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THE IMPACT OF GOVERNANCE STRUCTURES ON ECONOMIC GROWTH IN AFRICA: A PANEL DATA ANALYSIS OF 47 AFRICAN COUNTRIES

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Abstract. Major international institutions like the World Bank, African Union, and International Monetary Fund have made the development of robust governance systems a "sacred utterance" since the 1990s. Our study aimed to refute this common thinking by examining how governance structures have affected the expansion of the financial market in 47 African countries from 2008 to 2019. Using the availability of venture capital as a proxy for financial market development, our article departed from existing literature which used stock exchange characteristics as benchmarks for growth in the financial market. The governance variables comprise the six global governance indices: control of corruption, government effectiveness, political stability, regulatory quality, the rule of law, and voice and accountability. The model's control variables include GDP per capita, inflation, and trade openness. Our finding suggests that a great quality governance climate is significant in explaining the growth of the financial market in Africa using the generalized method of moments (GMM) methodological approach with corrected standard errors. Considering these findings, our research makes the case that solid institutional frameworks might encourage the degree of financial systems growth in Africa. Therefore, the financial development rate in the African region will be significantly influenced by improving the quality of governance through strengthening legal and institutional frameworks to facilitate financial inclusion.

Keywords: governance structures, financial market, Africa, corruption, political stability, rule of law, control of corruption, financial market development, voice and accountability.

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Introduction

What are the inspirational components that influence the financial development of a country? Several scholars have raised this question, and thus financial development and its impact on

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economic growth have become an exciting topic of discussion among researchers. Financial development contributes to the financial stability of nations by enhancing the effectiveness of financial markets and the impact of financial intermediaries. It also enables widespread and extensive access to funds and financial sectors. Thus, financial development may contribute significantly to promoting national welfare and economic growth through financing and technological advancement (Sayilir et al., 2018; Chinoda & Kapingura, 2023). Along with many other things, development of financial market is one of the essential precursors to economic progress and the end of poverty (Abubakar et al., 2020). According to Sayilir et al. (2018), assuring the monetary sector's accomplishment and the efficacy of financial intermediaries encourages financial depth and makes capital and other financial services more accessible. According to the research by Agyemang et al. (2018), a financial sector's ability to pool household savings and mobilize foreign capital for profitable ventures in a country can help that economy expand economically.

Without a robust financial economy, profitable initiatives may go unrealized, significantly slowing growth from what it ought to have been. Notably, the finance industry aggregates funds from families or individuals and efficiently distributes them to individual business owners. According to Appiah-Kubi et al. (2022), when it comes to initial venture, a robust financial market within an economy facilitates risk distribution among households and ensures the availability of viable investment opportunities. The second action often entails information gathering, choosing capital initiatives, and keeping an eye on venture creation (Agyemang et al., 2019; Mahran, 2023). However, it is suggested that the effectiveness with which the financial industry performs the above two crucial tasks depend on how robust an economy's governance systems are (Sayilir et al., 2018; Agyemang et al., 2019; Abubakar et al., 2020; Appiah-Kubi et al., 2021). According to Sayilir et al. (2018) and Appiah-Kubi et al. (2021), Governance includes the customs and structures that a nation uses to exert its authority. The method by which policymakers are chosen, supervised, and modified; the capability of the authorities to successfully establish and implement regulations; and the reverence of individuals and the government for the establishments that regulate socioeconomic relationships between them.

Due to the distinctive characteristics of financial contracts, scholars like Agyemang et al. (2018, 2019), Appiah-Kubi et al. (2020a), Chinoda and Kapingura (2023) have recently emphasized the significance of robust institutional frameworks and their influence on financial markets. To guarantee that the rights and restrictions of stakeholders to contracts are adequately enforced, there need to be robust governance frameworks and proper legal frameworks. Treaties would likely become untenable in the absence of these solid institutional arrangements because issues like systemic risk result from incomplete knowledge (Adams et al., 2019b; Agyemang et al., 2018, 2019; Appiah-Kubi et al., 2020b). In contrast, countries with more established frameworks benefit from well-developed financial institutions that support the open interchange of data among parties to contracts (Agyemang et al., 2019). Furthermore, any economy needs vital establishments to provide a foundation upon which financial markets may direct resources toward financing profitable endeavours (Agyemang et al., 2018, 2019; Amusa & Onyinola, 2019; Appiah-Kubi et al., 2020a). Therefore, it is crucial to understand how governance structures and the growth of financial markets are related.

The earlier works of Agyemang et al. (2018, 2019), Adams et al., (2019a), Dalwai and Mohammadi (2020) provide a formalized assessment of the influence of governance frameworks in the growth of financial markets. These works assert a favourable connection between the quality of governance structures quality and the growth of financial markets. The evolution of the financial system and the significance of institutional or Governance structures have been studied more lately by the following scholars like (Adams et al., 2019b; Liu et al., 2018; Pegkas, 2019; Hamdan et al., 2020; Modugu & Dempere, 2020). Studies from developed countries show that the development of financial markets frequently correlates with the stability of governance or institutional frameworks in countries (Mira & Hammadache, 2017; Park & Shin, 2017; Ramadhan, 2019; Al-Naser, 2019; Abdelbary & Benhin, 2019; Onifade et al., 2020; Shittu et al., 2020). Unfortunately, the impact of governance structures on the growth of financial markets has not received enough awareness in Africa. This paper aims to address the existing gap in the literature by examining the impact of governance structures on financial market growth in Africa. By assessing this influence, the study intends to provide valuable insights and contribute to the understanding of the topic.

