 2013). This is coupled with two measures of quality of institutions (Azam et al, 2021, Salman et al, 2019) namely economic freedom of the world index (EFI), as provided by Fraser Institute and POLITY2 obtained from Polity IV Project. The EFI captures the degree of economic freedom underlying five aggregate components (areas) ranging from government size, legal system and property rights, sound money, regulation, and freedom to trade internationally (Gwartney et al., 2022). Its importance anchors on the characterization of a country's effort towards securing private property protection, contract enforcement and a stable macroeconomic environment; and is measured annually on a scale of 1 (least free) to 10 (most free). The Polity2 score is derived from the combination of both the democracy and autocratic indices based on a 21-point scale ranging from -10 (strongly autocratic) to 10 (strongly democratic) as a measure of a country's level of democratic institutions. The other control variables include personal remittances received as % of GDP (Perez-Saiz et al, 2019) domestic savings as % of GDP (Nguyen & Nguyen, 2017) and they are both obtained from the World Bank.

They are selected since they also help explain the growth rate of GDP. Table 1 provides definitions of variables and expected signs based on literature as follows:

Table 1: Variables and expected signs.

Variable	Details	Expected sign	References
Growth in Gross Domestic Product (GDPG)	See definitions in World Bank (2023)	-	Bayraktar et al. (2023); Appiah, Li, & Frowne (2020); Boamah et al (2018)
Domestic credit to the private sector by banks (CPS)	See definitions in World Bank (2023)	Positive / Negative	Appiah, Li, & Frowne (2020); Demetriades et al (2016) & Takyi and Obeng (2013)
Domestic Savings (DS)	See definitions in World Bank (2023)	Positive	Ribaj & Mexhuani (2021); Nguyen & Nguyen (2017).
Remittances (REM)	See definitions in World Bank (2023)	Positive	Abdulai (2023); Nepal et al. (2020) Perez-Saiz et al (2019)
Polity 2 score (POLITY)	As defined in section 3.2	Positive	Ahmed et al. (2023); Bayraktar et al. (2023); Gwartney et al (2022)
Economic Freedom of the World Index (EFI)	As defined in section 3.2	Positive	Cervelló-Royo, Deveci & Blanco-González (2023); Gwartney et al. (2022)
Broad money (BM) (BM)	See definitions in World Bank (2023)	Positive / Negative	Bayraktar et al. (2023); Demetriades et al. (2016); Takyi and Obeng (2013)

In this study, countries are divided into 13 low income, giving 585 points of data and 18 middle income countries, giving at least 810 data points. The latter comprises of both lower and upper middle-income countries. Categorizations are based on the World Bank Group country classifications by income level (Hamadeh et al, 2023). Estimations are done using the same models and variables in each category and for all countries. The study makes inference to causality. Joint causality is indicated by the significance of the error correction term, long and short run causality is determined by the significance of coefficients in each panel and strong causality is inferred when all the three indicators are significant.

Findings and Discussions

Descriptive Analysis

Descriptives, Table 2, show that over the period under review, the average credit to the private sector (CPS) stands at 20.72% of GDP. This is an indicator of financial depth. The average growth rate in GDP stands at 3.20% pr annum, the average broad money supply (BM), another measure of financial depth is at 33.44% of GDP, the average level of domestic savings as a percentage of GDP is 10.95 and the remittance inflows stand at 5.46% of GDP on average. The two measures of institutional quality, POLITY and EFI stands at indices of -0.13 and 5.13 respectively. They show that countries in SSA are slowly moving towards establishing democratic institutions and moderate economic freedom. The levels of variability are high for all variables except EFI and GDPG which are consistent throughout. All variables are positively skewed except for GDPG, DS and EFI. All variables are not normally distributed and highly peaked except for POLITY variable.

