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# THE IMPACT OF GOVERNANCE ON FINANCIAL INSTITUTION AND FINANCIAL MARKET DEVELOPMENT: EMPIRICAL EVIDENCE FROM EMERGING MARKETS

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**Abstract:** The overall objective of the study is to investigate the impact of governance on financial development in Sub-Saharan African countries. To achieve the stated objective, the study employed balanced data of 43 Sub-Saharan African countries during the year 2002 to 2018. To analyze the data, the study used both the fixed and random effect estimation approaches and explored the relationship between the three dimensions of governance and three pillars of financial development in Sub-Saharan African countries. The study also applied the Principal Component Analysis (PCA) to create indexes for the political, economic, and institutional dimensions of governance taking the six world governance indicators. The overall findings of the study indicate that the political, economic, and overall governance composite index has a positive and significant impact on the overall financial developments of sub-Saharan African countries. The development of financial institutions in the region is influenced significantly and positively by political, institutional, and overall governance. In addition, the economic dimension of governance has had a significant and positive impact on the development of the financial markets in sub-Saharan Africa. Furthermore, trade openness, real interest rate, inflation, real GDP, and access to electricity are all major macroeconomic predictors of financial development, according to the study. As

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a result, all aspects of governance quality in the Sub-Saharan African countries must be improved. This can be achieved by policies aimed at strengthening voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, corruption control, and overall macroeconomic reform.
**Keywords:** Governance, Financial Development, Financial institution, financial market, and Emerging Markets.
**JEL code:** N20; G18; G28

## 1. Introduction

Financial development enhances the efficiency of financial markets and the effectiveness of financial intermediation to improve the financial stability, access to capital, and financial services for a country (Sayılır, 2018). Financial sector development is required for the sustainable economic growth of a country (Asratie, 2021). Financial sector development is about overcoming the costs incurred in the financial system (World Bank, 2016). A developed financial system will mobilize productive savings, allocate resources efficiently, improve risk management, and reduce information asymmetry, all of which facilitate innovation and entrepreneurship (Joseph Schumpter, 1911). It also promotes financial deepening and enhances access to capital and other financial services by ensuring the efficiency and effectiveness of the financial sector and financial intermediation (Abubakar, Y. I.etal, 2020). As a result, the relationship between financial sector development and economic growth has been a topical issue (Omodero, 2021).

The relation between financial development and economic growth has been one of the most investigated topics in economics (Junior Abeka, et al., 2021; Mlachila, et al., 2016; Levine, R, 1997; Asghar & Hussain, 2014; Davis, 2004 and Hassan, et al., 2011). The finding of previous research indicates the positive and significant impact of the financial sector development in facilitating and sustaining growth (Beck et al., 2000; King and Levine, 1993; Asghar and Hussain 2014) lowering poverty and reducing income inequality (Kappel, 2010 and Jeanneney & Kpodar 2011).

The channels through which the financial sector development catalyze economic growth includes, mobilizing and pooling savings, producing information ex-ante about possible investments, supporting the efficient allocation of capital and enhancement of total factor productivity, monitoring investments and exerting corporate governance, diversification, and management of risks, reduces information asymmetries, reducing transaction and monitoring costs, reducing the volatility of the economy by providing a variety of instruments and information to cope with adverse shocks through consumption and investment smoothing (Levine, 1997, Levine, 2004 and Mlachila, 2016). The financial sector development promotes economic growth not just by encouraging private sector development, but also by enabling the public sector in investing in infrastructure and encouraging households to invest in human capital (Zhuang et al., 2009).

Sub-Saharan African countries have made substantial progress in financial development over the past decade, but there is still considerable scope for further development (Mlachila, 2016) and the existing financial development is not efficiently converted into desirable levels of economic growth (Junior Abeka, et al., 2021). Besides, the positive effects of financial development on economic growth have encouraged researchers to study the determinants of financial development. (Voghouei et al., 2021). According to those researches, financial development is significantly influenced by a variety of factors ranging from economic to cultural (Omar & Inaba, 2020) including; inflation, trade openness, market capitalization, investment rate, and interest rate (Shabbir et al., 2018); institutions, the openness of trade and financial markets, legal tradition, and political economy (Voghouei et al., 2021), human capital and trade openness ( Ibrahim & Sare 2018); external debt, reserve requirement, real exchange rate, lending interest rate, inflation, political freedom index, trade openness and economic growth (Asratie, 2021), the six world governance indicators (Abubakar et al., 2020) are identified as factors promoting the financial system.

