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# Fostering Economic Growth Through Financial Stability in Sub-Saharan Africa

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**Abstract**

This paper investigates the impact of financial stability on the economic growth of countries in Sub-Saharan Africa, utilizing data from the World Development Indicators. To determine the most suitable model for analyzing the data, the Hausman test was employed to compare the effectiveness of the fixed effect estimator and the random effect estimator. Based on the results of the test, the random effect estimator was chosen as the preferred model for examining the relationship between financial stability and economic growth in the region. Panel data spanning from 2010 to 2023 was collected for Sub-Saharan African countries to analyze the impact of financial stability on their economic growth. The findings underscore the importance of maintaining financial stability as a key factor for fostering sustained economic growth. In a region characterized by volatility and economic challenges, ensuring a sound and resilient financial system can help mitigate risks and uncertainties that often hamper economic development. By stabilizing financial markets, improving banking systems, and enhancing regulatory frameworks, countries can create a conducive environment for investment, job creation, and overall economic progress. Moreover, the study highlights the potential for policymakers in Sub-Saharan Africa to prioritize financial stability as part of their broader economic strategies. While financial stability alone may not be the sole driver of economic growth, its significant contribution suggests that countries in the region should consider strengthening financial institutions and adopting policies that enhance the resilience of their economies. Future research could further explore the specific mechanisms through which financial stability influences growth, such as its effects on investment levels, trade, and access to credit, which are critical to the development of Sub-Saharan Africa. The study recommends that financial regulators in Sub-Saharan Africa implement prudential policies aimed at achieving higher economic growth. These policies should focus not only on strengthening monetary and fiscal frameworks but also on promoting market discipline. Monetary policies should ensure stable inflation rates, control interest rates, and maintain the liquidity of financial institutions, which are essential for encouraging investment and consumer spending. Fiscal policies, on the other hand, should aim to create a favorable environment for sustainable public spending and tax systems, while minimizing budget deficits and national debt levels. By effectively coordinating monetary and fiscal policies, regulators can ensure a balanced approach that fosters both economic stability and growth. Furthermore, the study emphasizes the importance of market discipline, which involves strengthening the financial sector's ability to regulate itself through sound risk management practices, transparency, and accountability. Financial institutions should be encouraged to adopt responsible lending and borrowing practices, ensuring that both borrowers and lenders are held accountable for their financial decisions. A disciplined financial market can also enhance investor confidence, reduce volatility, and ultimately support the long-term stability of the economy. By targeting these areas—monetary stability, fiscal discipline, and market regulation—financial regulators can create a more resilient financial system that supports sustainable economic growth in Sub-Saharan Africa. The successful implementation of these policies would not only foster a more robust economic environment but also build investor trust, attract foreign capital, and improve the overall economic prospects for the region.

**Keywords:** Financial Stability, Economic Growth, Sub-Saharan Africa

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## 1. INTRODUCTION

The recent global financial crisis, which led to substantial losses across various financial institutions, was a stark reminder of the vulnerabilities inherent in an unstable financial system (Ali, 2022). One of the primary causes of the crisis was the increase in non-performing loans and the excessive liabilities that outweighed the market value of assets held by banks (Abigail, 2023; Xiong, 2024). This imbalance caused a significant decline in the value of investments for many banks, triggering solvency and liquidity challenges (Ali & Sajid, 2020; Adjasi & Yu, 2021). As a result, many financial institutions found themselves unable to meet their obligations, leading to a widespread crisis of confidence in the global financial system. The ripple effects of this instability were felt across the global economy, disrupting macroeconomic stability, distorting the allocation of savings and investments, and ultimately hindering economic growth (Karhan, 2019; Muhammad, 2023). The crisis also highlighted the crucial role that governments play in maintaining the stability of financial systems. In many cases, governments were

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forced to step in with bailouts or other interventions to prevent the collapse of key financial institutions. These interventions underscore the interconnection between the performance of financial institutions and broader economic growth, suggesting that a failure to stabilize the financial system can have far-reaching consequences for the economy (Roy & Madheswaran, 2020; Ali & Mohsin, 2023). As Alsamara et al. (2018) point out, the performance of financial institutions is not merely a matter of their profitability or solvency but is closely linked to the overall health of the economy. A crisis in the financial sector can exacerbate macroeconomic challenges, leading to a downward spiral that impedes growth and development (Ahmad, 2019; Sossounoy & Kolenikov, 2023; Sadashiv, 2023). The broader implications of financial instability are particularly significant when considering its impact on economic performance. As Schinasi (2004) notes, a stable financial system is a fundamental enabler of positive economic outcomes, whereas instability can act as a drag on growth. A stable financial system fosters confidence in financial markets, encourages investment, and ensures that resources are allocated efficiently across the economy. In contrast, financial instability undermines these processes, creating uncertainty that can deter investment and disrupt the functioning of markets. Moreover, instability in financial markets can also impact the allocation of credit, making it more difficult for businesses and individuals to access financing for investment or consumption. A stable financial system is also essential for the smooth functioning of money markets and the efficient exchange of goods and services within an economy. Without the confidence that financial institutions will be able to meet their obligations, businesses may delay investments or cut back on expansion plans, which in turn reduces overall economic activity. Stability, therefore, is not only important for the health of individual financial institutions but is also a prerequisite for maintaining a functioning and growing economy (Safdar & Malik, 2020; Feng & Qi, 2024).

