

Effects of Interest Rates on Socioeconomic Prosperity in Sub-Saharan Africa

Elijah Emmanuel Ebwelle¹, Dobdinga Cletus Fonchamyo¹ & Francis Menjo Baye²

¹ Faculty of Economics and Management Sciences, The University of Bamenda, Cameroon

² University of Yaounde II, Cameroon

Correspondence: Elijah Emmanuel Ebwelle, Faculty of Economics and Management Sciences, The University of Bamenda, Cameroon.

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Abstract

Socioeconomic prosperity remains a critical priority for many countries in the Global South, particularly in Sub-Saharan Africa, where fluctuating interest rates pose significant challenges. This paper examines the impact of interest rates on socioeconomic prosperity across 38 Sub-Saharan African (SSA) countries from 2003 to 2024, drawing on secondary data from the World Development Indicators. Employing fixed effect models and system generalized method of moments (GMM) to address robustness and potential endogeneity issues, the findings indicate a significant association between interest rates and improvements in socioeconomic prosperity. These results are consistent across estimation methods and align with the perspective that favorable interest rate adjustments enhance productivity. Key policy recommendations emphasize the need to strengthen monetary policy transmission mechanisms through measures such as boosting banking sector competition, enhancing credit information systems, refining regulatory frameworks, and mitigating risk premiums through credit guarantee schemes and improved collateral mechanisms.

Keywords: interest rates, socioeconomic prosperity, SSA, SGMM

1. Introduction

Interest rates act as a fundamental driver in shaping economic paths, significantly affecting growth, job creation, and societal welfare in both advanced and emerging markets. In Europe, the European Central Bank's (ECB) recent monetary tightening, coupled with national policies, has raised borrowing costs, curbing growth and straining labour markets. This has reduced household purchasing power and overall welfare (IMF, 2023), emphasizing the need to examine interest rate fluctuations' wider social and economic effects. In the United States, a study by Federal Reserve (2020), highlights the regressive impacts of rising rates, which heighten costs for mortgages, credit cards, and small business loans, hitting low-income households hardest by restricting credit and widening inequality. Thus, wealthier groups, with assets that gain value in high-rate environments, face less strain, showing how rate policies reshape prosperity and equity.

Canada illustrates how credible monetary frameworks can mitigate high rates. The Bank of Canada's approach has stabilized inflation expectations, but sustained high rates have increased mortgage burdens and cut disposable incomes. Clear policy communication reduces uncertainty, easing socioeconomic costs (Tombe, 2022), a key lesson for Sub-Saharan Africa (SSA), where central bank independence and transparency are often limited. China's system differs, with state-controlled lending and exchange rates dominating transmission. Rate changes influence investment, urban jobs, and rural welfare uniquely, underscoring institutional roles in rate effects relevant for SSA's shallow financial sectors (PBOC, 2024).

South Korea's evidence shows that rate shifts strongly affect household debt, inequality, and polarization amid

high leverage. Rate hikes burden debtors, suppress consumption, and deepen divides, hindering inclusive growth (Yoon, 2024). Insights from Europe, North America, China, and Korea reveal rates' influence on prosperity through labour, credit, and distribution channels, providing a basis for SSA analysis. South Africa, with inflation targeting since 2000, uses rates for stability (South African Reserve Bank, 2000), but fiscal pressures, debt rising from 28% of GDP in 2008 to 56% in 2018, are projected to exceed 70% a challenge (Sangweni, 2020). The IMF warns that debt costs may force higher rates to anchor expectations (IMF, 2020), raising borrowing expenses and limiting investment and consumption. This interplay of rates and fiscal constraints shapes growth and welfare in unequal settings, stressing policy credibility and discipline for SSA to counter debt-driven rate pressures.

