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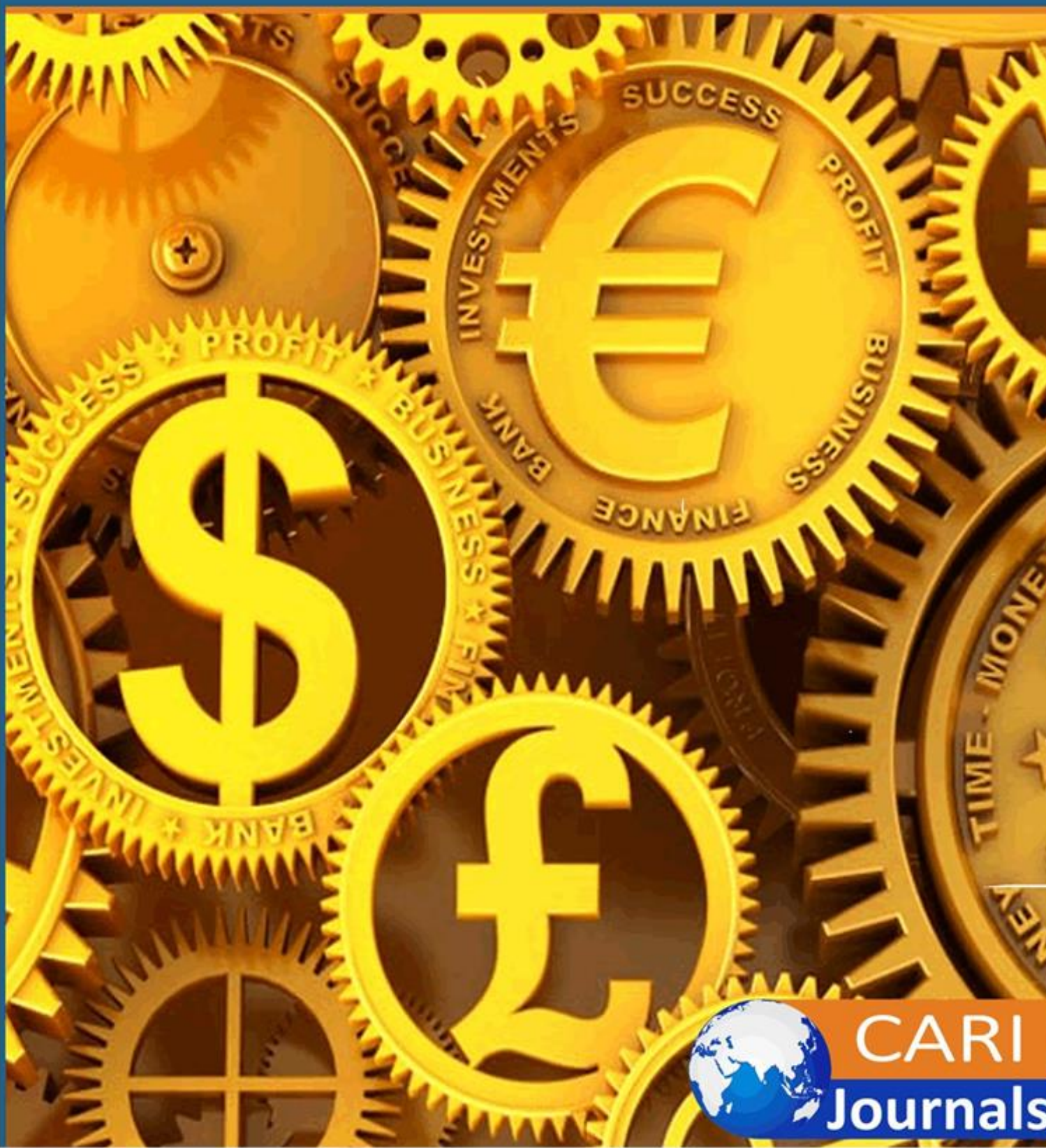

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Influence of Employment on Economic Growth in Sub-Saharan Africa: Does Financial Stability Matter?

[1]Justice Iddrisu Lambon, [1*]Evans O. N. D. Ocansey, PhD, [1]Opoku Kwaku Ababio, PhD

[1]Department of Accounting and Finance, Valley View University, Ghana

https://orcid.org/0000-0002-5176-1809

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Abstract

Purpose: The primary objective is to determine whether employment significantly influences economic growth and how financial stability, alongside other macroeconomic variables, affects this relationship.

Methodology: To achieve this, the study employs a robust quantitative design using panel data from 38 SSA countries covering the period from 2000 to 2023. The analysis utilizes the Generalized Method of Moments (GMM) technique, which controls for endogeneity, unobserved heterogeneity, and autocorrelation, ensuring the credibility of causal inferences.