In this context, the role of financial regulation becomes even more critical. It is through appropriate regulatory frameworks that financial stability can be maintained, which in turn fosters a conducive environment for economic growth (Alvi & Shahid, 2018; Kumar & Kumar, 2020; Osei & Acheampong, 2021; Umoh & Effiong, 2024). Effective financial regulation can help mitigate the risks of financial instability by ensuring that banks and other financial institutions operate in a sound and transparent manner, with adequate capital buffers, risk management protocols, and governance structures in place (Ahmad, 2018; Farahmand, 2019; Modibbo & Inuwa, 2020; Khan & Rehman, 2021; Avelino & Coronel, 2021; Pacillo, 2022; Chen, 2022; Ackah, 2023). Furthermore, regulation can help maintain market confidence, ensuring that investors and consumers can continue to rely on the financial system to facilitate economic activity. The global financial crisis highlighted the inextricable link between financial stability and economic growth. A stable financial system is not just important for the financial sector but is crucial for the overall performance of the economy. By ensuring financial stability through effective regulation, governments can support a healthy economic environment that fosters growth, investment, and prosperity (Zhang, 2020; Kilvachkov & Chaldaeva, 2021; Ang, 2022). Conversely, financial instability threatens economic performance by disrupting markets, diminishing investor confidence, and undermining the efficient allocation of resources. Therefore, financial regulators must remain vigilant in their efforts to maintain financial stability, as it is an essential pillar for sustaining long-term economic growth.

In recent years, Sub-Saharan Africa (SSA) has faced significant challenges to its financial stability, particularly in commodity-exporting countries (Ali, 2022). The decline in global commodity prices, tighter external financing conditions, and currency depreciations have placed increasing pressure on the financial systems of many countries in the region (Audi et al., 2022; Ali, 2022). According to the International Financial Statistics (2016), these factors have exacerbated existing vulnerabilities, particularly in economies that rely heavily on commodity exports. For many SSA countries, these economic shocks are likely to slow the pace of financial development in the medium term, potentially impeding broader economic growth prospects. One of the major challenges faced by financial systems in SSA is the weak enforcement of prudential standards in many countries. While some reforms have been implemented, the lack of rigorous enforcement and the slow adoption of stricter financial regulations remain significant hurdles. Financial institutions in SSA, despite benefiting from some growth over recent decades, still face critical gaps in their development compared to advanced economies. Sotiropoulou et al. (2019) highlight that the financial systems in SSA are still underdeveloped, which limits their contribution to economic growth. Unlike advanced economies, where financial institutions play a critical role in facilitating economic development, the performance of financial institutions in SSA remains constrained, hindering their ability to support long-term sustainable growth.

Despite these challenges, the importance of the financial sector in driving economic growth in SSA cannot be overstated. Financial sector reforms, particularly those that enhance the mobilization of domestic savings, improve resource allocation, and attract foreign investment, have the potential to play a pivotal role in boosting economic growth across the region. However, these benefits are often unrealized due to the inherent weaknesses within the financial systems. For example, a more stable financial system would help reduce inefficiencies in financial institutions, improve public confidence, and increase their capacity to attract both domestic and foreign investment. Stability in the financial sector is crucial not only for the efficient functioning of financial institutions but also for building investor trust, which is essential for economic growth (Shahid & Ali, 2015). When financial institutions are stable, they are more likely to be able to pool domestic savings and channel them into productive investments, ultimately benefiting the broader economy. The ability of financial institutions to attract foreign investments is particularly important in SSA, where many countries face significant capital gaps for development. Stability in the financial sector can play a critical role in attracting foreign capital, as investors are more likely to commit their resources to economies where the risk of financial instability is low. Furthermore, financial stability helps in reducing the cost of capital, which can encourage investment in key sectors such as infrastructure, manufacturing, and agriculture, all of which are vital

for economic growth in SSA.