Many cross-country studies conducted in Africa that attempt to investigate how institutional or Governance frameworks affect the growth of financial markets favor equity market characteristics which exclude equity market performance indicators (Altunbaş & Thornton, 2019; Shittu et al., 2020; Modugu & Dempere, 2020; Khan et al., 2020; Demir et al., 2022). While the African equity market has experienced significant advancements since the early 1990s, it is important to note that this progress does not necessarily imply the overall health of even the most developed African equity markets (De Haan & Sturm, 2017; Asamoah et al., 2019). Only a few equities that make up a sizable portion of the overall market valuation are traded in most African stock exchanges. Apart from these heavily traded equities, there have been significant informational blunders and disclosures for additional stocks. Additionally, governmental agencies' oversight practices are frequently insufficient (Agyemang et al., 2018). Due to the low amounts of shares listed on the continent, it is uncertain if the stock market can improve the usage of financial resources in Africa (Agyemang et al., 2018, 2019). Given these issues surrounding the growth of African nations stock exchange, Agyemang et al. (2018) have argued that using other predictors closely related to the financial industry could be helpful. The banking system is the primary channel through which surplus units provide funds to deficit units in most developing countries, especially in Africa. This study contributes to the existing body of research on the relationship between governance structures and financial market growth in Africa by adopting previously underutilized financial market advancement variables. Through this approach, the impact of governance structures on financial market growth are examined, offering valuable insights. The above motivation informs the hypothesis of the study, that is, good governance structures improve the development of financial market in Africa.

The novelty of this study and the contribution towards the body of literature thus has four parts. First, by utilizing one of the significant indicators of financial market growth – the availability of venture capital – this study adds to the body of research on the relationship between governance frameworks and the development of financial markets. There are four reasons why this variable is being focused on. First, the earlier literature by (Agyemang

et al., 2019; Altunbaş & Thornton, 2019; Shittu et al., 2020; Modugu & Dempere, 2020); that already exists on the growth of financial markets pays little or no attention to the availability of venture capital. Second, this study decision agrees with the new or emerging knowledge on the growth of the financial sector in emerging countries, given the specific focal point on African economies that this study adopts. Third, the significant flaws in the growth of the exchange market in African countries, as shown by prior studies by Agyemang et al. (2018, 2019), justify the study's attention. Lastly, as shown by the observational data from this study, the independent variable is significant since it helps transfer funds from productive investments to shortfall units for business growth in African countries. The results of this study are thus anticipated to act as a guide for policymakers as they establish institutions that may improve the development of the financial market in African countries. The existing literature on the connection between governance structures and financial market growth is reviewed in the next section of our article. The research approach is then described, and the conclusions are addressed. Conclusions are drawn, along with a few suggestions for practice and policy.

1. Literature review

For our analysis, it is crucial to evaluate the empirical literature on the impact of effective governance systems on financial development. As a result, this part aims to evaluate additional academic papers on the institutional and governance factors that influence the growth of the financial sector. The part will be reviewed considering the economic and governmental factors examined by previous studies that influence the evolution of financial economies. Research has been conducted to explore the impact of state governance on the operation of economic markets by Cooray et al. (2017), Alexiou et al. (2018), Agyemang et al. (2018), Balachandran and Williams (2018), Cumming et al., (2018), Agyemang et al. (2019), Samanta and Johnston (2020), Guha et al. (2020) have demonstrated that the growth of an effective finance market depends on the quality of institutions. Based on the study conducted by Cumming et al. (2018) made the case that sectors of the economy with solid institutional structures that give debt holders primacy in receiving the total claims against companies operate the economic sector more efficiently than those with weak institutional structures that provide little security to debt holders. Additionally, Balachandran and Williams (2018) show how the strength of a nation's legal framework affects the growth of its financial industry. Bajaher et al. (2022) indicate that firms and individuals have limited access to finance and make minor contributions in economies with inferior legal systems.

Although it is clear from the literature that private property and the judicial framework are essential for a fully operational financial sector, some scholars have indicated that the critical function of national governance or institutional arrangements in adjusting policies for capital markets and their advancement should not be disregarded (Agyemang et al., 2018; Antonio et al., 2019; Muktadir-Al-Mukit & Keyamoni, 2019; Cormier et al., 2019; Samanta & Johnson, 2020; Appiah-Kubi et al., 2020a). The claim is that countries with weak financial markets, which may make it extremely difficult for rivals to access financing, are typically those with weak governance or institutional structures, which include control of corruption, government effectiveness, political stability, regulatory quality, and the rule of Law and

voice and accountability. The research conducted by Agyemang et al. (2019) investigated this subject and found that governance institutions, particularly bureaucratic stability, play a significantly more prominent role in explaining the extent of financial and economic growth compared to legal structures.

Appiah-Kubi et al. (2020b) investigated those numerous aspects of an economy, including international investment, innovation, and economic disparity, are significantly impacted by corruption. Additionally, the degree of corruption present in an economy affects how well the financial sector can function. Corrupt financial markets may damage savings and discourage investors. An economy may become more vulnerable to financial crises as a result. The financial sector will likely be under criminal control in an economy with widespread corruption; therefore, if corrupt activities cause individuals to pull their money when encountering insider deals and exploitative and unscrupulous finance industry authorities, support for strengthening financial markets may suffer. In their research of sixteen West African countries, Demir et al. (2022) discovered that corrupt practices impede the degree of financial market growth within those countries. Furthermore, Liu et al. (2018) explore the connection between financial market growth and governance, and they discovered that the amount of corruption seriously hampers a country's economic degree of growth in the financial economy.