Table 2: Descriptives - Full sample

Stats	GDPG	CPS	DS	REM	POLITY	EFI	BM
Mean	3.2	20.72	10.95	5.46	-0.13	5.13	33.44
Sd	3.78	20.22	15.51	17.92	6.02	1.2	21.2
skewness	-0.82	3.62	-0.36	9.31	0.12	-0.14	1.56
kurtosis	4.46	20.01	9.68	10.05	1.54	2.91	4.94
N	1712	1713	1713	1712	1713	1709	1713

Source: Extracted by authors from STATA

There seem to be no problem of multicollinearity among the covariates as the correlation coefficients are less than 0.50. Positive and negative relationships are depicted in Table 3a for Low-income countries and Table 3b for Middle income countries.

Table 3a: Correlation – Low-Income

	GDPG	CPS	DS	REM	POLITY	EFI	BM
GDPG	1						
CPS	0.117**	1					
DS	0.187**	-0.045	1				
REM	0.041	-0.087	-0.111**	1			
POLITY	0.195**	0.104**	0.037	-0.071	1		
EFI	0.236**	0.177**	0.183**	-0.081	0.369**	1	
BM	0.113*	0.214*	0.355	0.324*	0.119	0.118	1

*significant at 0.10, **significant at 0.05, ***significant at 0.01

Source: Extracted by authors from STATA

Table 3b: Correlation – Middle Income

	GDPG	CPS	DS	REM	POLITY	EFI	BM
GDPG	1.000						
CPS	-0.040	1.000					
DS	0.039	0.030	1.000				
REM	0.038	-0.084**	-0.482	1.000			
POLITY	0.094**	0.303**	0.001	-0.06088	1.000		
EFI	0.064**	0.366**	-0.038	0.027	0.468**	1.000	
BM	0.061**	0.547**	-0.015	0.069**	0.323**	0.305**	1.000

*significant at 0.10, **significant at 0.05, ***significant at 0.01

Source: Extracted by authors from STATA

It is a standard procedure that we check for unit root which is done using the method by IPS. Results (Table 4) show that all variables are stationary after first differencing except for GDPG, DS and REM. This may mean that there is cointegration among variables.

Table 4: Unit Root

Variable	Low Income		Middle Income		Order
	Levels	First Difference	Levels	First Difference	
GDPG	-2.617***	-6.881 ***	-5.026***	-9.443***	I(0)
CPS	-1.179	-6.111***	-1.595	-6.677***	I(1)
DS	-4.972***	-7.301***	-2.626***	-7.491***	I(0)
REM	-2.072**	-6.298**	-2.285***	-7.791***	I(0)
POLITY	-1.381	-7.848***	-1.426	-6.369***	I(1)
EFI	-1.242	-8.734***	-1.549	-6.563***	I(1)
BM	-0.959	-4.943***	-1.731	-6.907***	I(1)

*significant at 0.10, **significant at 0.05, ***significant at 0.01

Source: Extracted by authors from STATA

To tests for Cointegration the study employs the methods by Westerlund and Kao. Both methods confirm the presence of long run relationships among variables. The variance ratio is 10.96 using Westerlund and the null hypothesis is rejected at 1% level. Using Kao, all the 5 parameters are significant at 1% and we reject the null hypothesis of no cointegration (results can be provided upon request by the authors).

Discussion

The ARDL model is estimated to establish long and short run relationships among variables. In Table 5, the top panel present long run relationships while the bottom panel is for short run relationships. Results are for lower- and middle-income countries. In each group three models are estimated as follows: model 1 comprises all covariates except for institutional quality variables, model 2 has one institutional quality variable and model 3 has both variables. The order in which institutional variables were introduced in the model did not change the results. The final model, A1, is for all countries in SSA having controlled for income level differences. The

speed with which deviations from growth in the short run are corrected in the long run is higher at 87.9%, lower income countries, compared to 70.4% in middle income countries. It confirms the existence of joint causality among key variables in both sub samples.