However, a good measurement of financial development is essential for analyzing the financial sector's development and understanding the impact of financial development on economic growth and poverty reduction (World Bank, 2016). The ratio of domestic loans to the private sector as a percentage of GDP (Junior Abeka, et al., 2021; Asratie, 2021; Khalfaoui, H, 2015; and Allen & Ndikumana, 2000), the ratio of financial institutions' assets to GDP, the ratio of liquid liabilities to GDP, and the ratio of deposits to GDP (World Bank, 2016) are the major traditional empirical proxies for financial development. These measurements, on the other hand, do not take into consideration the complexities of financial development (IMF, 2020). To put it another way, because a country's financial sector is made up of a diverse set of financial institutions, markets, and products, these estimates are merely a rough guide and do not take into account all aspects of financial development (World Bank, 2016).

Thus, this study employed the financial development index of IMF which summarizes the depth (size and liquidity) of financial institutions and financial markets, access (the ability of individuals and businesses to obtain financial services), and efficiency (the ability of institutions to deliver financial services at low cost and with sustainable revenues, as well as capital market activity) (IMF, 2020).

As a result, the overarching goal of this research is to look into the relationship between governance and financial development in Sub-Saharan Africa. With this general objective in mind, the study also explores the impact of the political, economic, and institutional governance components on the development of financial institutions and financial markets in Sub-Saharan African countries. Different scholars in the field conducted on the determinants of financial development, but this study is unique in that, it tried to see the relationship between various dimensions of governance (political, economic, and institutional) and different pillars of financial development (financial sector development, financial institution development, and financial market development) in sub-Saharan African countries.

## 2. Review of literature

### 2.1. Financial development and economic growth

Financial markets and institutions are critical in the process of economic development (Sanni et al., 2020), particularly when it comes to distributing funds to productive activities. Well-functioning financial institutions and markets boost economic growth (Beck et al., 2000; Asghar and Hussain, 2014; and King and Levine, 1993).

Financial development is not only important for economic growth, but also it helps to reduce poverty and income disparities in the process of economic development. The benefits of financial development outweigh the costs, that is why most countries that begin their economic growth process employ financial procedures and tools to increase their chances of success (Khalfaoui, 2015). So, why have so many countries remained economically underdeveloped even though financial development is so beneficial to growth? Why are certain economies blessed with well-functioning financial markets and institutions while others do not? Given the importance of the financial-economic relationship, it's critical to understand the elements that contribute to financial inequities (Takyi & Obeng, 2013).

### 2.2. Determinants of financial development

Since financial development is useful in reducing poverty and income inequality and showed a positive relationship with economic growth, different studies in developing and emerging economies were conducted on the determinants of financial development (Ezeibekwe, 2020). Financial development is determined by economic growth, which leads to increased demand for a financial instrument that expands the financial sector (Calderón & Liu, 2002; Robinson, 1952; cited by Nageri, 2020). Besides, initial capital, trade openness, initial population, institutional quality, government policies, geographic variables, and cultural qualities all influence a country's level of financial development (Huang, 2005). Institutions, commerce, and culture all play a role in explaining the disparities in financial development among

countries (Herger et al., 2008). Institutions that uphold the rule of law and trade openness, have a positive and immediate impact on financial development.
Baltagi et al. (2009) and Law (2007) investigate the factors that influence financial development heterogeneity both within and across countries. The main point is that a strong economic institutional framework and trade openness are critical components of financial development.

### 2.3. Governance quality and financial development

In an era of rapid change, globalization, and increasing uncertainty, all developed and developing countries are looking for a new form of governance that is better suited to the times to gain an advantage in economic competitiveness and generate substantial and sustainable social growth (Keping, 2018). However, because it is interpreted differently by different people and institutions, we must restrict our emphasis. The idea's definition changes depending on the level of governance in question, the goals to be achieved, and the methods used (Bevir, 2012 and Hufty, 2011). The new UNDP definition of economic policy, on the other hand, is one of the best broad definitions of governance that may be used.
*"Governance is the system of values, policies, and institutions by which a society manages its economic, political, and social affairs through interactions within and among the state, civil society, and private sector. It is the way a society organizes itself to make and implement decisions—achieving mutual understanding, agreement, and action."* — UNDP Strategy Note on Governance for Human Development, 2004.
Governance has been thoroughly analyzed and explained by several professionals with a broad range of definitions. Using panel data of 101 countries from 1984 to 2013, Khalid, U., and Shafiullah, M. (2021) explore bidirectional causality between governance and financial development. The findings revealed that strengthening governance quality has a beneficial impact on financial development, and Granger causality tests show that financial development and governance metrics are bidirectionally causal. Similarly, Karikari (2010) examines the factors that influence the financial development of 37 countries in Sub-Saharan Africa, with a focus on the roles of governance and financial liberalization, and finds that the importance of institutions to financial development reflects the widespread belief that good governance is a prerequisite for long-term economic growth.
Samadipour, et al. (2017) also looked into the impact of good governance and financial liberalization on financial development from 1996 to 2013 and found that in all estimated models, components of governance index and financial liberalization in low-income developing countries have a positive and significant impact on financial development, which is consistent with experimental evidence. Cooray, A.