According to Appiah-Kubi et al. (2022), the government's effectiveness may also impact how well an economy's financial system operates. The effectiveness of government e demonstrates a nation's competence to create and carry out wise policies (Samanta & Johnson, 2020). Additionally, it examines the effectiveness of state bureaucracy and service delivery and the public service's independence from political clout, capacity, and dedication to the nation's policies. According to the analytical perspective of government efficacy (Cormier et al., 2019), policymakers may help resolve market distortions and promote the growth of the financial system by decreasing credit costs and expanding access to capital. The amount of growth in the financial market in an economy has been shown in the literature to be influenced by political stability and the rule of Law as a national-level governance framework (Agyemang et al., 2018; Appiah-Kubi et al., 2021). Rule of Law has three crucial aspects in the financial markets. It entails political and legal protections for civil freedoms and property ownership. Additionally, it guarantees that a nation's court system is reliable, preventing viciousness and lowering processing fees. The third component of the legal system, judicial security, assumes that nationals may set their objectives within the confines of reliable laws that will not be changed indiscriminately. According to Nawaz (2019), the three characteristics increase the willingness of financial intermediation to adopt creative financial arrangements in the financial markets. Furthermore, the capacity of a government to develop efficient and reliable laws and rules to control how the private industry operates in a nation is known as institutional quality (Agyemang et al., 2019; Appiah-Kubi et al., 2021). When privatization is encouraged in underdeveloped countries, competent private sector regulation is a surefire method to ensure the industry's survival (Appiah-Kubi et al., 2022). According to Boateng et al. (2022), the degree of financial market growth in a country is influenced by the quality of laws and regulations.

Additionally, it is anticipated that increased voice and responsibility would lead to an economy's financial system operating as efficiently as possible (Agyemang et al., 2019). When lesser firms and households lack power and cannot grip the managers accountable, they may opt to divert their assets elsewhere. This could have a significant impact on the performance of the capital sector within the economy. This is one of the leading causes of unproductive financial market functioning (Agyemang et al., 2018; Sayilir et al., 2018; Boateng et al., 2022; Khalid et al., 2022). The existing literature has extensively studied the association between governance structures and the development of financial market, focusing primarily on developed countries and equity market characteristics. However, there is a noticeable research gap when it comes to the impact of institutional or governance structures on the growth of financial markets in the African context. Additionally, the current studies do not thoroughly examine the availability of venture capital as a benchmark of development of financial market.

This study intends to fill the research gap by assessing the influence of governance structures on financial market growth in Africa. It will focus on one of the most significant indicators of financial market development, the availability of venture capital, which has been largely overlooked in previous studies. This study investigates the impact of institutional structures on financial market development in Africa, employing an underutilized indicator for analysis, the study will contribute to the enrichment of knowledge. The literature surveys shown above emphasize the importance of governance and institutional frameworks to the economic growth of the financial sector. Most of the limited empirical studies on the link between governance frameworks and the maturity of the financial markets suggest that the former has a beneficial impact on the latter. However, most of this research used stock market data as a stand-in indicator of the degree of macroeconomic performance. It is essential to remember that most developing countries lack sophisticated stock markets, making it problematic to use stock exchange characteristics as surrogates for financial market growth. To test experimentally if a similar finding can be achieved in the setting of African countries, our current study tends to employ other financial market development variables.

2. Methodology

The study used panel data from forty-seven (47) African countries from 2008 to 2019 to accomplish our goals for this study. For this study, the following 47 African countries were chosen at random: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Cameroon, Central African Republic, Congo Democratic, Republic of Congo, Chad, Cote d'Ivoire, Egypt, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya. Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, and Zimbabwe are among the countries that share this list. Due to data availability, the study's countries and time frame were chosen. Based on Table 1 beneath, the information was obtained from an extensive collection of national-level governance evaluations by the World Development Indicators (WDI), a database the World Bank developed on the evolution of governmental systems in different countries. We concentrated on the Global Competitiveness Report database, and Kaufmann et al. (2011) and

Croissant and Pelke (2022) established governance metrics for the World Bank. The venture capital availability was used as a stand-in measure for the growth in the financial market.

Data on the availability of venture capital is based on the financing given to businesses and entrepreneurs, which can be given at various phases of development; however, it frequently requires startup and early-stage investment. The governance or institutional variables include the control of corruption (CORR), government effectiveness (GOVEF), political stability (POSTA), regulatory quality (REGQ), the rule of law (RULAW), and voice and accountability (VOA). These are the variables we chose to include in our estimation. The pooled governance indexes are composed of unprocessed data that has been gathered from several sources of data, including the public and private sectors, non-governmental organizations (NGOs), multinational corporations, residents, and credit bureaus, among others. The spectrum of the World Competitiveness Report's data from the opinion poll conducted by the World Economic Forum (WEC) is –2 to 2. The result is that a nation's ability to control corruption is atrocious if it receives a score of –2, while excellent corruption control is indicated by a rating of 2. Even though the data are derived from previous legislation, these data sets were chosen since they contain both the descriptive and analytical characteristics of the current economic climate.

The financial market development is said to be significantly influenced by many other factors. As a result, leaving out such factors could inadvertently affect how institutional, or governance arrangements and the growth of the financial market interact. The study added inflation, trade openness, gross domestic product per capita control variables. This study considered real gross domestic product per capita because previous studies by Agyemang et al. (2018), Phiri et al. (2020), and Appiah-Kubi et al. (2021), Azam (2022) had shown that it had a favorable impact on the level of financial market development. Furthermore, research by Agyemang et al. (2019) and Singh and Pradhan (2022) has shown that inflation has a beneficial impact on the degree of financial market development in the literature. Additionally, trade openness is a factor that has been used in previous research and has been shown to have a beneficial effect on the degree of the development of financial market (Appiah-Kubi et al., 2022; Singh, 2022).