South African research reveals monetary policy's distributional effects via rates. Expansive policies lowering rates often widen wage gaps by benefiting skilled workers more (Bhorat & Oosthuizen, 2022), while hikes may compress them by slowing top-end wage growth. Tightening also reduces consumption inequality by hitting debt-heavy, wealthier households harder (IMF, 2021). Rates thus impact beyond aggregates, affecting livelihoods and distribution crucial in SSA's unequal, segmented markets, where policies can entrench or ease disparities. South Africa's case urges evaluating rates for equity alongside stability, linking to socioeconomic prosperity. Nigeria exemplifies the high rates' drag on development. From 2000–2022, average lending (17.4%) and deposit (9.8%) rates discouraged borrowing, stifling private growth and non-oil diversification (Ajayi & Okeowo, 2025). Limited credit for SMEs and households curbed income opportunities, eroding welfare and progress. This highlights the risks of tight policies and the need for coordinated approaches for SSA prosperity.

Kenya's dynamics show debt and interest burdens hindering advancement. From 1991–2015, servicing external debt slowed growth by diverting funds from investments (Chepkilot, 2024), persisting to limit social and infrastructure spending. Vision 2030 prioritizes stability for savings, private growth, and SMEs (Government of Kenya, 2019), but a 40.8 Gini coefficient and rural-urban poverty gaps endure (World Bank, 2022). High interest payments cut resources for vulnerable groups, undermining equitable progress lessons for SSA on debt and inclusion. Nigeria's 2018 poverty 43% (89 million) below the line, 25% vulnerable (World Bank, 2020) worsens with high rates blocking credit and jobs (Ajayi & Okeowo, 2025). Rates manifest in real scarcities, underscoring affordable credit's role in inclusivity and aligning monetary policy with poverty goals in SSA.

Ghana's 2002 inflation targeting stabilised rates, with 1970–2016 data showing lower, predictable levels boosting investment and reducing uncertainty (Akosah, Loloh, & Omane-Adjepong, 2018). The 2010–2012 stability supported households and capital, proving credibility's value (Akosah et al., 2018). But later fiscal issues showed limits without fiscal support. Ghana demonstrates that credible systems can enhance welfare via rates, but need institutional insights for volatile SSA. A 2001–2017 study of 48 SSA countries found that government spending and FDI reduce poverty, while high-rate tight policies harm welfare without productive fiscal offsets (Anjande *et al.*, 2022). Fiscal tools like health, education, and infrastructure investments outperform rate hikes alone; high rates stifle private growth and hit the poor via credit barriers. SSA rate effects tie to fiscal interactions.

The World Bank (2024) projects SSA per capita income back to pre-COVID levels by 2026, only 2% above 2019, with poverty and limited fiscal space for human capital impeding inclusion. Rising debt costs crowd out social spending on infrastructure and safety nets, hurting vulnerable groups. SSA's slow recovery versus Asia/Latin America highlights vulnerabilities; high rates and poverty traps demand reforms, monetary-fiscal coordination, and investments for growth and welfare. Kenya's August 2025 25-basis-point cut to 9.5% signals stability confidence, easing costs for growth (Reuters, 2025a). But without supply chain, agriculture, and safety net reforms, high rates may still erode welfare. Central banks can adjust rates, but coordination ensures easing benefits socioeconomic outcomes.

South Africa's 2025 proposal to lower inflation targets aims to anchor expectations, cut costs, and boost competitiveness (Financial Times, 2025). Investors approved, but the treasury worried about wage and price impacts (Reuters, 2025b). In unequal societies, lower rates aid investment but risk inequality without fiscal/equity policies. These stresses integrating socioeconomic factors; for SSA, align monetary strategies with poverty reduction and equity. In Cameroon, rates critically shape socioeconomic development. The CEMAC framework's euro peg influences regional rates, affecting household affordability via credit costs. High rates limit access to food, health, and education which are key to prosperity (Touna Mama, 2019). They also sway investments; increase acute credit scarcity and exclude SMEs and vulnerable families, thus, warranting analysis of rate effects in Cameroon's context.