V. (2010), on the other hand, looks at the impact of two government dimensions, namely size and quality, on two financial sector dimensions, size, and efficiency, in a cross-section of 71 economies. According to the findings, higher government quality, as evaluated by governance and legal origin, has a positive impact on both the growth and efficiency of the financial sector. The impact of governance on financial development in West African countries is also investigated by Abubakar et al. (2020) and the result revealed that political stability, the absence of violence, and regulatory quality all have a significant impact on financial development proxies. Furthermore, voice and accountability, trade openness, and interest rate have an impact on the bank deposit-to-GDP ratio, whereas government effectiveness, rule of law, and control of corruption have an impact on domestic credit to the private sector. Having the findings of previous literature in mind, this study develops the following theoretical framework (See figure 1).

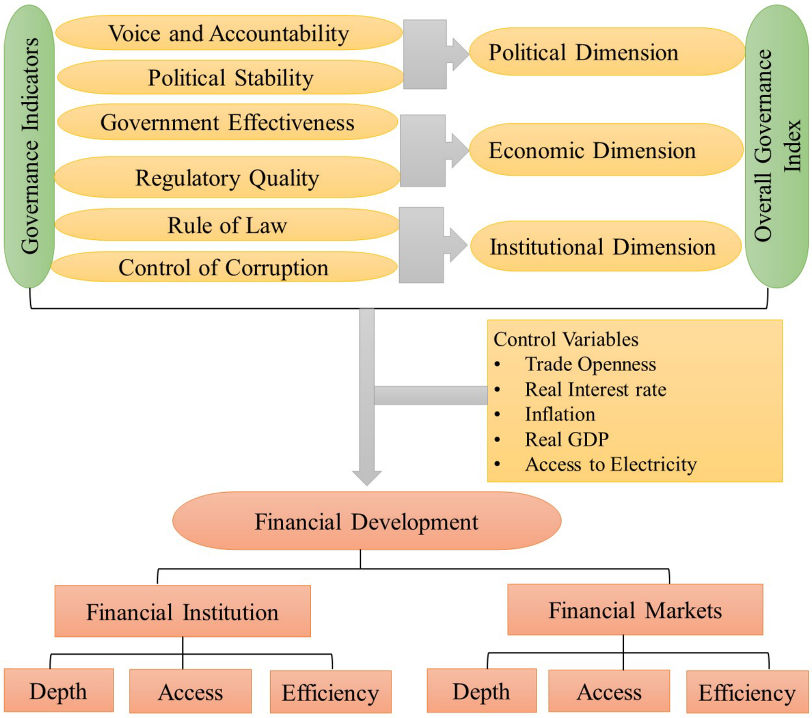


**Figure 1 Theoretical framework**
Source: Own computation; 2021.

## 3. Materials and method

### 3.1. Data type and source

The study analyzed the impact of governance and other macroeconomic control variables on the development of financial institutions and financial markets in 43 Sub-Saharan African countries during the period from 2002 to 2018. The study utilized data from World Governance Indicator (WGI), World Development Indicator (WDI), and International Monetary Fund (IMF) for modeling the relationship between different governance parameters with various pillars of financial development in sub-Saharan African countries.

### 3.2. Model specification

The functional relationship of the empirical model is described in three sub-groups mainly based on economic reasoning, data availability, and the aforementioned theoretical framework. The first four model specifications look at the three-dimensional and overall effects of governance and other macroeconomic variables on the overall financial development of Sub-Saharan African countries. The study has four model specifications in the second sub-group that are used to investigate the three-dimensional and overall impact of governance on financial institution development, and it has four model specifications in the last sub-group used to investigate the three-dimensional and overall impact of governance on the financial market development in sub-Saharan African countries.

i. *Governance quality indicators and financial development*

$$FD_{it} = \alpha + \beta_1 GI_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (1)$$
$$FD_{it} = \alpha + \beta_1 PDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (2)$$
$$FD_{it} = \alpha + \beta_1 EDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \ldots \quad (3)$$
$$FD_{it} = \alpha + \beta_1 IDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (4)$$

ii. *Governance quality indicators and financial institution development*

$$FI_{it} = \alpha + \beta_1 GI_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (5)$$
$$FI_{it} = \alpha + \beta_1 PDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (6)$$
$$FI_{it} = \alpha + \beta_1 EDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (7)$$
$$FI_{it} = \alpha + \beta_1 IDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (8)$$

iii. *Governance quality indicators and financial market development*

$$FM_{it} = \alpha + \beta_1 GI_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (9)$$
$$FM_{it} = \alpha + \beta_1 PDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (10)$$
$$FM_{it} = \alpha + \beta_1 EDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (11)$$
$$FM_{it} = \alpha + \beta_1 IDG_{it} + \beta_2 TO_{it} + \beta_3 RIR_{it} + \beta_4 INF_{it} + \beta_5 RGDP_{it} + \beta_6 AE_{it} + \varepsilon_{it} \quad (12)$$