Panel data were described by Arellano and Bond (1991) as the pooling of observations on various observational units throughout time. Some drawbacks of utilizing only cross-sectional or time-series data are overcome by this (Arellano & Bond, 1991; Arellano & Bover, 1995). Establishing the link between institutional or governance frameworks and the degree of the financial market's growth is the empirical specification's goal. Consequently, the study used the modelling approach described below:

$$FMD_{it} = \beta_0 \left(FMD\right)_{i,t-1} + \beta_1 \left(CORR\right)_{it} + \beta_2 \left(GOVEF\right)_{it} + \beta_3 \left(POSTA\right)_{it} + \beta_4 \left(REGQ\right)_{it} + \beta_5 \left(RULAW\right)_{it} + \beta_6 \left(VOA\right)_{it} + \beta_7 \left(ControlVar\right)_{it} + v_{it}. \quad (1)$$

With i – country (Algeria, Angola, Benin, …… Zambia and Zimbabwe, etc.) t – 2000, 2001, 2002, … 2019. β_0 …… β_7 are coefficients to be assessed using the Generalized Method of Moment (GMM). v_{it} – is the error term, i and t addresses country and time respectfully. $(FDI_{i,t-1})$ represents the lag of Foreign Direct Investment. $(GOVEF)_{it}$ represents Government Effectiveness. $(POSTA)_{it}$ addresses Political Stability. $(REGQ)_{it}$ addresses Regulatory Quality.

$(RULAW)_{it}$ addresses Rule of Law. $(CORR)_{it}$ represents control of Corruption. $(VOA)_{it}$ – addresses Voice and Accountability. $(ControlVar)_{it}$ – addresses a vector of control variable.

In this work, the study employed the dynamic panel generalized method of moments (GMM) estimators to predict the model. Arellano and Bond (1991), Holtz-Eakin and Rosen (1990), Arellano and Bover (1995), Blundell and Bond (1998) and Blundell and Bond (2000) all contributed to the development of this approach. As a result of the necessity to address simultaneity distortion and nation impacts, we used the dynamic panel estimator. The model utilizes the dynamic panel Generalized Method of Moments (GMM) estimators, as outlined by Arellano and Bond (1991). To eliminate the national impact, the model is frequently transformed into a first-difference model. In this study, we employ lagged values of our predictor variables as instrumental variables in order to mitigate the issue of bias. However, it has been claimed that if the explanatory variables are highly persistent, this type of modelling will likely provide false findings (Arellano & Bover, 1995). This is true of institutional frameworks, which endure after they become ingrained in society (Agyemang et al., 2018; Appiah-Kubi et al., 2021). Nevertheless, a system GMM estimator that combines the level and difference equations was proposed by Arellano and Bover in 1995. The independent variable lagged differences are then used as scope control for a level equation. There are two (2) system GMM estimators: one- and two-step. Since the two-step estimator is theoretically more effective than the one-step estimator, we used it in our study. The GMM system is suitable for this task for two key reasons. First, the endogeneity of the independent variables may be controlled using the GMM approach. The institutional arrangements are presumably endogenous, either because of feedback from the growth of the financial markets to institutional quality or because of shared impacts of neglected factors on the development of the financial markets and governance arrangements. According to Roodman (2006), it is suggested for situations where a study's time duration is limited, with quite a few participants. The study's time frame is only 12 years, yet we include several African countries. To assess the presence of second-order serial correlation in the disturbance term, we utilized the Arellano and Bond test (Arellano & Bond, 1991) and the Hansen J test of over-identification constraints. These tests were employed to verify the consistency of our estimates. By contrasting sample analogues of the estimation's moment conditions, the Hansen J test evaluates an instrument's reliability. Furthermore, it means that the instruments are reliable and the model is correctly defined if we are unable to reject the null hypothesis of the Hansen J test. Most likely, the disturbance term will be intentionally coupled in a first-order sequence. However, second-order serial correlation is a symptom of unrecognized heterogeneity.

3. Results and discussion of findings

In this part, the study discusses the findings from our empirical investigation. To study the available data, the study first give summary statistics. Second, this study provides an empirical analysis to ascertain the correlation between governance frameworks and the level of development of the financial market within the African nations under investigation.

3.1. Descriptive statistics

The descriptive statistics are shown in Table 2. Financial market development is 19.37 on average. Together, these figures show that the amount of growth in the financial market in the African countries we examined is relatively modest. Comparatively speaking, the study reports more observations than the existing literature examined, such as Agyemang et al. (2018), which employed a comparable dataset. The sampled countries' average government effectiveness score was –0.685. A mean of –0.53 is found for political stability, with minimum and highest values of –2.148 and 1.219, respectively. For an average country in the study, the quality of regulation was –0.626. The means for enforcing the law and combating corruption are –0.616 and –0.609. Average voice and accountability were –0.565, with maximum and minimum observations being –1.734 and 0.979, correspondingly.