Findings show that the first measure of financial depth, CPS, has no effect on growth in the short run in both groups of countries and in the long run for lower income countries. The p-values are more than 10% for all coefficients. In the long run, CPS has a negative impact on growth at least at 5% level of significance after including both measures of institutional quality in the middle-income countries. Considering the final model, M3, the study shows that a rise in CPS by 10% results in a fall in GDPG by 0.27%. This result may appear to be outside the expected norm, but a negative impact of financial depth on growth is attributed to adverse effects of systemic banking risks on growth. The probability of such an occurrence is higher as financial development improves which is consistent with a study by Demetriades et al (2016). The negative effect is worsened by high financial fragility which reduces the credit available for long term investments as banks rein in on risks. This result is in line with views found in Ajogbeje (2016). Furthermore, Andrianova et al, (2015) support this assertion that financial deepening as proxied by credit to the private sector show a negative effect on growth. Furthermore, the second indicator of financial deepening, BM, has a negative effect in the short run-in low-income countries which is consistent with Loayza and Ranciere (2006) who find a negative short run relationship between growth and financial intermediation as proxied by broad money supply while no growth is discernible in the long run. The negative effect is explained by the fact that the finance-growth nexus has a threshold effect. At higher levels financial depth negatively affects growth while it has a positive effect at lower levels. It has no effect on the growth rate of GDP in the middle-income countries in both long and short run periods which is consistent with Razia & Omarya (2022).

Remittances have a negative effect on growth in the short run-in low-income countries. This is significant at 10% level. The coefficient increases from 0.481 to 0.492 which means that a 10% increase in remittances, using model L3, leads to a fall in GDPG by 4.92% in lower income countries. This is supported by Perez-Saiz et al (2019) who show that the negative impact on growth comes about as remittances reduce the incentive to work and hence the labour force participation rate. This is further supported by a study Nyasha and Odhiambo (2022) which show that remittances may adversely affect productivity and growth in low-income countries as they are spent on foreign produced products and not invested in productive sectors at home. In the long run our findings are consistent with some past studies (Bucevska, 2022, Oladipo, 2020) which find a positive impact on growth in middle income countries. The same effect is revealed when we employ a sample for all countries which shows importance of the level of development in our analysis. The impact of remittances on growth rises at higher levels of remittances relative to growth. Giuliano and Ruiz-Arranz (2009) argue that remittances enhance growth in less financially developed countries which is consistent with our context. In this way they enhance growth by improving the allocation of capital and substituting for poor financial development.

The positive impact on growth for domestic savings has been confirmed in both low-income and middle-income countries. In the short term their influence on growth is insignificant using the sample for low-income countries and significant for the middle-income group and the overall sample. For middle income countries, the short run coefficient rises as we include institutional quality variables in the model. In the long run the coefficients continue to show signs of rising, and they are significant at 5% level compared to the 10% level under the short run. The positive influence of domestic savings on growth is confirmed by past studies (Aghion et al, 2016, Nguyen & Nguyen, 2017, Bayar, 2014) which show that savings enhance the ability to create capital and improve innovation which enhances growth in the long term.

The study also examines the influence of institutional quality variables on growth. Findings show that in the short run the economic freedom index (EFI) has no significant effect on growth. On the other hand, the other measure of institutional quality, POLITY, has significant and positive effect on growth in short run-in low-income countries. It is also observed that both measures of institutional quality enhance growth in the long term for all countries at different income levels. This shows that efforts by countries to secure property rights and enforce contracts in a stable environment improves growth. More so, an improvement in democratic institutions may enhance growth. Coefficients are higher in low-income compared to middle income countries which shows the significance of institutional quality for countries in this category. This slightly contradicts findings by Azam et al (2021) which show that institutional quality has a huge positive impact in middle-income countries than lower income countries. The differences could be explained by sample used and country classifications adopted. Our findings are supported by previous studies (Salman et al, 2019, Nawaz et al, 2014) which show that countries at varying levels of development experience different levels of significance on the impact of institutions on growth. Domestic institutions are efficient in promoting growth.