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**Table 1 Description of variables and sources of data**

| Variables | Measurement | Source |
|---|---|---|
| **Governance quality indicators (Independent variables)** | Overall Governance index (GI) | World Governance Indicators (WGI) and PCA computation |
| | Political Dimension of Governance (PDG) | |
| | Economic Dimension of Governance (EDG) | |
| | Institutional Dimension of Governance (IDG) | |
| **Control Variables** | Trade Openness (TO) | World Development Indicators (WGI) |
| | Real Interest Rate (RIR) | |
| | Inflation (INF) | |
| | Real GDP (RGDP) | |
| | Access to Electricity (AE) | |
| **Financial development indicators (Dependent variable)** | Overall Financial Development (FD) | International Monetary Fund (IMF) |
| | Financial Institutions Development (FI) | |
| | Financial Markets Development (FM) | |

Source: Own computation, 2021.

### 3.3. Estimation method

In this study, the study adopted a fixed and random effects model with the help of balanced panel data during the year 2002 to 2018. Using the Haussmann test, the fixed-effects model is compared against a random-effects model. Before being employed in the interpretation, all models were tested for heteroskedasticity, multicollinearity, and serial autocorrelation. Applying the Principal Components Analysis (PCA) tool, the study created four composite governance indexes: the political dimension of governance index, the economic dimension of governance index, the institutional dimension of governance index, and the overall governance index, comprising all the six governance indicators of WGI. Large datasets are becoming more common, yet they can be challenging to comprehend. PCA is a technique for reducing the size of large datasets while retaining as much information as possible. It achieves this by gradually introducing new uncorrelated variables that reduce variance (Jolliffe, I. T., & Cadima, J., 2016).

## 4. Empirical results and analysis

### 4.1. Descriptive statistics

Table 2 presents the summary statistics of explanatory and explained variables. The overall governance index (GI), the political dimension of governance (PDG), the economic dimension of governance (EDG), institutional dimension of governance are considered as independent variables and trade openness, real interest rate, inflation, real GDP, and access to electricity (as a proxy for infrastructural development) were considered as control macro variables. On the other hand, overall financial development (FD), financial institution development (FI), and financial market developments are considered as explained variables.

**Table 2 Summary statistics**

| Variable | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| **GI** | .0500652 | .9366428 | -2.561793 | 2.729874 |
| **PDG** | .0994164 | .9326763 | 2.115273 | 2.019942 |
| **EDG** | .0585143 | .8568432 | 2.280701 | 2.659893 |
| **IDG** | .0357547 | .9527405 | -1.82559 | 2.798253 |
| **FD** | .1393898 | .1018082 | 0 | .6484371 |
| **FI** | .2346289 | .136957 | 0 | .7356487 |
| **FM** | .0388635 | .0848109 | 0 | .5413688 |
| **TO** | 73.2042 | 38.00106 | 20.72252 | 311.3541 |
| **RIR** | 8.1818 | 10.57782 | 34.46203 | 61.8826 |
| **INF** | 8.120115 | 18.31782 | -8.97474 | 379.848 |
| **RGDP** | 30,500,000,000 | 77,300,000,000 | 125,000,000 | 467,000,000,000 |
| **AE** | 38.17548 | 26.50218 | 1.243382 | 100 |
| **obs** | 696 | | | |

Source: Own computation, 2021.

## 4.2. Econometric regression results and discussion

### 4.2.1 The impact of governance on financial development in SSA

Table 3 presented the results for the dimensional effects of governance and other macroeconomics variables on financial development. Columns (M1) – (M4) are estimated with overall financial development as a dependent variable and overall governance index, political dimension of governance, economic dimension of governance, and institutional dimensions of governance were used as a proxy for governance quality indicators respectively.

The overall governance index encompasses all the six governance parameters of WGI and is used in the study to examine their impact on the financial development of sub-Saharan African countries. The results reported in column (M1) of Table 2 indicated that the overall governance composite indexes are statistically significant and positively affect the financial development of sub-Saharan African countries. This finding is in line with the findings of Khalid & Shafiullah (2021) and Ellahi et al. (2021), Ellahi et al. (2021), and Abubakar et al. (2020) who indicated the positive and significant impact of governance on financial development in different regions. Therefore, it can be concluded that the increase in the overall governance composite index leads to financial development in sub-Saharan African countries.