Findings: Empirical results reveal that employment, financial stability and education attainment significantly enhance economic growth at these coefficients and p-values ($\beta = 0.0025$, $p < 0.01$), ($\beta = 0.3587$, $p < 0.001$), ($\beta = 0.00497$, $p < 0.001$) respectively. However, credit to private sector and inflation are negatively associated with economic growth respectively at these coefficients and p-values, ($\beta = -0.00077$, $p < 0.01$), and ($\beta = -0.00079$, $p < 0.001$). Notably, the interaction between employment and financial stability is negative ($\beta = -0.0073$, $p < 0.01$), implying that while both independently support growth, financial stability may inadvertently weaken the impact of employment, likely due to constrained credit flow to high-employment informal sectors.

Unique Contribution to Theory, Practice and Policy: These findings carry critical implications for policymakers, emphasizing the need to balance financial sector resilience with inclusive employment strategies. The study also highlights the role of education and inflation control in driving sustainable development. Finally, it calls for a re-evaluation of financial intermediation frameworks to ensure they promote employment-led growth without compromising macroeconomic stability.

Keywords: *Economic Growth, Employment, Financial Stability, Sub-Saharan Africa, GMM, Inflation, Credit to GDP, Education*.

1. Introduction

Sub-Saharan Africa (SSA) is a region characterized by enduring structural vulnerabilities as well as by dynamic developmental prospects and constitutes a most relevant case for the analysis of the complex nexus of employment, economic growth and financial stability. While economies around the world seek to recover from systemic shocks such as the COVID-19 crisis, the difficult task of achieving sustainable economic recovery and inclusive development is compounded in regions such as SSA where the labor market remains inefficient, and institutional fragility persists. While the empirical economic literature generally confirms the positive correlation between employment and economic growth, the peculiarities in SSA, in terms of under- and informal employment and financial exclusion, require a more phased analysis.

The conventional perspective on growth-employment linkages has been questioned because of the instability and vulnerability of financial systems in most SSA countries. These mechanisms, which are frequently underregulated or immature and connect labor utilization to macroeconomic performance, may in turn also create structural bottlenecks in some cases. Therefore, financial stability – usually depicted by the level of soundness of the banking sector, credit standing, inflation containing as well as institutional clarity becomes a key intervening variable that can relatively increase or decrease employment growth path in SSA environments (Babajide et al., 2020).

Financial stability, at its essence, means that financial institutions are functioning well, love risk and in a manner that supports sustainable macroeconomic performance. It involves strong regulation, a good credit atmosphere, healthy banks, and low volatility in financial markets. This stability underpins long-term investment and job creation by giving investors confidence to invest and enabling entrepreneurs and companies to access finance. In SSA, financial systems tend to be fragile and prone to volatility as a result of political instability including high dependency on external debt, weak institutional enforcement. As noted by Jima and Makoni (2023) instability impairs economic growth through, among others, reducing investment levels, discouraging productive and credit to access, increased investment risk. However, systemic financial sector deficiencies constrain inclusive development, a particularly big issue for labour intensive economies.

In addition, Dahmani and Makram (2024) posit that financial stability is not just a passive facilitator of economic expansion, but also an active actor through the channeling of resources and the enhancement of productive efficiency among sectors. Their analysis, examining SSA, presents strong evidence that stable financial conditions are positively associated with higher GDP growth rates, especially where this takes place in an environment of sound policy and an inclusive financial system.

Notwithstanding, the existing extensive literature on the interaction between employment, economic growth, and financial aspects, there are some gaps that need attention, especially in SSA.

First, most of the studies in literature usually consider these variables independently rather than integrated. There are few empirical analyses which utilize quantitative panel data techniques to investigate the interrelatedness of employment, economic growth and financial stability as complementary concepts in a SSA economy. Second, the sectoral decomposition is still relatively crude in the present study. The heterogeneous effects of employment in core sectors including agriculture, manufacturing, services and technology on economic growth in different financial circumstances have not been explore well. Additionally, most current ones tend to miss the nature of informality which characterizes SSA labor markets and is central in shaping the employment productivity connection.

Thirdly, visible is the scarcity of research investigating moderating role of financial stability, in which it is often proxies as control or outcome variable but not included as a moderation variable. It is against this context of the relative frailty of financial systems in SSA that financial stability is included in our study as a moderator in order to provide a more culturally sensitive lens for analysis (Dahmani & Makram, 2024). Fourth, the majority of existing studies have investigated macro-level aggregates that have obscured a microeconomic level, how employment affects household income, entrepreneurship, and patterns of consumption across different types of financial regimes. Such microfoundations are critical for policy in poverty-stricken regimes, particularly in SSA.