In this context, strengthening financial stability is essential for achieving the sustainable growth that SSA countries aspire to. A stable financial sector not only fosters domestic and foreign investment but also creates an enabling environment for the private sector to thrive. The private sector, in turn, plays a crucial role in driving economic growth, creating jobs, and reducing poverty. By addressing the challenges of financial instability, SSA countries can create a more conducive environment for private sector development and accelerate their economic growth trajectories. Despite the increasing recognition of the importance of financial stability, many studies on financial development in Africa have overlooked the direct nexus between financial stability and economic growth. The literature on financial development often focuses on factors like financial depth, access to credit, and capital markets development, but fails to adequately explore the stabilizing role that a sound financial system can play in fostering economic growth. By examining the interplay between financial stability and economic growth in SSA, this gap in the literature could be filled, providing valuable insights for policymakers looking to strengthen their economies. In conclusion, financial stability is not merely a matter of ensuring the smooth operation of financial institutions but is intrinsically linked to broader economic growth in SSA. By ensuring that financial institutions are stable, efficient, and able to attract both domestic and international investments, SSA countries can overcome the challenges they face and unlock their full economic potential. Financial sector reforms aimed at improving stability, reducing inefficiencies, and building public confidence will be crucial for achieving sustainable economic growth in the region. The financial stability–economic growth nexus must therefore be at the forefront of policy agendas, as it holds the key to long-term prosperity for Sub-Saharan African economies.

Financial stability plays a fundamental role in ensuring the long-term health and growth of a country's economy. It is defined by the ability of financial institutions to remain profitable while maintaining sufficient liquidity to balance their structured assets against liabilities (Klaas and Vagizova, 2014; Ahmad, 2018; Farahmand, 2019; Modibbo & Inuwa, 2020; Khan & Rehman, 2021; Avelino & Coronel, 2021; Pacillo, 2022; Chen, 2022; Ackah, 2023). A stable financial system helps mitigate the negative effects that may arise from poor capital quality, inadequate assets, and unbalanced liabilities. For instance, overly aggressive credit policies, which can increase credit risk, might lead to significant losses for financial institutions. Financial stability, therefore, ensures that banks and other financial entities have adequate capital buffers to absorb potential losses, while also safeguarding their liquidity, which is crucial for maintaining investor and public confidence (Hodachnik, 2009). Furthermore, financial stability supports the profitability of financial institutions. A high level of profitability reflects how effectively credit organizations use their resources, which in turn can positively influence their ability to meet liabilities, maintain liquidity, and provide credit to the broader economy. A well-capitalized financial system enhances the reliability and robustness of the financial sector, providing a foundation for sustained economic growth. Without financial stability, institutions may face solvency crises that undermine investor trust, hinder lending, and limit economic expansion.

The relationship between financial stability and economic growth is complex and can vary depending on the theoretical framework applied. In traditional growth models, the impact of financial market performance on growth is often viewed as transient, occurring only during the transition phases of an economy as it moves toward its steady-state growth path. However, more recent theories, particularly those within the endogenous growth framework, suggest that the influence of financial stability can have long-term effects, potentially driving an economy to a higher and more sustainable growth trajectory (Deabes, 2004; Ahmad, 2018; Farahmand, 2019; Modibbo & Inuwa, 2020; Khan & Rehman, 2021; Avelino & Coronel, 2021; Pacillo, 2022; Chen, 2022; Ackah, 2023). The long-term impact of a stable financial system on economic growth can manifest in several ways. First, it can improve the average productivity of capital by ensuring that resources are allocated efficiently to productive sectors. Second, it can channel investment funds to key institutions through financial intermediation, facilitating the flow of capital to businesses that require funding for expansion. Finally, financial stability can enhance domestic savings by fostering investor confidence in the financial system, which, in turn, provides a stable base of funds for investment and growth (Deabes, 2004).

Despite the theoretical importance of financial stability, empirical studies on its impact on economic growth have yielded mixed results. The majority of the research conducted in this area has focused on developed economies, with studies examining the relationship between financial stability and growth in countries such as the United States, the United Kingdom, and the Eurozone. These studies suggest that a stable financial system can have a significant positive effect on economic growth, particularly in terms of facilitating investment and fostering a favorable business environment (Alsamara et al., 2018; Duprey et al., 2017; Aboura and Van-Roye, 2017; Klemkosky, 2013; Ahmad, 2018; Farahmand, 2019; Modibbo & Inuwa, 2020; Khan & Rehman, 2021; Avelino & Coronel, 2021; Pacillo, 2022; Chen, 2022; Ackah, 2023). However, there is a gap in the literature regarding the effects of financial stability on economic growth in developing regions, particularly in Sub-Saharan Africa.