Cameroon's agriculture-, oil-, and informal trade-dependent economy reacts sharply to rates. High costs deter farm modernization, low credit hampers productivity, creating cycles of low income and resilience. Policies must expand affordable finance for rural vitality. Urban areas like Douala and Yaoundé face rate-driven housing and import cost hikes, worsening debt via high microfinance rates for informal traders stifling jobs and growth. Rates affect micro-outcomes like employment and skills; narrowing spreads is vital to protect urban households

(Nguena & Tchana, 2019). Cameroon's financial sector, post-reforms, favours large firms; SMEs lack affordable credit due to BEAC-regulated high rates and collateral (Epule *et al.*, 2021). This crimps private growth and labour absorption, causing unemployment amid youth bulge and informality (Nguena, 2019). Easing constraints is key for inclusive jobs. Rates strain public finance: higher ones raise debt costs, consuming budgets and limiting social programs (World Bank, 2022), deepening inequality and slowing SDGs (Foko & Tamba, 2020). Benign rates ensure fiscal sustainability and welfare for middle-income aspirations.

CEMAC's centralization through BEAC denies Cameroon control over its rates, preventing effective responses to crises like the Anglophone conflicts or COVID-19. Rates often do not match local needs, increasing vulnerabilities; for instance, regional rate hikes restrict credit, worsening unemployment and poverty (Ngouhouo & Nembot, 2018). External constraints influence domestic outcomes. Socially, high or restrictive rates contribute to youth unemployment and unrest, linking macroeconomic instability to issues of legitimacy and cohesion (Njong, 2021). Rates impact societal stability; understanding them helps develop policies for fair growth, strong institutions, and national prosperity in Cameroon.

2. Literature Review

2.1 Theoretical Review

Key economic theories explaining the nexus between interest rates and socioeconomic prosperity—encompassing growth, employment, and welfare—have evolved from classical foundations to complex modern frameworks. While the traditional monetary policy transmission mechanism suggests that central bank adjustments stimulate prosperity via credit, exchange rates, and expectations (Mishkin, 2007), contemporary research introduces the Reversal Interest Rate hypothesis. This theory posits that once rates fall below a specific threshold, further cuts may actually constrain prosperity by eroding bank profitability and distorting resource allocation (Brunnermeier & Koby, 2019; MDPI, 2024). Furthermore, the classic Loanable Funds Theory and Keynesian Liquidity Preference have been modernized by the Endogenous Money Approach. This perspective suggests that interest rates are less about equilibrating fixed supplies of money and more about central banks tracking a shifting Neutral Interest Rate to ensure the economy reaches its full potential without overheating (Cleveland Fed, 2025; Zaman, 2024).

The relationship between interest rates and price stability is further illuminated by the Fisher Hypothesis, which has been expanded by recent Neo-Fisherian literature. While Fisher (1930) focused on nominal rates adjusting for inflation to stabilize real incomes, Neo-Fisherianism suggests that a permanent increase in nominal rates might be a prerequisite for escaping low-inflation, low-growth traps, thereby fostering long-term prosperity (Bouakez & Kano, 2024; NBER, 2024). Additionally, the socioeconomic impact of interest rates is now viewed through a distributional lens; recent studies indicate that while low rates aim to boost employment, they can inadvertently exacerbate wealth inequality by inflating asset prices (ResearchGate, 2026). This modern synthesis, alongside Rational Expectations and New Keynesian models, emphasizes that the efficacy of interest rate policy depends heavily on anchored expectations and institutional credibility, acknowledging that productivity shocks often limit the extent to which monetary policy alone can drive prosperity.

2.2 Empirical Review

There exists a litany of studies that underscore the role of interest rates on economic growth and prosperity in SSA. These studies make use of a battery of estimation techniques and methods. Chepkilot (2024) analysed external debt interest payments' effects on Kenya's growth using annual data from 1991–2015. Based on regression analysis, the results indicated a significant negative link, with high payments diverting resources from investments, and undermining prosperity. Okoro and Nkoro (2024) examined asymmetric interest rate impacts on Nigeria's agriculture and rural livelihoods, using annual data from 1990–2023 and the ARDL model. The result showed that rate increases harmed output more than decreases, exacerbating rural vulnerability. Zulu and Banda (2023) assessed policy rates' influence on Zambia's financial inclusion and stability (2005–2022 quarterly data; SVAR model). Rate changes significantly affected service access and stability, impacting population well-being.