In light of these deficiencies, the current study is both timely and vital. It attempts to investigate the full range of the impact of employment channel and economic growth in SSA, while explicitly allowing for financial development as a moderating factor. The goal is to see if the impact of employment generation on economic growth is stronger in lowly leveraged economy, with potentially critical and refined policy implications. This study attempts to add to the larger discussion about inclusive development as well as financial sector reform in SSA in so doing. By using strong quantitative methods with recent panel data of SSA countries, the paper contributes to the literature by establishing the empirical findings with missing micro evidence. Second, it attempts to disentangle effects across economic sectors and formal versus informal employment conditions, thus contributing to the evidence base for both the academic and policy communities. Finally, the study's results will be policy-relevant for governments, central banks, development agencies, and private investors in SSA. It will guide how financial system reforms can be integrated with labor market policies for growth that is employment-oriented, resilient and inclusive. Further, it aligns with the region's drive to the attainment of the Sustainable Development Goals (SDGs) and the national aura transformation especially Sustainable Development Goals 8 and 9: on decent work and economic growth and on industry, innovation, and infrastructure, respectively (Babajide et al., 2020).

2. Literature Review

2.1 Influence of Employment on Economic Growth

The evidence is quite strong that job creation is key to building sustainable economic growth, especially in labour abundant regions such as SSA. Employment encourages income and boosts aggregate demand and human capital — all of which stimulate the economy. The classical theory of growth in employment emphasizes the role of labour use in the evolution of the employment structure from an agriculture-based to an industry-based and finally service based (Kritikos, 2024).In the case of the SSA, the nexus between employment and economic growth is complicated by the prevalence of informal employment and less industrial absorptive capacity. Nevertheless, But Adegboye (2020) argues that macroeconomic policies that emphasize promoting employment creation contributes a lot to the increment of GDP growth especially in nations with labor markets intertwined with economic production cycle. Despite often being of low productivity, employment in activities, including agriculture and low-quality services, still make a positive contribution to overall economic activity.

Moreover, Harun and Laksito (2022) evidence that employment of workers in productive sectors—specifically agriculture and manufacturing—significantly influences output, affirming the importance of sectoral employment as a generator of growth. Their results confirm that employment intensity in leading sectors leads not only to short run rising output, but also long run structural change. However, quantity and quality of jobs are different things. Although a high employment rate may seem like a good thing, growth is still weak because many of those jobs are "bad" ones and there are no productivity gains. Widarni and Bawono (2021) also underscore human capital and technological absorption, which will be meaningful for an improvement of the employment-growth nexus. Their analysis on Indonesia is instructive as the parallels are useful for SSA, demonstrating how investments in education and training increase labor productivity and thus better overall economic performance.

2.2 Influence of Employment on Economic Growth, Moderated by Financial Stability

How employment and economic growth interact with each other depends in large measure on the degree of financial stability in an economy. Stable, inclusive, and responsive financial systems act as a catalyst turning employment as a source of growth and decent standard of living into a sustainable growth engine. And, financially wobbly conditions limit the impact on jobs by choking off access to capital and discouraging investment by the private sector.

Owusu (2024) also notes that financial inclusion and stability (Reinhart and Rogoff, 2008) act positively in conjunction to enhance the employment-growth channel by facilitating credit supply (with a consequent facilitation of SMEs) and reducing transaction costs. This role of financial intermediation becomes even more important in SSA, where SMEs account for most of employment. Financial stability is therefore, both, a precondition and also a multiplier of job-led growth. Similarly, Frimpong et al. (2023) empirically show that financial freedom and stability are

moderators in the relationship of inclusive finance with macroeconomic performance. Their research demonstrates that, in the absence of financial environment, the average high levels of employment and self-employed entrepreneurship cannot lead to large growth dividends, even under financial development's support and protection.

Furthermore, Anarfo and Abor (2020) highlight the crucial role of financial regulation in safeguarding financial stability while promoting employment-intensive sectors. Their findings suggest that without sound regulatory frameworks, the expansion of employment may exert inflationary pressures or worsen fiscal imbalances, thereby neutralizing potential growth gains.