In Sub-Saharan Africa, where financial systems are often less developed and more vulnerable to external shocks, the role of financial stability in supporting economic growth is even more crucial. Many SSA countries face challenges such as volatile commodity prices, weak banking sectors, and limited access to financial services, all of which can exacerbate the negative impacts of financial instability. As the region continues to grow, improving financial stability can enhance investor confidence, increase the flow of domestic and foreign capital, and stimulate economic growth. However, the complexity of this relationship necessitates a deeper exploration of how financial stability can be sustained and leveraged to foster long-term economic development in SSA. While there is broad consensus that financial stability is a key enabler of economic growth, the specific mechanisms through which this occurs, particularly in developing economies, remain an area of ongoing research.

Understanding these mechanisms is vital for policymakers in Sub-Saharan Africa and other emerging markets, as they seek to strengthen their financial sectors and improve economic resilience. Financial stability, when properly managed, can help create the conditions necessary for sustained growth, increased investment, and the broad-based development that many countries in SSA are striving to achieve.

## 2. LITERATURE REVIEW

The Endogenous Growth Theory, popularized by Paul Romer in the 1990s, suggests a two-way causal relationship between financial sector development and economic growth. This theory emerged in response to criticisms of the Neoclassical Growth Model, which, introduced by Solow in 1956, posited that technological advancements and capital accumulation are exogenous factors that drive growth, with diminishing returns on capital. Romer's theory, however, emphasizes that economic growth is primarily driven by internal factors, specifically the rate of return on both physical and human capital. The theory argues that the accumulation of capital—whether in the form of physical infrastructure or human capital—drives productivity and fosters long-term economic growth. As such, policy interventions, particularly those fostering financial stability and innovation, are seen as crucial for facilitating sustained economic progress. Central to this theory is the idea that improvements in innovation, whether through technological advancements or human capital development, can lead to enhanced productivity and, consequently, positive economic growth. Financial stability plays a key role in this process by providing a conducive environment for businesses to thrive. A stable financial system reduces uncertainty, encourages investment, and supports entrepreneurship—key drivers of innovation, job creation, and economic expansion. Government action, in the form of ensuring financial stability and sound fiscal and monetary policies, is crucial in creating a supportive environment for businesses to innovate and grow, thus boosting the economy. Moreover, the Endogenous Growth Theory posits that policy measures, including those aimed at reducing inflation and optimizing tax rates, can influence the growth rate of an economy in the long run. This suggests that the economic growth rate is not predetermined or solely dictated by external factors but can be significantly shaped by internal policies and institutional frameworks. A stable and efficient financial sector, therefore, is integral to the sustainable growth of an economy, as it helps in the mobilization of savings, proper allocation of resources, and the facilitation of trade and investment. These processes are essential for enhancing overall economic productivity and fostering long-term growth (McCallum and Goodfriend, 1987; Ahmad, 2018; Farahmand, 2019; Modibbo & Inuwa, 2020; Khan & Rehman, 2021; Avelino & Coronel, 2021; Pacillo, 2022; Chen, 2022; Ackah, 2023).

Empirical literature has consistently supported the existence of a financial stability-growth nexus. Scholars such as Eschenbach (2004), Schinasi (2004), Havi and Enu (2014), and Ibrahim and Sare (2018) have demonstrated that a well-functioning financial sector contributes to economic growth through mechanisms such as trade facilitation, risk pooling, resource mobilization, and efficient allocation of capital. Financial stability ensures that these processes occur smoothly and without significant disruption. For example, a stable banking sector is more likely to attract foreign and domestic investment, while reducing systemic risk and improving access to credit for businesses. These factors directly impact the productivity of the economy and contribute to sustained growth. However, the Endogenous Growth Theory has faced criticisms, particularly in its treatment of international trade and external factors. Critics, such as Fine (2000), argue that the theory overlooks the role of international trade and liberalization, which are exogenous factors that significantly influence a country's growth trajectory. While the theory places emphasis on internal economic factors such as capital accumulation and innovation, the global economy is increasingly interconnected, and external factors—such as trade openness, foreign direct investment, and international market conditions—can play a pivotal role in shaping a country's growth path. These factors are especially important in developing economies, where external trade and investment flows can significantly boost economic growth (Ali & Sajid, 2020; Adjasi & Yu, 2021).