Anjande *et al.* (2022) examined the effect of money supply on spending on SSA poverty using 48 countries, data from 2001–2017 and a system GMM estimation technique. Expansions linked to higher poverty via inflation and high borrowing costs, indirectly highlighting rate mediation. Similarly, Sibanda and Moyo (2022) investigated rates' effects on Zimbabwe's poverty and inequality using annual data from 1990–2021 and a Vector Error Correction Model (VECM) for estimation. The result shows that high rates worsened outcomes by raising credit costs for vulnerable groups. Adebayo and Oloyede (2021) studied real rates' impacts on SSA investment and performance, using 10 countries, and data from 2000–2019; while estimation was performed using the dynamic GMM technique. The result shows that higher rates negatively affected investment and growth.

Mugume and Muvawala (2020) analyzed rates' effects on Uganda's private credit and activity using annual data

from 1990–2018 and the Autoregressive Distributed Lag (ARDL) model. The results showed that lower rates boosted credit, investment, and jobs. Kamau and Muturi (2020) examined the rates' impacts on Rwanda's investment and growth using quarterly data from 2005–2019. Using the Ordinary Least Squares (OLS) estimation technique, the result shows a negative correlation with investment observed. Matekenya et al. (2020) linked financial inclusion (tied to rates) to SSA human development using data from 2015–2020 and estimation done through the GMM. The results showed that affordable borrowing improved HDI via health/education investments. Olamide and Olufemi (2019) assessed long-run rate effects on Nigeria's growth using annual data from 1980–2017; while the ARDL technique was used for estimation. The result shows a significant negative impact in the long run. Ndung'u and Githuku (2018) evaluated interest rate spreads on Kenya's financial performance and growth using quarterly data from 2000–2017 and a VECM. The results that Wide spreads hindered growth via high intermediation costs.

Amoah and Atiso (2017) studied rate liberalization on Ghana's financial deepening and growth using quarterly data from 1980–2015 and an Error Correction Model (ECM). Mixed results were obtained showing that initial deepening but unclear long-run growth gains. Akinlo (2016) assessed rates' impacts on SSA growth based on panel data from 1986–2013, using the OLS, fixed effects and dynamic GMM. The results showed that a 1% rate rise reduced growth by 4.35%. Alagidede and Panagiotidis (2015) examined rates' mediation in the financial development-growth nexus based on 16 SSA countries, using data from 1990–2012. Based on panel cointegration (PVECM), the result showed that rates significantly influenced outcomes. These studies affirm high rates' detrimental effects on SSA prosperity, advocating integrated policies to enhance transmission and equity.

3. Methodology

3.1 Sources of Data

The data utilized in this study are primarily from secondary sources, covering the period 2003–2024. This timeframe was selected to encompass significant political changes and major economic challenges in Sub-Saharan Africa (SSA), including issues such as supply shocks, fiscal pressures, and structural vulnerabilities, as highlighted by various authors between 2003 and 2023. Macroeconomic indicators, including imports and exports of goods and services, GDP per capita, foreign direct investment (FDI), domestic capital formation, broad money (M2), credit to the private sector, inflation, human capital, and population growth, are sourced from the World Development Indicators (WDI, 2025). Data on socioeconomic prosperity are obtained from the Legatum Prosperity Index (LPI, 2025). Interest rate information for the rest of SSA is sourced from the International Monetary Fund (IMF, 2025). Data for the CEMAC subregion are excluded due to unavailability, though Bank of Central African States (BEAC, 2025) data are referenced for contextual insights on the CEMAC region.