2.3 Theoretical Framework

It is crucial to base the critical assessment of the employment-economic growth relationship in Sub-Saharan Africa (SSA), particularly in relation to financial stability on a sound theoretical underpinning. In this context, two important economic theories offer an explanation: the Solow–Swan Growth Model and the Financial Intermediation Model. Taken together, these frameworks highlight how labor and financial sector dynamics can co-determine long-run economic performance. First, the Solow–Swan Growth Theory provides a basic econometric model on how labour, capital and technology should be related to affect long-term economic growth (Missaglia & Vaggi, 2025; Villanueva, 2023). It emphasizes the importance of employment as an input into production and the limitations of the law of diminishing returns in the absence of technological progress. On the other hand, the Theory of Financial Intermediation argues on the intermediation function of the financial institutions as the one ensuring an efficient allocation of capital and its appropriate management of risk, making it an enabler of employment expansion and productivity growth (Gbadebo, 2024; Bethune et al., 2022). Together these theories comprise a dual approach to understanding how employment adds to — or subtracts from — growth that depends on the financial structure of an economy to extend — or restrict — this relationship.

2.3.1 Solow–Swan Growth Theory (Neoclassical Growth Model)

The Solow–Swan model is an exogenous growth model, an economic model of long-run economic growth set within the framework of neoclassical economics. Capital stock, labor (employment), and the rate of technological innovation (Michaelides, 2025; Mohamed, 2023) in an economy are considered to be the key drivers of long-run output according to the model. Perhaps most importantly, employment is included as a key factor in the aggregate production function, an input to production that affects output directly along with capital. At a time when there is plenty of labour in SSA that is not being fully utilised, this model emphasizes the untapped power of human resources in stimulating growth. In a regional applications of the Solow model, Abreu (2021) finds that differences in labor absorption can account for much of the income divergence among developing regions, including SSA.

In addition, the model focuses on declining returns to capital—unless augmented by technological progress or labor-augmenting productivity—underscores the potential for complementary factors such as education, training, and infrastructure to tap the full growth potential of employment. This problem is particularly critical for SSA, where informality is widespread and productivity is low. Another important point to note is that the Solow–Swan model requires a stationary macroeconomic context to guarantee the existence of savings and investment. Capital formation could be uneven and post-employment-driven growth unsustainable without financial stability. Assous and Dal Pont Legrand (2020) critique the model for neglecting institutional and financial dynamics and propose that extending it to include the financial sector can provide a more comprehensive perspective, particularly for regions as SSA.

In recent adaptations, scholars have integrated regional dynamics and capital mobility into the model, making it more applicable to SSA economies with open financial flows and significant labor migration (Zhang, 2025). These extensions offer a more nuanced understanding of how employment patterns and regional integration impact economic growth trajectories, making the model highly relevant for this study.

2.3.2 Financial Intermediation Theory

The Solow–Swan model, on the other hand, is a model of macroeconomic production factors, and Financial Intermediation Theory is a model of the intermediating institutions through which capital gets mobilized and allocated. Based on Schumpeter insights and also developed in contemporary economics, the theory emphasizes the critical mediating role of financial institutes—banks, micro-finance institutions, and capital markets—in connecting savers and investors, and thus enabling efficient investment and utilization of resources (Gbadebo, 2024). Financial intermediation and employment creation financial access is limited in SSA and the effectiveness of financial intermediation is crucial for job creation. Financial intermediaries are dedicated to minimize transaction costs, risk reduction and the pooling of resources, functions which are essential for fostering entrepreneurship and labor intensive sector (Bethune et al., 2022) growth. For example, Chukwunulu and Ibenta (2021) show that in Nigeria, financial innovation has played a considerable role in improving the efficiency of intermediation, for better job-creation impacts.

Further, the theory is strongly supportive for the introduction of financial stability as a mediator. Financial systems that are stable allow lending on a long-term basis, protect against disruptive shocks, and offer certainty to investors—all prerequisites for growth led by employment. By contrast, economic instability destabilizes credit and leads to capital withdrawal and increases in the rate of interest, stifling the potential of firms to employ labor for hire or stagnating the attraction of technological advancements to boost efficiency (Berger & Boot, 2024). It is curious however to note that current advances in financial theory e.g. Decentralized Finance (DeFi) are even coming up with new innovations in the area of intermediation in the finance sector with the likes of digital platforms. According to Grassi et al. (2022), these platforms have the

potential to circumvent conventional institutions thereby enhancing financial inclusion for the disadvantaged and stimulating employment in underbanked regions. This development is hugely promising for SSA, where mobile money and fintech services have already demonstrated the transformative benefits they can offer.

Equally important is the intermediating role of financial intermediation in the promotion of inclusive growth. Financial intermediation has a direct bearing on the outcomes of micro, small and medium enterprises (MSMEs), which play a major role in employment generation in developing areas (Ratnawati, 2020). Her research in Asia demonstrates the need for affordable capital to be made more accessible to under-served firms, and the same holds true for the SSA region. Although analysts of financial intermediation usually characterizing it as the handmaiden, its effectiveness rests largely on the institutional context. Poor regulations, corruption, or banking-sector concentration can distort intermediation activities and contribute to economic inequality. Thus, incorporating financial intermediation theory into this study provides an optic through which to not only analyse capital flows but to question the structural constraints to employment-driven growth in SSA.