One crucial aspect that has received less attention in the literature is the impact of financial stability on economic development, particularly in regions like Sub-Saharan Africa (SSA). Sub-Saharan Africa is home to many low-income and developing economies where the financial sector remains underdeveloped, and economic growth is often impeded by instability in financial institutions. Despite the economic progress observed in several SSA countries, the financial systems in many of these nations still face significant challenges, including low banking penetration, limited access to credit, and vulnerability to external shocks. As a result, these economies are often more susceptible to financial instability, which can undermine the long-term growth potential of the region. The financial crisis of 2008 underscored the importance of financial stability, as the global meltdown revealed the devastating consequences of poorly regulated and unstable financial markets. In response to the crisis, policymakers and financial regulators worldwide, including the Basel Committee on Banking Supervision, introduced significant reforms aimed at strengthening the resilience of the financial sector. The Basel III framework, introduced in 2009, emphasized the need for financial institutions to maintain adequate capital buffers to withstand shocks. The reforms were designed to ensure that banks and financial institutions are better equipped to handle economic turbulence and mitigate the risks associated with excessive leverage and insufficient capital. The introduction of these regulations marked a critical step in reinforcing financial stability globally and addressing some of the vulnerabilities that were exposed during the crisis (BCBS, 2009).

In Sub-Saharan Africa, where financial systems are still developing and often face structural weaknesses, the importance of financial stability cannot be overstated. Financial stability in SSA would help address the challenges of low domestic savings, inefficient resource allocation, and limited access to credit. By fostering a more resilient financial sector, SSA countries could

increase investor confidence, attract foreign investment, and ensure that domestic savings are effectively mobilized for productive investments. A stable financial system would also improve the capacity of local banks to provide financing to small and medium-sized enterprises (SMEs), which are crucial for job creation and poverty reduction in the region. Therefore, ensuring financial stability in SSA is not only critical for safeguarding the existing economic gains but also for unlocking the region's potential for long-term, sustainable growth. While the Endogenous Growth Theory provides valuable insights into the importance of internal factors like financial stability and innovation in driving economic growth, it must be understood within the context of both internal and external factors. For developing regions such as Sub-Saharan Africa, ensuring financial stability is a critical step toward achieving sustainable growth, as it provides the foundation for investment, entrepreneurship, and innovation. Reforms that strengthen the financial system, alongside prudent economic policies, can help SSA countries improve their financial infrastructure and contribute to long-term economic development. The concept of financial soundness has been an essential focus for economic policymakers and financial regulators, particularly after the global financial crisis of 2008. In response to the need for more reliable indicators of financial system health, the International Monetary Fund (IMF) endorsed a set of core indicators called the Financial Soundness Indicators (FSI) in 2001. These indicators were later revised in 2015 to better capture the resilience of financial systems across different economies. The FSI includes key metrics such as the capital adequacy ratio, asset quality (i.e., non-performing loans or NPL), and liquidity. These indicators are crucial because they help assess the stability of a country's financial system and its capacity to withstand economic shocks. A stable financial system is widely perceived as a key driver of economic development. According to Schinasi (2004), financial crises often arise from an unstable financial system, which can lead to systemic risk and disrupt economic activities. A stable financial sector, in contrast, is less likely to be vulnerable to such crises and can contribute significantly to economic growth by providing a solid foundation for investment and credit. When financial institutions are well-capitalized, maintain high liquidity, and manage investment risks effectively, they can support increased capital accumulation, lower borrowing costs, and enhance the efficiency of economic transactions. This, in turn, promotes higher levels of investment and encourages the efficient allocation of resources, which are vital for long-term economic growth. The theoretical link between financial stability and economic growth has been explored in various studies, with García-Cicco and Kawamura (2014) identifying five key dimensions of macroeconomic and financial challenges that financial stability addresses. These dimensions are: information asymmetry and agency challenges in financial contracts, economic downturns arising from unexpected increases in market risk, credit supply changes that exacerbate systemic risks, the disadvantages of internal money creation as a key factor in lending decisions, and the long-term effects of central bank liquidity policies on bank liquidity preferences. A financial system that is well-developed and robust—one that adopts appropriate technological innovations—can help overcome these challenges. Such a system not only attracts foreign direct investment (FDI) but also enables more efficient distribution of economic resources between surplus and deficit sectors of the economy. Furthermore, by pooling individual savings and channeling them into productive investments, a stable financial system can contribute significantly to economic growth.

In contrast, many countries in Sub-Saharan Africa (SSA) continue to struggle with underdeveloped financial systems. One of the main reasons for this underdevelopment is the presence of government-controlled policies that have historically impeded financial growth. In contrast, advanced economies benefit from well-established, stable financial systems that contribute significantly to their economic prosperity. A developed financial system in SSA would enhance the mobilization of domestic savings, improve the allocation of resources, and create a more conducive environment for foreign investment. To achieve financial stability in SSA, it is essential to remove restrictive controls, restructure distressed banks to ensure their solvency, and formulate policies that enhance the supervision and regulation of financial institutions. The impact of financial stability on economic growth has been widely documented in the literature. A healthy financial system provides a mechanism for channeling household savings into productive investments, improving the efficiency of economic activities, and mitigating risks by pooling, sharing, and diversifying them. Moreover, it facilitates trade by providing businesses and consumers with access to credit and investment opportunities. Scholars such as Levine (1997), Levine (2005), Demirgüç-Kunt and Levine (2008), and Beck (2012) have all highlighted the positive relationship between financial stability and economic growth. These studies argue that the stability of the financial system plays a critical role in fostering an environment conducive to investment, innovation, and economic expansion.