3.2 Model Specification

To examine the effects of interest rates on socioeconomic prosperity, the study develops a model where socioeconomic prosperity (measured by the Legatum Prosperity Index, LPI) serves as the dependent variable, influenced by real interest rates and other control variables. The model formulation draws inspiration from Stiglitz (2024) and Milton Friedman (1968), who emphasized socioeconomic prosperity as a function of real interest rates, as well as insights from Kliesen and Carney (2022). The functional form is specified as:

$$LPI = f(RIR, BM, UEM, HCAP, FDI, PG) \quad (1)$$

Where LPI represents the Legatum Prosperity Index, RIR denotes the real interest rate, BM stands for broad money, UEM refers to unemployment, FDI indicates foreign direct investment, HCAP signifies human capital, and PG represents population growth. Econometrically, the model can be expressed as follows:

$$LPI_{it} = \alpha_0 + \alpha_1 RIR_{it} + \alpha_2 BM_{it} + \alpha_3 UEM_{it} + \alpha_4 HCAP_{it} + \alpha_5 FDI_{it} + \alpha_6 PG_{it} + \varepsilon_{it} \quad (2)$$

Where ε_{it} is the error term and α_i are parameters to be estimated, $i=1, 2, \dots, N$ and $t=1, 2, \dots, T$.

3.3 Estimation Technique

To estimate the model mentioned above, we employ the Generalized Method of Moments (GMM) estimation technique. The rationale for using GMM is rooted in the works of Arellano and Bond (1991) and Blundell and Bond (1998), and further supported by Levine et al. (2000), who justified applying GMM to explore the relationships between variables. GMM addresses endogeneity not only at the level of other explanatory variables but also for the dependent variable by utilizing a series of instrumental variables derived from the lags of the endogenous variables. Specifically, it is assumed that the explanatory variables are weakly exogenous, meaning current and past realizations can influence them but must remain uncorrelated with future realizations of the error terms. Dynamic models are characterized by the inclusion of one or more lagged values of the dependent variable among the explanatory variables. In this context, the presence of the lagged dependent variable

precludes the use of econometric techniques such as ordinary least squares. Estimates derived from static panel models, including pooled OLS, fixed effects, and random effects estimators, may yield biased results when country-specific effects and lagged dependent variables or potential endogeneity of explanatory variables are present (Ibrahim and Law, 2014; Baltagi et al., 2005). Given these econometric challenges, we adopt the GMM estimation method for our analysis. From the specified model, we can consider an autoregressive panel data model of the following form:

$$LPI_{it} = \alpha_0 + \partial_1 LPI_{it-1} + \alpha_1 RIR_{it} + \partial_2 RIR_{it-1} + \alpha_2 BM_{it} + \partial_3 BM_{it-1} + \alpha_3 UEM_{it} + \partial_4 UEM_{it-1} + \alpha_4 HCAP_{it} + \partial_5 HCAP_{it-1} + \alpha_5 FDI_{it} + \partial_6 FDI_{it-1} + \partial_6 PG_{it} + \partial_6 PG_{it-1} + \varepsilon_{it} \quad (3)$$

Where $\varepsilon_{it} = \eta_i + \nu_{it}$ is the usual ‘fixed effects’ decomposition of the error term; N is large, T small as in our case. Fixed and random effects estimators in dynamic panel models can bias results due to correlation between explanatory variables and the error term, violating exogeneity assumptions. The Generalized Method of Moments (GMM) addresses this as a robust alternative for dynamic panel estimation. GMM’s key advantages include resilience to model misspecification, no need for specific residual distributions, and alignment with theory by minimizing the weighted distance between predicted and actual values. It features two variants: (1) Difference GMM (Arellano & Bond, 1991), which eliminates individual-specific effects via first-differencing and instruments explanatory variables with lagged levels; and (2) System GMM, which extends this by combining differenced and level equations for improved efficiency.

$$\Delta LPI_{it} = \alpha_0 + \alpha_1 \Delta LPI_{it-1} + \alpha_2 \Delta RIR_{it} + \alpha_3 \Delta BM_{it} + \alpha_4 UEM_{it} + \alpha_5 HCAP_{it} + \alpha_6 \Delta FDI_{it} + \alpha_7 \Delta PG_{it} + \varepsilon_{it} \quad (4)$$

The system GMM estimator, developed by Blundell and Bond (1998), integrates the first difference equations with the level equations. It is more robust than the difference GMM. In this approach, the instruments used in the first difference equations are expressed in levels, and vice versa. We will apply both GMM methods to gain a better understanding of our study’s results, as the outcomes of an estimation can vary depending on the estimation method employed. The GMM estimator offers several advantages, as it is robust to model misspecification and does not rely on specific distributional assumptions regarding the residuals. This estimator is more closely aligned with the theoretical relationship because it is designed to minimize the weighted distance between the theoretical values and the observed values.