3.2. Discussion of GMM results

The paper provides and analyzes the study findings in this section. Based on the governance frameworks and financial market growth in Africa, our findings let us reach our study goal using the dynamic panel generalized technique of moments (GMM). It should be noted that Tables 1 and 2 have different numbers of observations because, as Arellano and Bover (1991) describe, regression analysis ignored extreme values. A study by Arellano and Bover (1995) explained that the omitted variables in the model argument are delineated and condensed. Table 2 summarizes the findings of the correlation between governance frameworks and our surrogate for financial market growth (availability of venture capital). The tables contain seven prediction models in total. Estimates based on the simple average of different institutional indicators are provided by the regression models described in the tables. These indicators (models 1–7) include the ability to regulate corruption, political stability, regulatory quality, the rule of law, voice, and accountability.

Table 1. Descriptive statistics of variables (2008–2019) (source: authors' own computation, 2022)

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial market development					
Availability of venture capital	552	19.377	8.478	1	43
Governance structures					
Control of corruption	552	–0.609	0.639	–1.816	1.039
Government effectiveness	552	–0.685	0.602	–1.922	1.057
Political stability	552	–0.530	0.845	–2.148	1.219
Regulatory quality	552	–0.626	0.574	–2.032	1.127
Rule of law	552	–0.616	0.597	–1.852	0.996
Voice and accountability	552	–0.565	0.715	–1.734	0.979
Control variables					
Gross domestic product	498	2159.291	2739.429	258.629	16989.959
Inflation	552	8.433	24.610	–9.978	513.907
Trade openness	497	70.005	32.48	16.141	311.354

Table 2 findings show that the lagged dependent of financial market development is statistically significant, demonstrating the suitability of the proposed GMM approach as an estimator. Consequently, the study may rely on empirical findings to conclude statistics. Additionally, it implied that countries that had an increase in their financial development ratio in a particular year would likewise have an increase in their percentage the following year. According to our GMM analysis (Table 2), The results show that institutional or governance structures play a direct role in promoting the growth of the financial market in Africa, as per models 1–7. We uncover resounding proof that the growth of financial markets and institutional or governance frameworks are positively correlated. To advance the development of financial markets in our sample of 47 African nations, all of the governance or institutional framework's components – corruption control, effective administration, political stability, quality of regulations, rule of law, voice, and accountability – appear to be crucial. The results signify that the institution of good governance structure in any African country foster financial market development through venture capital. Investor are unlikely to invest in corrupt and politically unstable countries since the risk of losing investment is very great. Likewise, if accountability is transparent and structures are well regulated, it boosts the confidence of market participants to engage in trade without hesitation. The reality of the matter is, weak civil service systems, corrupt administrative agencies, and bureaucratic bottlenecks are the foundation of the African governance structure thereby resulting in a strong deficiency in the financial market in Appendix.

Our findings also demonstrate that the propensity of violence and crime, including the effectiveness of enforcement of contracts, private property, and faith in the laws of society, have a substantial impact on financial development in African economies. The findings are consistent with earlier studies by Cooray et al. (2017), Badeeb and Lean (2017), Alexiou et al. (2018), Agyemang et al. (2018), Balachandran and Williams (2018), Cumming et al. (2018), Agyemang et al. (2018, 2019), Samanta and Johnston (2020), Apergis and Apergis (2019) and Appiah-Kubi et al. (2021). According to the above existing studies, poor institutional or governance frameworks that African countries have established may have a negative impact on the growth of the financial markets in such countries. The African countries' financial underdevelopment results from corruption, political instability, ineffective government actions, unreliable regulatory framework, the weak rule of law, and lack of influential voice and accountability via government operations.

The coefficients on GDP per capita show a substantial driver of the degree of growth of the financial market in our sampled 47 African countries, according to our control variables in the specification of the level of the growth of the financial market in all models (1–7). Financial development was positively and significantly impacted by growth in GDP per capita. This finding validates the theories put forward in the research by Agyemang et al. (2019), Phiri et al. (2020), and Appiah-Kubi et al. (2021) and Azam (2022), that capital accumulation follows from productivity expansion. In all the models, the inflation rate coefficients had a statistically significant beneficial impact on the financial market growth of the African countries we selected. Additionally, the models' trade openness coefficients showed a negligible correlation with the degree of growth in the financial market in the African countries we tested.

Table 2. GMM results (source: authors' own calculations, as of 2022)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
	FMD	FMD	FMD	FMD	FMD	FMD	FMD
lag FMD	0.554*** (0.021)	6.253*** (0.419)	5.533*** (0.376)	6.554*** (0.425)	5.372*** (0.350)	5.919*** (0.366)	6.236*** (0.412)
Governance structures							
CORR		2.753*** (0.543)					
GOVEF			4.132*** (0.422)				
POSTA				1.438*** (0.297)			
REGQ					4.340*** (0.605)		
RULAW						3.587*** (0.549)	
VOA							2.027*** (0.504)
Control variables							
GDP	0.002** (0.00109)	0.00221* (0.00122)	0.00240* (0.00133)	0.0032** (0.00127)	0.00188 (0.00146)	0.0027** (0.00127)	0.0023* (0.00135)
INFLA	0.00465*** (0.00106)	0.00475*** (0.00126)	0.00475*** (0.00112)	0.00483*** (0.00127)	0.00450*** (0.00115)	0.00481*** (0.00116)	0.00537*** (0.00125)
TRADP	0.00130 (0.00246)	−0.00068 (0.00305)	−0.00083 (0.00272)	0.000539 (0.00285)	−0.00022 (0.00272)	−0.00102 (0.00276)	−0.00074 (0.00299)
_cons	6.422*** (0.541)	1.269 (1.277)	4.437*** (1.073)	−0.734 (1.352)	5.013*** (0.980)	2.657** (1.062)	0.745 (1.169)
Diagnostics							
No. of obs.	452	452	452	452	452	452	452
No. of Inst.	26	27	27	27	27	27	27
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR(2): Z (p-value)	0.150 (0.882)	0.400 (0.688)	0.310 (0.758)	0.340 (0.738)	0.330 (0.743)	0.300 (0.767)	0.340 (0.733)
X^2: (p-value)	33.29 (0.777)	30.88 (0.914)	30.41 (0.962)	31.00 (0.960)	30.30 (0.984)	31.31 (0.932)	31.13 (0.893)