For instance, when financial markets are stable, banks are more likely to lend to businesses, which in turn promotes entrepreneurship and the creation of jobs. A stable financial system also supports the growth of small and medium-sized enterprises (SMEs), which are key drivers of economic development, particularly in developing regions. Additionally, financial stability can help reduce the cost of borrowing, improve access to credit, and attract both domestic and foreign investment. These factors collectively contribute to higher economic growth and improve the overall well-being of a country's population (Ali & Sajid, 2020; Adjasi & Yu, 2021; Roy & Madheswaran, 2020; Ali & Mohsin, 2023). The financial sector plays a critical role in the development of a nation's economy. Financial stability, through the effective regulation and supervision of financial institutions, is essential for fostering economic growth. While many countries in Sub-Saharan Africa face challenges in achieving financial stability due to historical policy constraints, the implementation of sound financial reforms and the adoption of international best practices can help strengthen the financial system and promote sustainable economic growth. The lessons learned from advanced economies and the positive experiences documented in the literature suggest that a stable financial system is a key driver of long-term economic prosperity.

## 3. METHODOLOGY

To gain the maximum number of observations and enhance the robustness of the analysis, this study uses panel data. The key advantage of panel data is its ability to observe each country multiple times over different periods, thus enabling a more dynamic analysis of the relationship between financial stability and economic growth across Sub-Saharan African countries. In this context, the subscripts iii and t represent the individual countries and the periods of the selected Sub-Saharan African countries, respectively. By using panel data, the model captures both cross-sectional and time-series variations, improving the precision of the estimates and providing a clearer picture of the relationship between the variables of interest. The model employed in this study draws upon the framework specified by Beck and Levine (2004), which explores the role of financial development and stability in promoting economic growth. However, for the current study, the model is slightly modified to incorporate additional control variables that have been identified as relevant in previous research. These variables help capture other factors that may influence economic growth, such as governance quality, inflation, trade openness, and investment rates. The modification ensures that the model is well-suited to the specific context of Sub-Saharan Africa, where financial development and stability face unique challenges due to factors like underdeveloped financial markets, high volatility in commodity prices, and policy constraints. By including these control variables, the study aims to isolate the effect of financial stability on economic growth while accounting for other macroeconomic factors that might also play a significant role.

The regression equation that forms the basis of the analysis can be written as follows:

GRO=f(BC, NPL, BL, TRA, INF)

Where

GRO

BC= Bank Capital

NPL=Non-performing Loans

BL= Bank Liquidity

TRA= Trade Openness

INF= Inflation Rate

A quantitative method is used to assess data on the relationship between financial stability on economic growth in 33 Sub-Saharan African countries. Data is extracted from the World Development Indicators, published by the World Bank database from 2010 to 2023.

## 4. RESULTS AND DISCUSSION

Table 1 provides the descriptive statistics for six variables, presenting a summary of their central tendencies, variability, and range. For the GRO variable, which has a mean of 8.217 and a standard deviation of 0.971, the values range from a minimum of 7.118 to a maximum of 9.897. This suggests that GRO is relatively stable, with its values falling within a narrow range around the mean. The BC variable has a mean of 2.296 and a standard deviation of 0.397. Its values range from a minimum of 0.399 to a maximum of 2.889. The lower standard deviation compared to the mean indicates that BC is moderately less variable, with values concentrated around the mean but still showing some spread. For NPL, the mean is 1.408, and the standard deviation is 0.621. The range for NPL is from -0.879 to 2.642. The negative minimum value suggests that there could be some negative observations or outliers in the data, which might require further investigation. The BL variable has a mean of 3.118 and a standard deviation of 0.939. Its minimum value is 0.865, and its maximum is 4.98, indicating that BL has a relatively wider range compared to the other variables, with some extreme observations on the higher end. For TRA, the mean is 1.710, with a standard deviation of 0.809. The values range from 0.265 to 3.112, showing moderate variability. The standard deviation suggests that TRA is more variable than some of the other variables, though the range is not as wide as BL.

Finally, INF has a mean of 1.446 and a standard deviation of 0.999. The values for INF range from -0.902 to 2.958. The relatively high standard deviation indicates considerable variability in the data, and the negative minimum value suggests some deflationary periods or negative growth in the data. The variables exhibit a mix of low to moderate variability, with some extreme values observed in NPL, BL, and INF. These descriptive statistics give a first insight into the distribution of the data and help assess whether any variables may require further data cleaning or transformation.