In conclusion, between the Solow–Swan Growth Theory and the Financial Intermediation Theory, we have a strong theoretical framework comprising how employment affects economic growth in Sub-Saharan Africa as well as how the level of financial stability will affect this relationship. The former accentuates the macroeconomic significance of labor in promoting long-term growth, while the latter looks on institutional activity of financial system to assist and resist this process. This study is therefore appropriately placed to examine not simply the direct effect of employment on economic performance, but to explore how the characteristics of the financial sector, in terms of its development and structure, moderate the relationship across SSA countries. This theoretical foundation will inform the empirical methodology and findings in the forthcoming sections.

3. Methods

3.1 Data Collection and Sample

This study adopts a quantitative approach to assess the relationship between employment, economic growth, and financial stability in Sub-Saharan Africa using panel data from 38 countries (2000–2023). Secondary data were sourced from reputable databases like the World Bank, IMF, and UNESCO. The chosen timeframe captures financial reforms and allows dynamic modeling, ensuring consistency, comparability, and policy relevance across diverse economic contexts (Abreu, 2021).

3.3 Measures

Table 1: Measurements of Variables

Variable	Definition	Acronym	Measurement	Data Source
Economic Growth Index	Composite score of real economic output and income per capita	EGI	Average of normalized values: GDP per capita, GDP growth, GNI per capita	World Bank World Development Indicators
Employment Ratio	Share of working-age population that is employed	EMP	Employment-to-population ratio (%)	World Bank WDI
Financial Stability Index	Composite score of banking system strength	FSI	Avg. of normalized: Capital to assets, (1 - NPL), Regulatory Quality	IMF Financial Soundness Indicators, WGI
Inflation	Rate of increase in general price level	INF	Annual % change in CPI	World Bank WDI
Credit to Private Sector	Financial resources provided to private sector as % of GDP	CRD	% of GDP	World Bank WDI
Educational Attainment	Average years or completion rates in formal education	EDU	Educational attainment index (based on school enrollment or completion)	World Bank/UNESCO

3.4 Model for the Study

3.4.1 Model Specification

The baseline empirical model is specified as follows:

$$EGI_{it} = \beta_0 + B_1 EMP_{it} + B_2 FSI_{it} + B_3(EMP_{it} \times FSI_{it}) + B_4 X_{it} + \mu_i + \lambda_t + \epsilon_{it}$$

Where:

- EG_{it} = Economic growth in country *i* at time *t*.
- EMP_{it} = Employment Ratio
- FSI_{it} = Financial Stability Index
- $EMP_{it} \times FSI_{it}$= Interaction term (moderation effect)
- X_{it} = Vector of control variables (inflation, credit, education)
- ϵ_{it} = the error term.

- μ_i = Country-specific effect.
- λ_t= Time fixed effects

3.5 Analytical Techniques

In this paper we use a rigorous econometric framework to investigate the nexus between employment, growth and financial stability in Sub-Saharan Africa. The process starts with the use of descriptive and correlation analysis to identify variable distributions and interrelations. Levin-Lin-Chu and Im-Pesaran-Shin panel unit root tests (which test the validity of time series) are used for stationarity. Inestimable model and multicollinearity are tackled through the Hausman test and VIF test respectively. The Generalized Method of Moments (GMM) regression, which is suitable to deal with issues of endogeneity, such as reverse causality between employment and growth, is the main methodological approach of this analysis. GMM improves the reliability of estimation by using internal instruments to guarantee robust and credible inferential results.

4. Results

4.1 Descriptive Statistics

The descriptive statistics give a cursory description of the distribution and nature of the variables over our sample (2000–2023). The average Economic Growth Index (EGI) was 0.144 implying low-performance growth among the selected SSA countries. The low average is also consistent with the structural growth limitations identified in the SSA literature (Missaglia & Vaggi, 2025). Overall, the share of employed people to total population averaged 61.67%, which was relatively high labor force participation; however the wide range of 30.77–85.84% indicates substantial inter-country differences. Additionally, a mean FSI of 0.46 suggests average financial sector health with a skewness suggesting the existence of a greater number of countries below the mean, which mirrors systemic weaknesses in numerous SSA economies (Babajide et al., 2020). By contrast, the distribution of credit to GDP is more disper sive and right skewed, indicative of credit concentration in a few financial centers. The price is particularly the most volatile one (Std. Dev = 28.73), highly kurtosis and skewness, which is in agreement with the past cases of hyperinflation in SSA. Last, testing for normality of all the variables with Jarque-Bera indicates non-normality ($p < 0.01$) and thus robust GMM estimator is used (Grassi et al., 2022).