Notes: FMD is an acronym for financial market development. The six-governance metrics' simple average is represented by governance structures. The acronym CORR stands for corruption control. The acronyms GOVEF stands for government effectiveness, POSTA for political stability, RULAW for the rule of law, and REGQ for regulatory quality. VOA stands for accountability and voice. real gross domestic product per person is represented by GDP. INFLA is a symbol for inflation. Trade openness is symbolized by TRADOP. P-values are the numbers inside parentheses; the values ***, **, and * stand for 1 percent, 5 percent, and 10 percent significant levels, respectively. Standard errors and confidence intervals are both used. Since there is no overriding identity and the instruments used are effective and do not correlate with the error term, the negligible probability (J-stats) value showed that there is no overriding identity.

3.3. Robustness check

The estimated models in Table 2 are adequately defined. Therefore, it was determined that the diagnostic data were credible. The study could not test the null hypothesis that the lagged variables were ineffective instruments in the model using the over-identity Sargan test (P = 0.777). Like this, there is no residual autocorrelation at order two (P = 0.882), and the GMM performs as predicted. As a result, the over-identification constraints were not rejected by the Hansen test.

Conclusions, recommendation and limitation

The study aimed to examine how institutional, or governance frameworks affect the development of the financial market in Africa. Most of the earlier research used stock market or stock exchange characteristics as benchmarks for growth in the financial market, even though existing relevant literature has demonstrated a positive association between governance frameworks and the degree of the growth of the financial market in countries. Using stock market or stock exchange characteristics as surrogates for the growth of the financial market in developing countries, particularly African markets, might provide a fuzzy picture of how far along such markets are. In contrast, the study departed from the existing literature by using venture capital availability as a substitute indicator for the degree of growth of the financial market in African countries as a result of the dominance of the financial sector in Africa. To test the robustness and prevent any potential endogeneity in the exogenous variables, the panel data GMM two-step model methodology was also used. From 2008 to 2019, we researched 47 different African countries.

Our empirical findings, supported by the dynamic panel system generalized technique of moment estimates, show that institutional frameworks in our selected African economies make it easier for countries to access venture capital which is a proxy of the development of the financial market. The study observed a considerable positive correlation between institutional frameworks and financial market expansion in the sampled African nations. In a nutshell, the speed of financial development will be significantly influenced by the quality of governance, which can be improved through the strengthening of institutional and legal frameworks, the enforcement of standards, the empowerment of supervisory agencies, and the introduction of an effective regulatory environment to facilitate financial inclusion. Additionally, fostering financial depth will be significantly aided by regime stability, maintaining social, economic, and political harmony, and safeguarding savings and dividend payments. Our study contributes to the existing literature by demonstrating the importance of institutional frameworks on financial market development in Africa. It highlights the need for stronger governance structures and effective regulatory environments to foster financial inclusion and depth. This has significant implications for policymakers and stakeholders in the African financial markets, emphasizing the critical role institutions play in shaping the landscape of financial development.

The study made these suggestions and recommendations: The development of strong institutions is significant for a continent like Africa that has not yet reached its full capabili-

ties because it will likely not just boost the amount of financial market development but also possibly help the continent draw in foreign direct investment, which will help enhance the development of the economy across the continent. In this context, laws that encourage accountability, improve institutional quality, reduce violence, and guarantee the stability of the democratic system should be passed. Regulations that uphold natural cohesion assure access to financial services via technologies that will lower overhead costs and market imperfections, promote saving, and ease entry to and sustainability of debt, significantly advancing the monetary system. By encouraging accountability, reducing violence, and ensuring political stability, African countries can create an environment conducive to financial market growth and overall economic progress.

Nonetheless, our study has some limitations. The sample size was limited to 47 African countries, and the time frame spanned from 2008 to 2019. This demonstrates the necessity for future studies to include all recognized African nations and for more thorough and high quality data on African economies. This constraint frequently arises in research on developing African countries, underscoring the demand for more comprehensive, high-quality data on these economies. Future research directions could explore the interplay between financial market development, institutional frameworks, and foreign direct investment inflows in Africa. This would provide a more comprehensive understanding of the factors that drive financial market growth and economic development in the region. Additionally, studies could investigate the impact of specific institutional reforms and interventions on financial market development, as well as the role of technology and innovation in fostering financial inclusion and market growth. Finally, future research may also consider examining the role of informal financial sectors in shaping the overall financial landscape in Africa, given their widespread presence and potential impact on financial market development.

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Author contributions

Conceptualization, SNKAK, MM, and KM. methodology, SNKAK, KM, JP, JM and SKK.; formal analysis, SNKAK, MM, JS. and KM.; investigation, SNKAK, KM, JP, and J.M.; data curation, SNKAP, JP, SKK and KM.; writing – original draft preparation, SNKAP, KM, MM and JM.; writing – review and editing, SNKAP, M.M. and KM. All authors have read and agreed to the published version of the manuscript.

Disclosure statement

The authors declare no conflict of interest.