The impact of the political dimension of governance was employed in the study to see its impact on the financial development of sub-Saharan African countries. The result indicated on Column (M2) that there is a positive and significant impact between the political dimension of governance and the financial development of sub-

Saharan African countries which was consistent with the findings of Abubaka et al. (2020) who found the significant and positive impact of the two components of the political dimension of governance which are voice and accountability and political stability on financial development. Therefore, it can be concluded that the increase in the political dimension of governance leads to an increase the financial development in sub-Saharan African countries.

**Table 3 Governance quality and overall financial development**

| | Dependent variable: Overall financial development | | | |
|---|---|---|---|---|
| **Model** | **M (1)** | **M (2)** | **M (3)** | **M (4)** |
| **Hausman test** | **fe** | **re** | **re** | **re** |
| **GI** | 0.009796** (0.004142) | | | |
| **PDG** | | 0.007266** (0.042604) | | |
| **EDG** | | | 0.010357** (0.0041318) | |
| **IDG** | | | | 0.0056545 (0.0034758) |
| **TO** | 0.0001478** (0.00006) | 0.0001923*** (0.0000674) | 0.0002251*** (0.0000684) | 0.0001889*** (0.0000674) |
| **RIR** | -0.0002549** (0.000122) | -0.0003109** (0.0001247) | -0.0003199** (0.0001263) | -0.0003186** (0.0001242) |
| **INF** | -0.0001867 (0.000137) | -0.0002212 (0.001403) | -0.0001543 (0.000146) | -0.0002138 (0.0001406) |
| **RGDP** | 3.46e-13*** (4.78e-14) | 3.57e-13*** (4.64e-14) | 3.74e-13*** (4.58e-14) | 3.70e-13*** (4.62e-14) |
| **AE** | 0.0009059*** (0.000143) | 0.0010413*** (0.0001412) | 0.0010937*** (0.000141) | . 0.0010488*** (0.0001409) |
| **Cons** | 0.107641*** (0.00758) | 0.0935002*** (0.0127353) | 0.0881441*** (0.0113851) | 0.0943671*** (0.126626) |
| **$R^2$ within** | 0.2523 | 0.2399 | 0.2358 | 0.2392 |
| **R2 between** | 0.7398 | 0.7036 | 0.7366 | 0.7007 |
| **$R^2$ overall** | 0.7230 | 0.6918 | 0.7190 | 0.6883 |

The standard errors are presented in the parentheses and **fe** denotes fixed effect while **re** denotes random effect.
*, ** and *** represents the level of significance at 10%, 5% and 1%
Source: Own computation, 2021.

In the third column (M3), the quality of governance is proxied by the economic dimension of governance and the regression result indicated the positive and significant impact of the economic dimension of governance on financial development. In the last column (M4), the study employed the institutional dimension of governance as a proxy of governance indicators and the regression result depicts the positive but insignificant impact of the institutional dimension of governance on financial development.

With regards to the control variables, in all of the above four regressions, trade openness, real GDP and access to electricity are statistically significant and positively affect the financial development of SSA countries. While the real interest rate is statistically significant and negatively affects the financial development of sub-Saharan African countries.

### 4.2.2 The impact of governance on financial institution development in SSA

Table 4 presents results for the dimensional effects of governance and other macroeconomic variables on financial institution development.

**Table 4: Governance quality and financial institution development**

| **Dependent variable: Financial Institution Development** | | | | |
|---|---|---|---|---|
| **Model** | **M (5)** | **M (6)** | **M (7)** | **M (8)** |
| **Hausman test** | **fe** | **fe** | **fe** | **re** |
| **GI** | 0.0193894***<br>(0.0054875) | | | |
| **PDG** | | 0.0127633**<br>(0.0057826) | | |
| **EDG** | | | 0.0004273<br>(0.0056033) | |
| **IDG** | | | | 0.0142348***<br>(0.0046427) |
| **TO** | 0.0001798**<br>(0.0000885) | 0.0001766**<br>(0.0000893) | 0.0001684*<br>(0.0000903) | 0.0002486***<br>(0.00009) |
| **RIR** | -0.0004833***<br>(0.0001628) | -0.0005585***<br>(0.000162) | -0.0006192***<br>(0.0001617) | -<br>0.0005778***<br>(0.0001659) |
| **INF** | -0.0006389***<br>(0.0001825) | -0.000722***<br>(0.0001824) | -0.0007249***<br>(0.0001873) | -0.0007202<br>(0.0001877) |
| **RGDP** | 5.17e-13***<br>(6.34e-14) | 4.81e-13***<br>(6.43e-14) | 5.00e-13***<br>(6.42e-14) | 4.85e-13***<br>(6.17e-14) |
| **AE** | 0.0016004***<br>(0.001899) | 0.0015835***<br>(0.0001919) | 0.0016086***<br>(0.0001929) | 0.00176 ***<br>(0.0001883) |
| **Cons** | 0.179154***<br>(0.0100422) | 0.1833311***<br>(0.0100273) | 0.1873145***<br>(0.0102437) | 0.1660419***<br>(0.0169521) |
| **$R^2$ within** | 0.3589 | 0.3474 | 0.3398 | 0.3382 |
| **$R^2$ between** | 0.5901 | 0.5340 | 0.4596 | 0.5903 |
| **$R^2$ overall** | 0.5792 | 0.5312 | 0.4614 | 0.5859 |