**Table 1: Descriptive Statistics**

| Variable | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| GRO | 8.217 | 0.971 | 7.118 | 9.897 |
| BC | 2.296 | 0.397 | 0.399 | 2.889 |
| NPL | 1.408 | 0.621 | −0.879 | 2.642 |
| BL | 3.118 | 0.939 | 0.865 | 4.98 |
| TRA | 1.710 | 0.809 | 0.265 | 3.112 |
| INF | 1.446 | 0.999 | −0.902 | 2.958 |

Table 2 presents the correlation matrix for the six variables under consideration. The correlation coefficients reveal the strength and direction of the linear relationships between each pair of variables. The relationship between GRO and BC is moderately positive, suggesting that as one increases, the other tends to increase as well. However, the correlation is not strong enough to

imply a very tight relationship. Similarly, GRO and NPL are negatively correlated, indicating that as GRO increases, NPL tends to decrease. However, this negative correlation is not very strong, and the two variables do not exhibit a highly pronounced inverse relationship. The correlation between GRO and BL is also negative, but it is slightly stronger than the relationship with NPL, meaning that higher GRO values are somewhat more consistently associated with lower BL values. There is a relatively strong positive correlation between GRO and TRA, meaning that as one variable increases, so does the other. This suggests a reasonably strong linear relationship between GRO and TRA, indicating that these two variables move in the same direction over time. On the other hand, the correlation between GRO and INF is weakly negative, implying that as GRO rises, INF slightly decreases, although this relationship is not strong enough to be considered significant.

The correlation between BC and NPL is very weak, with a coefficient close to zero, meaning that changes in one variable do not appear to influence the other. BC and BL show a moderate positive relationship, indicating that as BC increases, BL tends to increase as well, but again, this correlation is not very strong. The correlation between BC and TRA is weakly positive, suggesting that there is a slight tendency for TRA to increase when BC increases, although the relationship is not statistically significant. Similarly, the relationship between BC and INF is weak, indicating almost no meaningful linear association. The correlation between NPL and BL is weakly negative, suggesting that there may be a slight inverse relationship between these two variables, though the relationship is not substantial. The relationship between NPL and TRA is almost negligible, with a correlation close to zero, implying that changes in NPL do not have a meaningful effect on TRA. The correlation between NPL and INF is also weakly positive, showing that there is little to no meaningful connection between these two variables. The negative correlation between BL and TRA is relatively strong, indicating a significant inverse relationship between these two variables. As BL increases, TRA tends to decrease, and vice versa. Finally, the relationship between BL and INF is weakly positive, suggesting a slight tendency for INF to increase as BL rises, although the relationship is not strong. Similarly, TRA and INF show a very weak positive correlation, indicating no significant relationship between these two variables.

The correlation matrix reveals that some variables exhibit moderate to strong relationships, such as GRO and TRA, while others have weak or negligible correlations, such as NPL and TRA, or NPL and INF. The strongest relationship is found between BL and TRA, which are negatively correlated, while most other relationships are either weak or not statistically significant. This suggests that some variables may move together in predictable ways, while others do not show strong linear dependencies.

**Table 2: Correlation Matrix**

| Variables | GRO | BC | NPL | BL | TRA | INF |
|---|---|---|---|---|---|---|
| GRO | 1.000 | | | | | |
| BC | 0.477 | 1.000 | | | | |
| NPL | (0.295) | 0.022 | 1.000 | | | |
| BL | (0.414) | 0.310 | (0.147) | 1.000 | | |
| TRA | 0.584 | 0.125 | 0.025 | (0.724) | 1.000 | |
| INF | (0.242) | 0.099 | 0.048 | 0.212 | 0.092 | 1.000 |

Table 3 presents the results from a panel least squares regression, showing the relationship between the dependent variable and several independent variables. Each row provides the estimated coefficient, standard error, t-statistic, and p-value for the variables included in the model. The coefficient for BC is 0.0662, with a standard error of 0.0243. The t-statistic is 2.724, and the p-value is 0.003. This indicates that BC has a statistically significant positive effect on the dependent variable, as the p-value is well below the 0.05 threshold. A one-unit increase in BC is associated with an increase of 0.0662 in the dependent variable, suggesting a positive relationship between the two. For NPL, the coefficient is -0.0668, and the standard error is 0.0183. The t-statistic is -3.643, and the p-value is 0.001. This negative and statistically significant relationship indicates that as NPL increases, the dependent variable decreases. The relationship is strong, as evidenced by the low p-value, which suggests that NPL has a significant inverse effect on the dependent variable. The coefficient for BL is 0.0189, with a standard error of 0.0037. The t-statistic is 5.064, and the p-value is 0.000. This result shows a statistically significant positive relationship between BL and the dependent variable, with BL contributing positively to the outcome. The strong t-statistic and very low p-value indicate that the effect of BL is highly significant.