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APPENDIX

Governance structures in the selected 47 African countries from 2008 to 2019

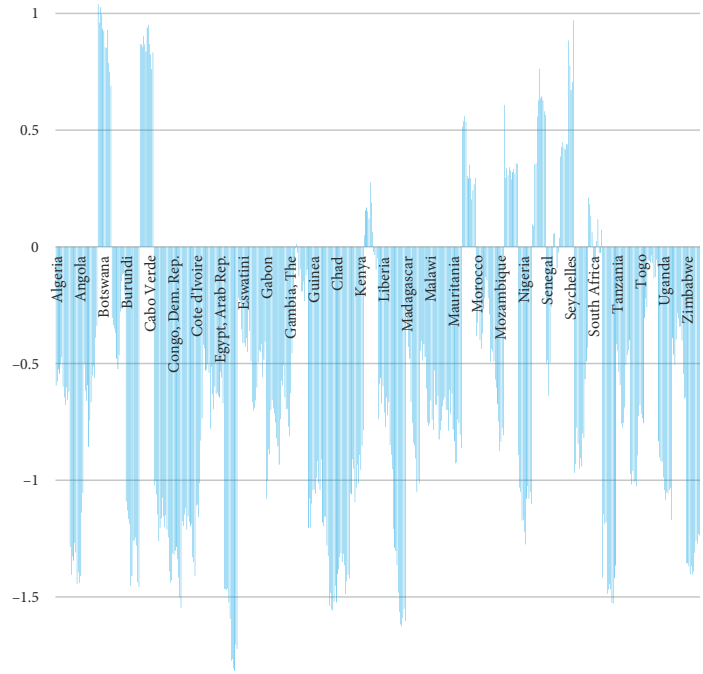

Figure A1. Corruption in Africa from 2008–2019 (source: authors' own computation, 2022)

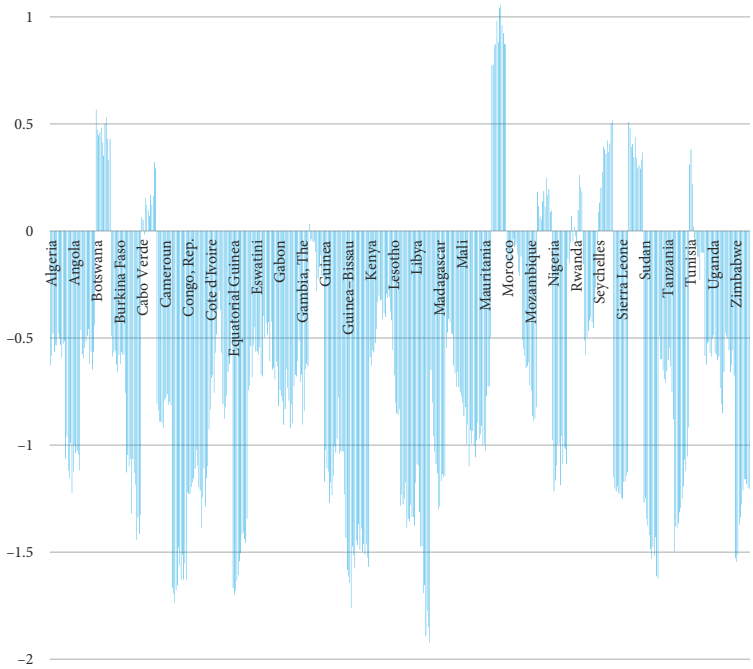

Figure A2. Government effectiveness in Africa from 2008–2019 (source: Authors' own computation) 2022

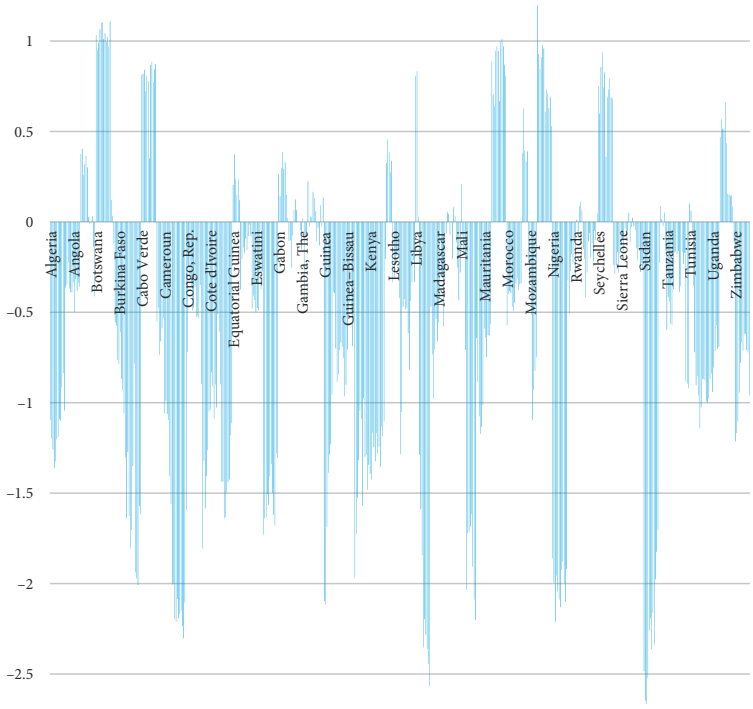

Figure A3. Political stability in Africa from 2008–2019 (source: authors' own computation, 2022)