4. Results and Discussion

As an introduction to the estimation procedures, this study conducts a descriptive analysis of the employed variables. Table 1 summarizes the statistics that will be instrumental in addressing the research objectives. The dataset spans from 2003 to 2023 and includes 38 countries selected based on availability of data, although some variables contain missing values.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Prosperity Index	646	46.263	6.784	29.434	65.952
Real Interest rate	798	6.494	11.26	-81.132	52.437
FDI	798	4.151	7.981	-17.292	103.337
Broad money	780	31.987	20.562	7.352	156.746
Human capital	798	1.802	.466	1.069	3.125
Population growth	798	2.505	.788	-1.132	5.627
Import	745	1.010e+10	1.920e+10	47158152	1.236e+11

Obs- the number of observations, Std. Dev.= the standard deviation, Min = the minimum value and Max = the maximum value.

Source: constructed by the authors.

The prosperity index, serving as the dependent variable, averages 46.263 with a standard deviation of 6.784 and ranges from 29.434 to 65.952, reflecting moderate prosperity levels with potential for socioeconomic improvement. Among the independent variables, the real interest rate averages 6.494% (SD 11.26%, range -81.132% to 52.437%), showing significant disparities across countries; inflation averages 9.831% (SD 32.182%, range -4.295% to 557.202%), indicating extreme variability with some nations facing hyperinflation;

the human capital index averages 1.802 (SD 0.466, range 1.069 to 3.125), suggesting moderate differences in education and healthcare investments; population growth averages 2.505% (SD 0.788%, range -1.132% to 5.627%), with moderate variability including stagnation or decline in some areas; and import value averages 1.010e+10 (SD 1.920e+10, range 47,158,152 to 1.236e+11), highlighting substantial import disparities.

The correlation result presented in Table 2, reveals generally positive relationships between these variables and prosperity, though inflation, the real effective exchange rate, and population growth correlate negatively, potentially impeding progress. With coefficients below 0.5, multicollinearity is low, enhancing the reliability of regression analyses for assessing each variable's independent influence on socioeconomic prosperity.

Table 2. Correlation matrix of the relationships among inflation, interest rate and socioeconomic prosperity

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Prosperity Index	1.000									
(2) Real Interest rate	0.049	1.000								
(3) Exchange rate	-0.048	-0.219	1.000							
(4) Inflation	-0.110	-0.530	0.135	1.000						
(5) FDI	0.032	0.074	-0.023	-0.014	1.000					
(6) Broad money	0.664	0.010	-0.047	-0.097	-0.009	1.000				
(7) Human capital	0.481	-0.114	0.099	0.119	-0.056	0.272	1.000			
(8) Terms of trade	0.057	0.012	-0.004	-0.018	0.141	-0.012	0.128	1.000		
(9) Population growth	-0.595	0.004	-0.072	-0.006	0.059	-0.665	-0.448	0.041	1.000	
(10) Import	0.174	-0.081	-0.009	0.001	-0.112	0.188	0.227	-0.003	-0.176	1.000

Source: constructed by authors.

The analysis shows positive correlations between the Legatum Prosperity Index and Broad Money ($r=0.664$) and Human Capital ($r=0.481$), indicating that increased financial development and investments in human capital enhance prosperity, aligning with Acemoglu and Robinson (2012). Conversely, it has a negative correlation with Population Growth Rate ($r=-0.595$), suggesting that rapid population growth can strain resources and diminish prosperity, consistent with Bloom and Canning (2004). The Real Interest Rate negatively correlates with Inflation ($r=-0.530$), implying higher interest rates suppress inflation through increased borrowing costs, supporting Friedman (1968). Inflation shows a positive correlation with the Real Effective Exchange Rate ($r=0.135$), indicating that rising inflation leads to currency depreciation and boosts exports, as noted by Krugman and Obstfeld (2009). Human Capital is positively linked to Broad Money ($r=0.272$), demonstrating that investments in human resources stimulate financial expansion, echoing Becker (1962). The value of imports positively correlates with Prosperity ($r=0.174$), emphasizing the role of trade in fostering prosperity, as discussed by Frankel and Romer (1999).