Table 2: Descriptive Statistics Results

	Economic Growth Index	Employment	Financial Stability Index	Credit to GDP	Education	Inflation
Mean	0.144448	61.66660	0.461177	20.31756	31.03501	8.881108
Median	0.143492	61.85100	0.456994	13.80506	26.94000	5.681349
Maximum	0.247930	85.84000	0.788203	142.4220	90.62309	557.2018
Minimum	0.057469	30.76700	0.271223	0.001297	2.040000	-16.85969
Std. Dev.	0.014215	13.30477	0.080922	23.08169	19.78310	28.73177
Skewness	1.331974	-0.101191	0.589895	2.935496	0.642351	15.78762
Kurtosis	14.21976	1.942038	4.190861	12.06731	2.437381	281.4360
Jarque-Bera	4615.502	40.27002	97.53226	4049.933	68.27129	2725423.
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	120.3253	51368.28	384.1606	16924.53	25852.17	7397.963
Sum Sq. Dev.	0.168118	147278.1	5.448263	443260.0	325620.9	686828.2
Observations	833	833	833	833	833	833

Source: Field Data (2025)

4.2 Correlation Analysis

The correlation matrix provides preliminary information on pairwise relationships among the variables under study. First, we find a positive relationship between growth and financial stability (r = 0.21) and between growth and credit/GDP (r = 0.28), meaning that healthier financial systems and higher credit/GDP are modestly related to better growth outcomes. This result is consistent with evidence from a previous empirical study, which associates level of financial deepening with macroeconomic performance in SSA (Frimpong et al., 2023).

However, employment is negatively and weakly associated with economic growth (r = -0.06), which raises issues about the nature and productivity of employment in SSA. This may be a manifestation of the preponderance of informal and low-productivity jobs in the area, where the growth in employment does not necessarily lead to economic reorganization (Adegboye, 2020). Employment is further negatively associated with financial development (r = -0.31), education (r = -0.35) and credit to GDP (r = -0.33), suggesting that those with lower levels of financial development and education pay be more likely to be in employment—harking back to the presence of an informal sector. Finally, inflation has low correlations with all variables, which suggests it should be included as a control rather than key explanatory variable (Bethune et al., 2022).

Table 3: Correlation Analysis Results

	1	2	3	4	5	6
1. Economic Growth Index	1.000000					
2. Employment	-0.064885	1.000000				
3. Financial Stability Index	0.205611	-0.307048	1.000000			
4. Credit to GDP	0.280839	-0.333689	0.427026	1.000000		
5. Education	0.256241	-0.349846	0.194566	0.423373	1.000000	
6. Inflation	-0.102495	0.044533	-0.090111	-0.075218	0.169931	1.000000

Source: Field Data (2025)

4.3 Stationary Tests

In panel unit root tests, we find Economic Growth Index (EGI) to be stationary at level, we have satisfied the one of the necessary conditions for the use of panel data. The first test is that of Levin, Lin & Chu (LLC) and rejects the null of a unit root in the panel of countries on the basis of a test statistic of -6.26 with a p-value of 0.0000 when a common autoregressive process is imposed across countries (Abreu, 2021).

In addition, the Im, Pesaran, and Shin (IPS) W-stat that allows for the heterogeneity in the autoregressive process across panels also leads to a stationarity result with the statistics -9.00 and 0.0000. This joint validation two provides greater confidence in the result and suggests that the data may be appropriate for panel regression methods, including the Generalized Method of Moments (GMM) estimation (Grassi et al., 2022). In addition, both the ADF-Fisher and PP-Fisher Chi-square tests give strong evidence with very low p-values below the one percent level. As a result, these results confirm that the series is mean-reverting, and thereby reduce the likelihood of spurious regressions and validate any subsequent econometric modelling (Villanueva, 2023).

Table 4: Stationary Tests Results

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.26451	0.0000	38	836
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-9.00413	0.0000	38	836
ADF - Fisher Chi-square	222.508	0.0000	38	836
PP - Fisher Chi-square	435.567	0.0000	38	874

*** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.*

4.4 Multicollinearity Check

The application of the Varinace Inflation Factor (VIF) to check for multicollinearity was also employed to enhance the reliability of the regression estimates. Mutligocollinearity, when the explanatory variables are highly correlated, may lead in increased standard errors and erratic coefficients' significance. Fortunately, from the above centered VIF values in Table 6, multicollinearity is not so serious in the present model. In particular, all of the centered VIFs are far off the widely accepted cut-off of 10 (Bethune et al., 2022).