Table 5: Empirical Models

Lower Income Countries				Middle Income Countries			ALL
Long Run Models							
Models	L1	L2	L3	M1	M2	M3	A1
CPS	-0.008	0.011	0.018	-0.030***	-0.031***	-0.027**	-0.021**
DS	0.113	0.049**	0.054**	0.038**	0.034**	0.035**	0.046***
REM	0.069	0.022	-0.016	0.022***	0.025***	0.024***	0.029***
BM	0.011	-0.005	-0.003	0.012	0.012	0.010	0.008
POLITY		0.196***	0.195***		0.040*	0.041*	0.099***
EFI			1.416***			0.872**	0.993***
Short Run Models							
ECT	-0.837***	-0.871***	-0.879***	-0.711***	-0.710***	-0.704***	-0.748***
CPS	-0.011	0.052	0.051	-0.027	-0.019	-0.015	0.03
DS	-0.007	0.019	0.021	0.064*	0.060*	0.074**	0.055*
REM	-0.481*	-0.495*	-0.492*	-0.130	-0.100	-0.072	-0.205*
BM	-0.152***	-0.158**	-0.174**	0.001	-0.003	0.008	-0.044
POLITY		0.105**	0.120**		0.102	0.030	0.061
EFI			-0.593			0.134	-0.72
C	1.907***	2.656***	2.556***	1.979***	2.01***	1.930***	2.01***

*significant at 0.10, **significant at 0.05, ***significant at 0.01

Source: Extracted by authors from STATA

Conclusions

This study sought to examine the impact of financial development and institutional quality on growth. The study employed a sample of 13 low-income countries and 18 middle income countries. Data was obtained from the World Bank and covered the period from 1975 to 2020. The study employed an ARDL model to establish both short and long run dynamics. Analysis was conducted in way to understand relationships in the two sub samples. The study confirmed both short and long run causality from financial development and institutional quality to growth in both sample groupings.

The important findings in this study are that institutional quality enhances growth in both low- and middle-income countries in the long run. This notable conclusion shows that the direction of the impact of institutional quality is the same while the magnitude of the impact is different within the two sampled categories. It plays a more significant role in low-income countries compared to middle income economies. This has implications on the on-policy considerations. For example, by strengthening the quality of institutions, low-income countries may catalyse their rate of development. More so, they benefit more as they develop financial markets being underpinned by such strong institutions. The study brings out potential financial fragility and systemic risks in financial institutions among countries in sub-Saharan Africa. Such institutions are bound to suffer more from minor shocks in their financial make up and global shocks.

The study revealed that different sets of institutions need to be developed in countries at different levels of development. This is because the importance of institutional quality on the link between financial development and growth is clearly different within the sampled groups. More so, economic freedom index has a huge impact on growth compared to the POLITY2 variable. This is more pronounced in low-income countries. It suggests that low-income countries can quicken the pace of growth and catch up with middle income economies by having an efficient size of the government, strong legal systems and effective property rights and regulations on the external environment.

Policies that enhance the quality, consistency, and uniformity of legal reasoning in judicial decisions are ideal. These could be achieved through training, facilitation of dialogue on reforms and independence and improving administrative duties and ethical codes. Building political institutions that improve checks and balances and establishment of the rule of law which cannot be manipulated by policy makers is also critical as suggested in this study to drive growth. Individual economic agents need protection against expropriation of property which is promoted by having secrecy and anonymity to private economic decisions. Reducing the risk profile for investments may enhance the flow of credit to the private sector by financial institutions. This could be achieved by having the private sector to set clear investment goals, review their risk tolerance levels and not putting their finances received from financial institutions in one asset class or single projects. In addition, strengthening government policies, developing of infrastructure in financial markets and ensuring economic and social stability are critical in improving credit to the private sector to enhance growth. Specifically, it is recommended that countries in SSA monitor the level of financial development. This must be kept at the known thresholds to avoid the adverse impact of higher levels of financial development on growth beyond the optimal level.

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