The scatter plot depicting the relationship between real interest rates and socioeconomic prosperity reveals a slightly upward sloping trend, suggesting a weak positive correlation between the two variables. This observation aligns with theoretical expectations, as higher real interest rates can encourage greater savings and investment, ultimately contributing to enhanced socioeconomic prosperity (Tobin, 1965; McKinnon, 1973). However, it is important to recognize that this relationship may not apply in extreme situations, such as in Zimbabwe, where hyperinflation and economic instability have resulted in a complete breakdown of the monetary system. For example, Zimbabwe's inflation rate soared to an astonishing 89.7 sextillion percent in mid-November 2008, effectively rendering its currency worthless (Hanke, 2008). Consequently, the real interest rate turned negative, leading to a significant decline in savings and investment (Kairiza, 2009). In contrast, countries like Botswana and Mauritius have managed to maintain relatively high real interest rates while enjoying elevated levels of socioeconomic prosperity.

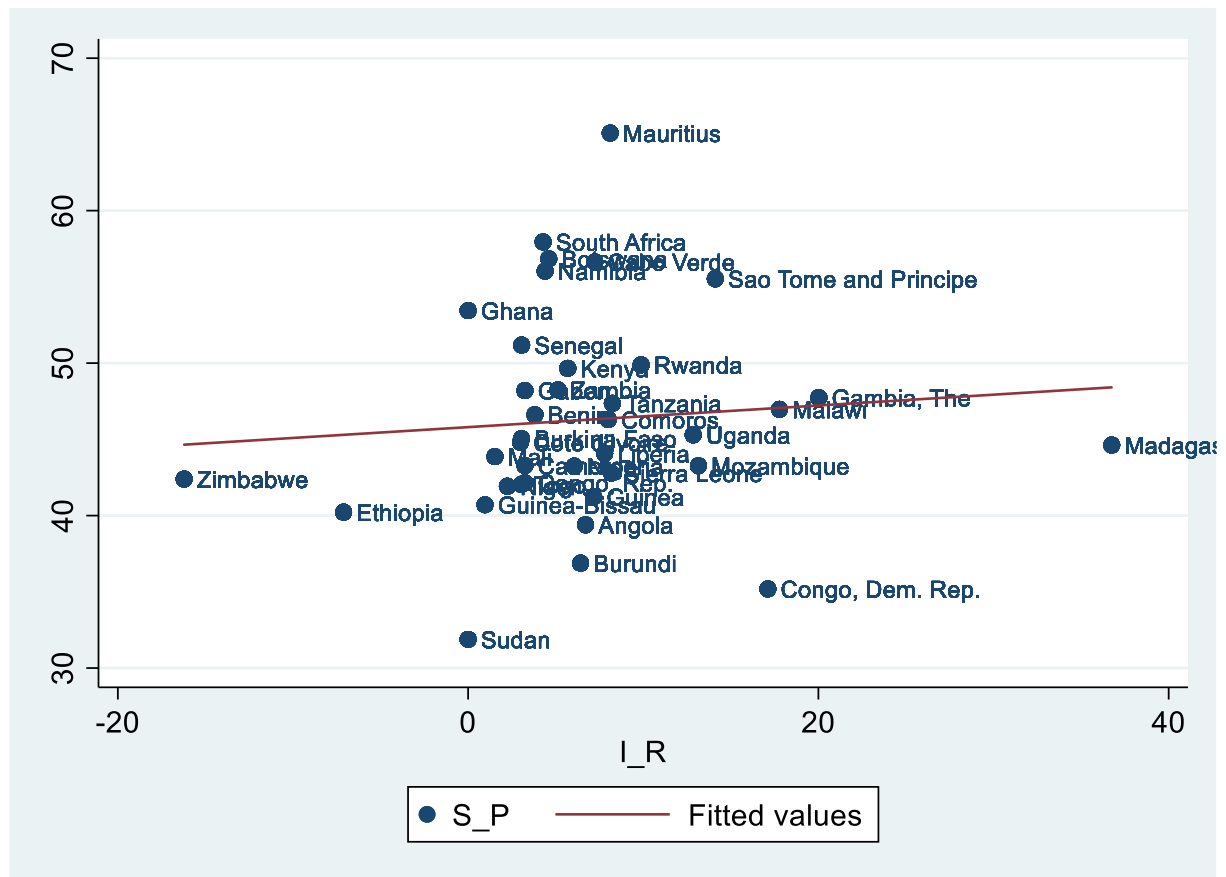


Figure 1. The relationship between real interest rate and socioeconomic prosperity

Source: constructed by authors.

The plot suggests that higher real interest rates are associated with higher levels of socioeconomic prosperity, although the relationship is not very strong. This implies that policymakers in SSA may need to consider the potential impact of interest rates on socioeconomic prosperity when making policy decisions. However, in extreme cases like Zimbabwe, policymakers may need to adopt more unconventional policies to promote socioeconomic prosperity. For instance, policymakers in Zimbabwe have implemented policies such as dollarization and monetary policy reforms to stabilize the economy and promote economic growth (Kairiza, 2009). According to a study by Makoni (2018), Zimbabwe's dollarization policy helped to reduce inflation and stabilize the economy, although it also led to a sharp decline in economic growth. In contrast, countries such as Ghana and Kenya have maintained relatively low real interest rates and have experienced lower levels of socioeconomic prosperity.

The slightly upward sloping trend in the plot highlights the importance of considering the potential impact of interest rates on socioeconomic outcomes in SSA. Policymakers in SSA should aim to maintain interest rates that promote savings and investment, while also considering the potential impact on socioeconomic prosperity. However, in extreme cases like Zimbabwe, policymakers may need to prioritize