For example, Employment variable has a centred VIF of 1.25, and Financial Stability Index and Education report VIFs of 1.27 and 1.37. These values indicate very low linear relationship between predictors and thus assure on the validity of the model. The uncentered VIFs suggest multicollinearity (especially for the constant term (C) that equals 87); but these expected, due to the presence of the intercept, and are irrelevant for multicollinearity diagnosis (Grassi et al., 2022). Thus, the results based on the centered VIFs indicate that multicollinearity is not a problem for the reliability of the regression estimates, and the individual variable effects can be accurately interpreted within the GMM model framework (Villanueva, 2023).

Table 6: Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
Employment	1.50E-09	28.12617	1.249589
Financial Stability Index	4.13E-05	42.75522	1.275593
Credit to GDP	5.89E-10	2.627818	1.479824
Education	7.43E-10	4.753424	1.372245
Inflation	2.74E-10	1.170759	1.068542
C	1.84E-05	87.04372	NA

4.5 Regression Analysis

The GMM estimates of the regression in this work offers a nuanced and statistically sound perspective on the complex nexus among employment, financial stability and economic growth in SSA. It is worth mentioning that employment, financially stable, education are statistically significant places a significant positive impact on economic growth. In contrast, inflation, credit to the private sector have negative coefficients as well as the interaction term between employment and financial stability are negative-implies that financial stability diminishes the employment-growth link downward. These results are compatible, but also partially contrary, to a number of recent publications.

First, the positive, and highly significant, effect of employment on growth ($\beta = 0.0025$, $p < 0.01$) is in line with the general conclusion in development economics. Frimpong et al. (2023) who found that higher levels of employment (in particular, for productive sectors) were a

significant driver of GDP growth in their system-GMM panel analysis of 39 SSA countries. This is also in line with Asante et al. (2023) identified that the key factor for economic advance is labor utilization, particularly when combined with financial deepening.

Notwithstanding, although there is a general consensus in the literature regarding the relevance of employment, few of the published papers specifically focus on its relationship with the financial system variables. This paper contributes to the literature by adding a moderation term (EMP* FSI) and finding that the coefficient is negative ($\beta = -0.0073$, $p < 0.01$). This suggest that while financial stability enhances growth, it mitigates the marginal contribution of employment on economic growth, possibly through reorienting credit away from labor-intensive but risky informal activities. It is interesting to note that this contrasts Espacenet Patent Results Broad and Babajide et al. (2020), who contend that fiscal and employment stability are mutually reinforcing in stimulating entrepreneurship and inclusivity growth. This variation could be as a result of methodological differences since Babajide et al. used pooled OLS and used entrepreneurship proxies instead of formal employment.

Additionally, the positive influence of financial stability ($\beta = 0.358$, $p < 0.001$) is in line with many SSA empirical evidence. For instance Jima and Makoni (2023) showed a causal relationship between financial stability and GDP growth by the use of panel causality tests. They also stressed that financial systems that are stable help to lower macroeconomic uncertainty, facilitate investment and support growth. Similarly, Ahulu et al. (2021) that financial fragility in SSA frequently drives recessions and enhancements in banking robustness cause substantial growth acceleration. The current study adds to this claim (and contributes nuance by finding that the beneficial effects of financial stability may not be uniform across labour contexts).

As for credit to the private sector, the negative coefficient ($\beta = -0.00077$, $p < 0.01$) is in contrast to economic intuition, but it makes some sense in the context of SSA. In practice, expanded credit is supposed to make business easier to expand, create more jobs and improve productivity. Nevertheless, as Anuya and Ifionu (2021) demonstrate in SSA using dynamic panel GMM, credit flows are usually biased towards the non-productive sectors or absorbed because of government borrowing, and thereby cannot be deployed for development. One crimson thread to all of this is the inadequate conversion of credit expansion to inclusive growth - be it due to poor institutions or underdeveloped capital markets. This result is consistent with that of Beyene (2024) who pointed out that bad governance reduces allocative efficiency of credit across low income African economies.

As it is evidenced from the literature a direct relationship between education and economic growth ($\beta = 0.00497$, $p < 0.001$). According to human capital theory, spending on education increases worker productivity and innovation and leads to long-run economic growth. This theoretical perception is supported by evidence from Ratnawati (2020) which showed that educational level significantly enhances the performance of micro and small enterprises in agribusiness in developing Asia, which is also as poverty-ridden as SSA's informal sector

landscape. Moreover, Babajide et al. (2020) highlighted that education builds financial stability, indirectly does so by promoting responsible financial behaviour, giving the dual path to development.