For TRA, the coefficient is 0.1026, with a standard error of 0.0135. The t-statistic is 7.629, and the p-value is 0.000. This indicates a very strong positive relationship between TRA and the dependent variable, suggesting that as TRA increases, the dependent variable also increases significantly. The coefficient for INF is -0.0352, and the standard error is 0.0135. The t-statistic is -2.393, with a p-value of 0.012. This indicates a significant negative effect of INF on the dependent variable, as the p-value is below the 0.05 threshold. A one-unit increase in INF is associated with a decrease in the dependent variable, although the magnitude of the effect is smaller compared to some of the other variables. Finally, the constant term is 7.1597, with a standard error of 0.4999. The t-statistic is 14.322, and the p-value is 0.000. This indicates that the constant term is highly significant and represents the value of the dependent variable when all the independent variables are zero. The panel least squares regression shows that BC, BL, and TRA have positive and statistically significant effects on the dependent variable, while NPL and INF have negative and significant effects. The constant term is also highly significant, representing

the baseline value of the dependent variable.

**Table 3: Panel Least Squares**

| Variables | Coefficients | Std Error | t- statistics | P\| |
|---|---|---|---|---|
| BC | 0.0662 | 0.0243 | 2.724 | 0.003 |
| NPL | −0.0668 | 0.0183 | −3.643 | 0.001 |
| BL | 0.0189 | 0.0037 | 5.064 | 0.000 |
| TRA | 0.1026 | 0.0135 | 7.629 | 0.000 |
| INF | −0.0352 | 0.0135 | −2.393 | 0.012 |
| Constant | 7.1597 | 0.4999 | 14.322 | 0.000 |

## 5. CONCLUSIONS

The purpose of this paper is to investigate the relationship between financial stability and various macroeconomic variables, and their collective impact on economic growth in Sub-Saharan Africa. The analysis uses recent data from 33 Sub-Saharan African countries, spanning from 2010 to 2023, drawn from the World Development Indicators. The results from the panel data regression analysis reveal several significant relationships between financial stability indicators and economic growth. Specifically, the study finds positive relationships between economic growth and bank capital, bank credit, and trade openness. These results align with the view that a stable financial system, characterized by adequate bank capital and a well-functioning credit market, plays a vital role in fostering economic growth. The relationship between economic growth and these financial stability indicators supports the notion that strong financial institutions, adequate credit supply, and openness to international trade can drive economic development in Sub-Saharan Africa. Conversely, the study identifies negative relationships between economic growth, non-performing loans, and inflation. The negative effect of NPL on economic growth highlights the risks posed by a high level of distressed assets in the banking sector, which can reduce the capacity of banks to lend and support productive investments. Similarly, the negative relationship between inflation and economic growth suggests that high inflation rates can erode the purchasing power of consumers, distort economic decision-making, and impede long-term growth. This underlines the importance of controlling inflation to sustain economic stability and growth. The findings of this study provide valuable insights for policymakers and financial regulators in Sub-Saharan Africa. It underscores the necessity of maintaining financial stability as a foundation for economic growth, while also emphasizing that controlling inflation is a critical component of achieving sustainable development. Moreover, the positive relationship between bank credit and economic growth presents an interesting opportunity for policymakers to leverage the financial sector to support economic expansion. In particular, reducing the cost of credit and improving access to financing can enhance investment and economic activity, particularly in the private sector. The study also makes a compelling case for the adoption of international financial regulations such as the Basel III framework. Given the importance of bank capital adequacy and liquidity requirements in fostering financial stability, Sub-Saharan African countries should consider implementing these regulations to strengthen their financial systems and support economic growth. Future research could explore the impact of Basel III compliance on the ability of banks in Sub-Saharan Africa to lend and contribute to economic development. Additionally, the results suggest that prudential policies should be designed with a balanced approach, incorporating both monetary and fiscal measures, alongside market discipline, to create an environment conducive to long-term growth. By ensuring that inflation is kept under control, reducing the cost of credit, and reinforcing financial stability, SSA countries can enhance their ability to achieve and sustain economic growth in the coming years. In conclusion, the findings of this paper highlight the importance of financial stability in driving economic growth in Sub-Saharan Africa. Financial sector reforms, aimed at strengthening the banking system and reducing inflation, will be essential for fostering a more robust and resilient economic environment. The paper recommends that financial regulators in Sub-Saharan Africa focus on lowering credit costs, improving access to financing, and adopting global financial standards like Basel III to ensure sustainable economic growth.

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