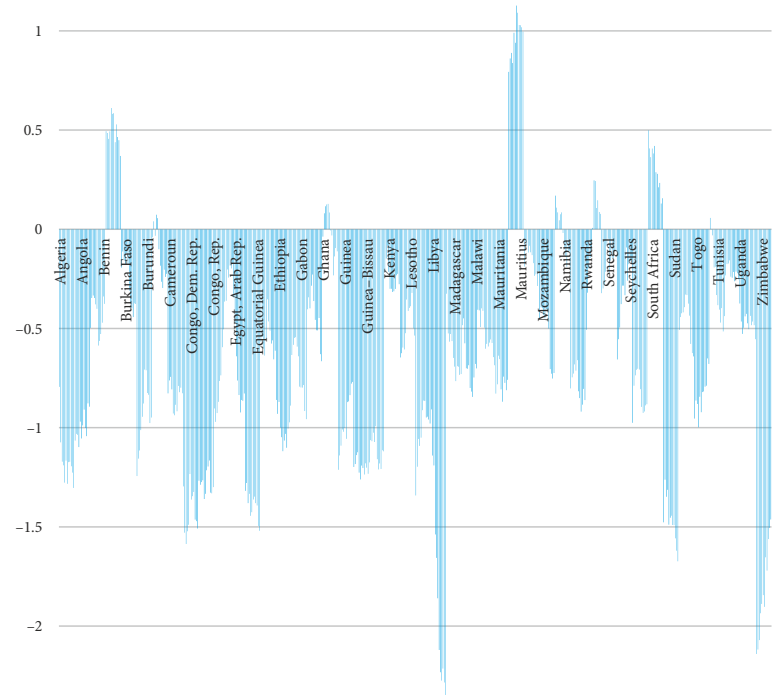

Figure A4. Regulatory quality in Africa from 2008–2019 (source: authors' own computation, 2022)

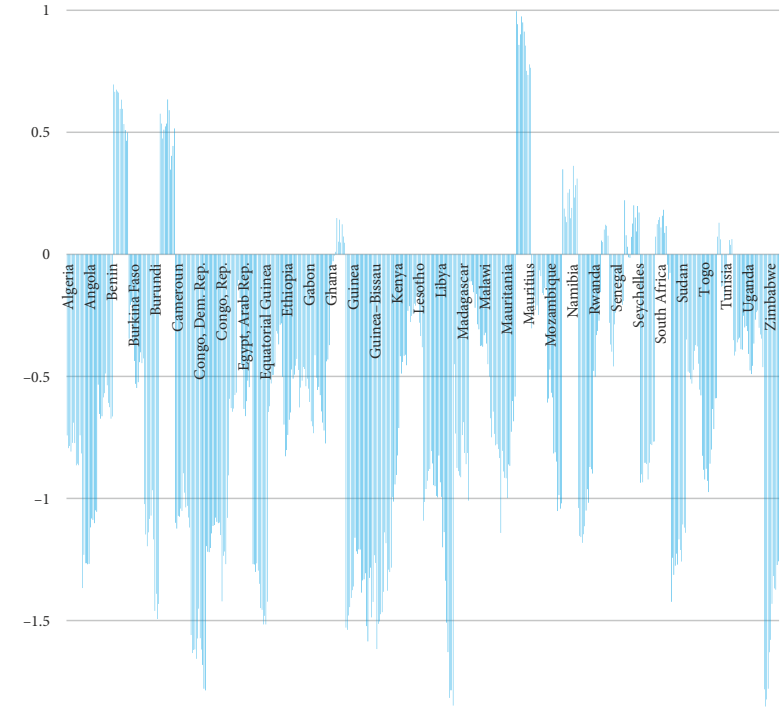

Figure A5. Rule of Law in Africa from 2008–2019 (source: authors' own computation, 2022)

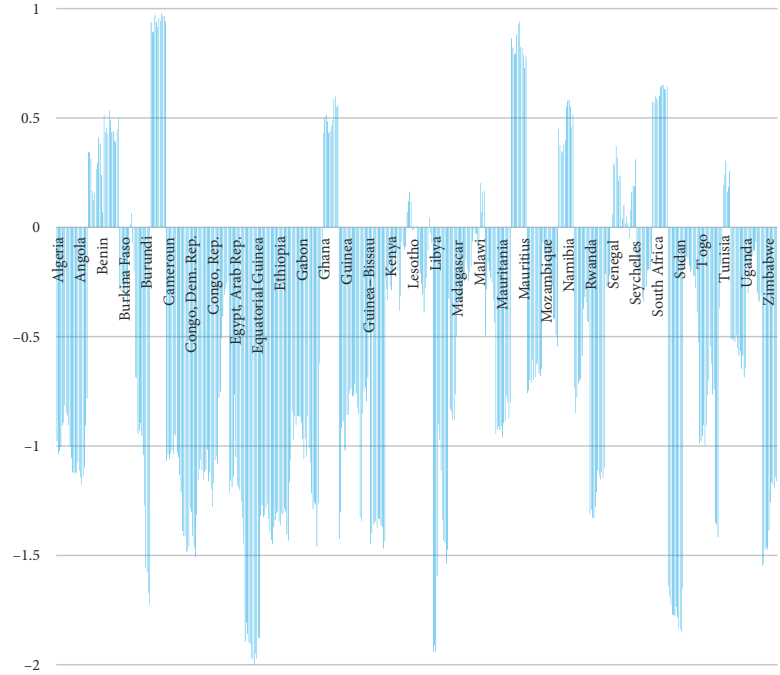

Figure A6. Voice and accountability in Africa from 2008–2019 (source: authors' own computation, 2022)