The standard errors are presented in the parentheses and **fe** denotes fixed effect while **re** denotes random effect. The level of significance: *, ** and *** represents the level of significance at 10% 5%, and 1%

Source: Own computation, 2021.

Column (M5) – (M8) are estimated with overall financial institution development as a dependent variable and overall governance index, political dimension of governance, economic dimension of governance, and institutional dimensions of governance were used as a proxy for governance quality indicators respectively.

The results reported in column one (M5), column two (M6), and column four (M8) of Table 3 indicate the positive and significant impact of overall governance, the political dimension of governance, and institutional dimension of governance on the financial institution development of SSA countries, respectively. While column three (M7) presents the positive but statistically insignificant impact of the economic dimension of governance on financial institution development.

Trade openness, real GDP, and access to electricity have statistically significant and have a positive impact on the financial institution development of SSA countries. On the other hand, real interest rates and inflation have a significant negative impact on the financial institution development of the region.

### 4.2.3 The impact of governance on financial market development in SSA

Table 5 presents results for the dimensional effects of governance and other macroeconomic variables on financial market development. Columns (M9) – (M12) are estimated with overall financial institution development as a dependent variable and overall governance index, political dimension of governance, economic dimension of governance, and institutional dimensions of governance were used as a proxy for governance quality indicators respectively.

The result reported in column three (M11) of table 5 indicates the positive and significant effect of the economic dimension of governance and trade openness on the financial market development of SSA countries. However, the overall governance index, the political dimension of governance, and the institutional dimension of governance are not statistically significant to affect the financial market development of SSA countries. With regards to control variables, all columns of table 4 indicate the significant and positive impact of real GDP on financial market development. Besides, column two (M10), column three (M11), and column (M12) indicate the positive and statistically significant impact of inflation and access to electricity on the financial market development of -sub-Saharan African countries.

**Table 5: Governance quality and financial market development**

| Dependent variable: Financial Market Development | | | | |
|---|---|---|---|---|
| **Model** | **M (9)** | **M (10)** | **M (11)** | **M (12)** |
| **Hausman test** | **fe** | **re** | **re** | **re** |
| **GI** | -0.0001677<br>(0.0051056) | | | |
| **PDG** | | -0.0045562<br>(0.0050951) | | |
| **EDG** | | | 0.0090264*<br>(0.004906) | |
| **IDG** | | | | -0.0021144<br>(0.0041623) |
| **TO** | 0.0001102<br>(0.000824) | 0.0001262<br>(0.0000817) | 0.0001403*<br>(0.000082) | 0.0001271<br>(0.0000817) |
| **RIR** | -0.0000168<br>(0.0001515) | -0.0000631<br>(0.000153) | -9.21e-06<br>(0.0001527) | -0.0000496<br>(0.0001521) |
| **INF** | 0.0002725<br>(0.0001698) | 0.0003217*<br>(0.0001722) | 0.0003953**<br>(0.0001764) | 0.0003191*<br>(0.0001721) |
| **RGDP** | 1.62e-13***<br>(5.90e-14) | 2.91e-13***<br>(5.47e-14) | 3.01e-13***<br>(5.39e-14) | 2.80e-13***<br>(5.46e-14) |
| **AE** | 0.0001773<br>(0.0001767) | 0.0003664**<br>(0.0001686) | 0.0003322**<br>(0.0001671) | 0.0003492**<br>(0.0001684) |
| **Cons** | 0.320449***<br>(0.0093404) | 0.0154822<br>(0.0130532) | 0.0107796<br>(0.0124902) | 0.0152416<br>(0.132018) |
| **$R^2$ within** | 0.0324 | 0.0345 | 0.0305 | 0.0325 |
| **$R^2$ between** | 0.6806 | 0.6655 | 0.7574 | 0.6895 |
| **$R^2$ overall** | 0.6247 | 0.6165 | 0.7054 | 0.6371 |

The standard errors are presented in the parentheses and **fe** denotes fixed effect while **re** denotes random effect. The level of significance: *, ** and *** represents the level of significance at 10%, 5% and 1%
Source: Own computation, 2021.