In contrast, the negative and statistically significant coefficient for inflation ($\beta = -0.00079$, $p < 0.001$) indicates the destabilizing impact of macroeconomic volatility. This is consistent with the results of Frimpong et al. (2023), low real income reduces investment in the long run as well as growth. Similarly, Seyram et al. (2019) suggested that the uncertainty that is induced by inflation volatility has an asymmetric effect in the credit market, which could reduce household and business spending. Another parallel difference is found in the autoregressive factor of lagged economic growth ($\beta = -0.075$, $p < 0.01$), which is negative and significant. Although it is counter-intuitive, a similar pattern is documented in dynamic GMM results, which include cyclical adjustments, or correction processes following above-average growth periods (Asante et al., 2023). It also captures the inertia and volatility traceable to SSA economies, for which previous growth may not be a true portent of gains in coming times, owing to either institutional fragility or policy shocks.

The diagnostic statistics of the model also significantly confirm its validity. The J-test p-value (0.36) indicates that instruments utilised in the GMM estimation are valid and the model is well-specified, as indicated by Grassi et al. (2022). In addition, the use of first-differenced variables and internal instruments enhances causal inferences, a practice that has been ignored in past pooled or fixed-effects analyses. This analysis is congruent with much of the literature, however, in the way of understanding financial stability as a moderating variable this study differs considerably. Whereas most writings suggest some form of positive relationship between financial development and growth in an essentially linear sense (see Ahulu et al., 2021), this paper offers a different nuance by arguing that stability can lead to a diluted impact on labour-led growth, if it reduces capital flows into high-risk, high-employment sectors. That points to a policy trade-off between financial stability and inclusive growth — requiring greater scrutiny.

Given such a background, the current study offers three unique views to the existing literature. First, it confirms that growth in SSA is multi-dimensional and flows two-ways and stresses the role of employment, education and financial sector quality in the same. Second, it provides a warning signal against the optimism of assuming that credit growth or financial sector development per se will automatically lead to an increase in institutional quality. Third, in presenting evidence that financial stability can impede the employment-growth nexus, it questions the extant orthodoxy and requests the design of more context specific policies. We also find previous empirical evidence to be supported as well as contradicted in some cases in this GMM analysis. It supports the importance of employment, education, and quality of financial system in fostering growth, and it provides evidence that some dynamics like the relationship between financial stability and employment may work differently in reality as compared to the role

postulated by the theory. These results highlight the importance of adoption of country-specific policy mix, combining macroeconomic stability with inclusive employment policies.

Table 7: Regression Analysis Results Using GMM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Economic Growth Index(-1)	-0.075337	0.026630	-2.829044	0.0048
Employment	0.002549	0.000679	3.755800	0.0002
Financial Stability Index	0.358684	0.040408	8.876490	0.0000
Credit to GDP	-0.000772	0.000181	-4.261709	0.0000
Education	0.004971	0.000569	8.737379	0.0000
Inflation	-0.000791	0.000102	-7.738403	0.0000
EMP*FSI	-0.007342	0.001164	-6.308388	0.0000
	Effects Specification			
Cross-section fixed (first differences)				
Mean dependent var	0.000150	S.D. dependent var		0.012539
S.E. of regression	0.021416	Sum squared resid		0.345825
J-statistic	31.09618	Instrument rank		36
Prob(J-statistic)	0.360904			

Conclusions

In this respect, the present study provides robust evidence that employment, income and education are critical in driving economic growth in SSA, but also points to important nuances. Employment complements growth positively and its positive impact is dampened with the effect of financial stability, which may be due to the constraints upon the informal sectors that credit markets create. The results also indicate that inflation and the credit to GDP ratio have a negative impact on growth, confirming the importance of macroeconomic policy balances. Of importance, the study also questions the conventional wisdom in financial literature that deems financial stability and inclusive growth are complimentary, and that extension of credit is not in itself synonymous with economic growth. These findings advance the financial intermediation theory and suggest that a nuanced financial governance is needed in SSA.

Recommendations

In order to maximize employment potential, policies aimed at labour-intensive and value-added sectors, such as manufacturing and agro-processing, need also to be prioritized by governments. Also, regulatory trade-offs in the informal and SME finance divide Financial regulators must balance prudent regulation and inclusive credit access, particularly for the informal and SME segments. Investments in education should match labor market needs, and increase labour productivity and innovation. In addition, macroeconomic stability needs to be preserved through the judicious use of the monetary and fiscal tools in order to control inflation

and encourage investment. The credit allocation needs to be better targeted for productive use, and financial literacy needs to be strengthened for better efficiency in borrowing. Finally, further sectoral analysis is advised to unravel the diverse effect of credit on SSA.

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