## 5. Conclusion and Policy Recommendation

This study investigates the three-dimensional impacts of governance on the three dimensions of financial development over the period 2002 to 2018. We used the fixed effects and random effect estimation techniques to examine the impact governance quality indicators composite index including the political dimension of governance, the economic dimension of governance, institutional dimension of governance, and overall governance composite index on the three dimensions of financial development including financial institution development, financial market development, and overall financial development.

Using Principal Component Analysis (PCA), we created the three dimensions of governance by using the six governance indicators. The general findings of the study indicate that the political, economic, and overall governance composite index has a

positive and significant impact on SSA countries' overall financial developments. The political, institutional, and overall governance composite index has had a considerable and positive impact on the development of financial institutions in SSA countries. Furthermore, the economic dimension of governance has had a major and positive impact on the development of financial markets in SSA countries.
In addition to this, it has been suggested in the study that trade openness, real interest rate, inflation, real GDP, and access to electricity are key determinants of the financial institution, financial market, and overall financial development in SSA countries.
The policy recommendations include a need to improve all dimensions of governance quality. This can be achieved by policies designed towards improving voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption.

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**Author Contributions**
HLF and WBM conceived the study and were responsible for the design and development of the data analysis. HLF and MKY were responsible for data collection and analysis and also for data interpretation. HLF, WBM and MKY were responsible for the literature review section.

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**References**
1. Abubakar, Y.I., Mustapha, R.A. & Ajiboye, E.S. (2020), Impact of Governance on Financial Development: evidence from West Africa. Hasanuddin Economics and Business Review, 3(3), 103-111.
2. Allen, D.S. & Ndikumana, L. (2000), Financial intermediation and economic growth in Southern Africa. Journal of African economies, 9(2), 132-160.

3. Asghar, N. & Hussain, Z. (2014), Financial development, trade openness and economic growth in developing countries: Recent evidence from panel data. Pakistan Economic and Social Review, 99-126.
4. Baltagi, B.H., Demetriades, P.O. & Law, S.H. (2009), Financial development and openness: Evidence from panel data. Journal of development economics, 89(2), 285-296.
5. Beck, T., Levine, R. & Loayza, N. (2000), Finance and the sources of growth, Journal of Financial Economics, Vol. 58 No. 2, pp. 261–300.
6. Bevir, M. (2012), Governance: A very short introduction. OUP Oxford.
7. Cooray, A.V. (2010), Does the size and quality of the government explain the size and efficiency of the financial sector?
8. Davis, E.P. (2004), Financial development, institutional investors, and economic performance. In Financial Development and Economic Growth (pp. 149-182). Palgrave Macmillan, London.
9. Ellahi, N., Kiani, A., Malik, Q., Raza, A. & Gul, R. (2021), Institutional governance and financial sector development: Panel evidence from Asian economies. Cogent Economics & Finance, 9(1), 1890367.
10. Ezeibekwe, O.F. (2020), Financial Development in Developing Countries. Global Economy Journal, 20(03), 2050016.
11. Hassan, M.K., Sanchez, B. & Yu, J.S. (2011), Financial development and economic growth: New evidence from panel data. The Quarterly Review of economics and finance, 51(1), 88-104.
12. Herger, N., Hodler, R. & Lobsiger, M. (2008), What determines financial development? Culture, institutions, or trade. Review of World Economics, 144(3), 558-587.
13. Huang, Y. (2005), What Determines Financial Development? Discussion Paper No. 05/580, Department of Economics, University of Bristol.
14. Sayılır, Ö., Doğan, M. & Soud, N.S. (2018), Financial development and governance relationships. Applied Economics Letters, 25(20), 1466-1470.
15. Hufty, M. (2011), Investigating policy processes: the governance analytical framework (GAF). Research for sustainable development: Foundations, experiences, and perspectives, 403-424.
16. IMF (2020), https://data.imf.org/?sk=F8032E80-B36C-43B1-AC26-493C5B1CD33B
17. Jeanneney, S. G., & Kpodar, K. (2011), Financial development and poverty reduction: can there be a benefit without a cost? The Journal of development studies, 47(1), 143-163.
18. Jolliffe, I.T. & Cadima, J. (2016), Principal component analysis: a review and recent developments. Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 374(2065), 20150202.
19. Jr. Abeka, M., Andoh, E., Gatsi, J.G. & Kawor, S. (2021), Financial development and economic growth nexus in SSA economies: The moderating role of telecommunication development. Cogent Economics & Finance, 9(1), 1862395.
20. Kappel, V. (2010), The effects of financial development on income inequality and poverty. CER-ETH-Centre of Economic Research at ETH Zurich, Working Paper, (10/127).
21. Karikari, J.A. (2010), Governance, financial liberalization, and financial development in Sub-Saharan Africa. In African Economic Conference, November.

22. Keping, Y. (2018), Governance and good governance: A new framework for political analysis. Fudan Journal of the Humanities and Social Sciences, 11(1), 1-8.
23. Khalfaoui, H. (2015), The determinants of financial development: Empirical evidence from developed and developing countries. Applied Economics and Finance, 2(4), 1-9.
24. Khalid, U. & Shafiullah, M. (2021), Financial development and governance: a panel data analysis incorporating cross-sectional dependence. Economic Systems, 100855.
25. King, R.G. & Levine, R. (1993), Finance and growth: Schumpeter might be right. The quarterly journal of economics, 108(3), 717-737.
26. Omar, M.A. & Inaba, K. (2020), Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. Journal of Economic Structures, 9, 1-25.
27. Sahay, R., Čihák, M., N'Diaye, P. & Barajas, A. (2015), Rethinking financial deepening: Stability and growth in emerging markets. Revista de Economía Institucional, 17(33), 73-107.
28. Samadipour, S., Ahmadzadeh, K. & Mohammadi, A. (2017), Studying the Effects of Governance and Financial Liberalization on Financial Development: Evidence from Developing Countries. Journal of Economic & Management Perspectives, 11(4), 996-1008.
29. Takyi, P.O. & Obeng, C.K. (2013), Determinants of financial development in Ghana. International journal of development and sustainability, 2(4), 2324-2336.
30. World Bank (2016), https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-development.
31. Casanova, L., Cornelius, P.K. & Dutta, S. (2018), Banks, credit constraints, and the financial technology's evolving role. Financing entrepreneurship and innovation in emerging markets, 161-184.
32. Levine, R. (2004), Finance and Growth: Theory and Evidence. NBER Working Paper No. 10766, National Bureau of Economic Research, Cambridge, MA. Available: www.nber.org/papers/ w10766.
33. Zhuang, J., Gunatilake, H.M., Niimi, Y., Khan, M.E., Jiang, Y., Hasan, R. & Huang, B. (2009), Financial sector development, economic growth, and poverty reduction: A literature review. Asian Development Bank Economics Working Paper Series, (173). http://hdl.handle.net/11540/1829.
34. Mlachila, M.M., Jidoud, A., Newiak, M.M., Radzewicz-Bak, B. & Takebe, M.M. (2016), Financial development in Sub-Saharan Africa: promoting inclusive and sustainable growth. International Monetary Fund.
35. Aluko, O.A. & Ibrahim, M. (2019), On the macroeconomic determinants of financial institutions development in sub-Saharan Africa. International Review of Economics, 1-17.
36. Levine, R. (1997), Financial development and economic growth: views and agenda. Journal of economic literature, 35(2), 688-726.
37. Shabbir, Beenish & Jamil, Lubna &nd Bashir, Sehrish & Aslam, Najaf & Hussain, Munawar, Determinants of Financial Development. A Case Study of Pakistan (February 13, 2018). Available at or http://dx.doi.org/10.2139/ssrn.3122911.
38. Voghouei, H., Azali, M. & Jamali, M.A. (2011), A survey of the determinants of financial development. Asian-Pacific Economic Literature, 25(2), 1-20.

39. Ibrahim, M. & Sare, Y.A. (2018), Determinants of financial development in Africa: How robust is the interactive effect of trade openness and human capital? Economic analysis and policy, 60, 18-26.
40. Asratie, T.M. (2021), Determinants of financial development in Ethiopia: ARDL approach. Cogent Economics & Finance, 9(1), 1963063.
41. Abubakar, Y.I., Mustapha, R.A. & Ajiboye, E.S. (2020), Impact of Governance on Financial Development: evidence from West Africa. Hasanuddin Economics and Business Review, 3(3), 103-111.
42. Roe, M.J. & Siegel, J.I. (2011), Political instability: Effects on financial development, roots in the severity of economic inequality. Journal of Comparative Economics, 39(3), 279-309.
43. Omodero, C.O. (2021), Fintech Innovation in the Financial Sector: Influence of E-Money Products on a Growing Economy. Studia Universitatis Vasile Goldiş, Arad-Seria Ştiinţe Economice, 31(4), 40-53.
44. Nageri, K.I. (2020), Ease of Doing Business and Capital Market Development in a Demand Following Hypothesis: Evidence from ECOWAS. Studia Universitatis Vasile Goldiş, Arad-Seria Ştiinţe Economice, 30(4), 24-54.
45. Sanni, M., Salami, A.A., & Uthman, A.B. (2020), Determinants of Bank Performance in Nigeria: Do they Behave Differently with Risk-Adjusted Returns? Studia Universitatis Vasile Goldiş Arad, Seria Ştiinţe Economice, 30(3), 1-34.