economic stabilization and monetary policy reforms over interest rate management. This can be achieved through the use of unconventional monetary policy tools, such as quantitative easing and forward guidance (Bernanke, 2013). According to a study by Ncube (2018), Zimbabwe's monetary policy reforms helped to stabilize the economy and promote economic growth, although they also led to a sharp increase in public debt. Countries such as Rwanda and Tanzania have successfully implemented monetary policy reforms and have experienced rapid economic growth and poverty reduction.

Before carrying out regression analysis to know the effect of the different predictors on socioeconomic prosperity, it will be important to first of all carry out some preliminary tests. These tests include the unit root test, the cross-sectional dependency test, the test of slope homogeneity, and the cointegration test. The unit root test results indicate the order of integration for each variable, which is essential for determining the appropriate econometric model specification. The results show that Inflation, Real Interest Rate, FDI, Broad Money, Real

Exchange Rate, Export, Import, Population Growth, and Human Capital are all stationary at level $I(0)$, indicating that they do not have a unit root. This suggests that these variables are mean-reverting and can be modeled using standard econometric techniques. Similar results have been reported by Enders (2014), who found that many macroeconomic variables, including inflation and interest rates, are stationary at the level.

Table 3. Unit root test of Pesaran

Variable	Statistics	P-value	Order of integration
Real interest rate	-3.931	0.000	I (0)
Economic prosperity	-10.318	0.000	I (1)
FDI	-6.885	0.000	I (0)
Broad Money	-4.821	0.000	I (0)
Unemployment	-12.989	0.000	I (1)
Population growth	-8.564	0.000	I (0)
Human Capital	-2.811	0.002	I (0)

Source: Authors' Computation.

On the other hand, Economic Prosperity, Terms of Trade, and Unemployment are non-stationary at level $I(1)$, indicating that they have a unit root. This suggests that these variables are not mean-reverting and may require differencing or other transformations to achieve stationarity. These findings are consistent with the results of Hamilton (1994), who found that many economic time series, including GDP and unemployment rates, are non-stationary and require differencing to achieve stationarity. The Augmented Dickey-Fuller (ADF) test statistics and p-values indicate the significance of the unit root test results. The low p-values (< 0.05) for most variables indicate that the null hypothesis of a unit root can be rejected, confirming that these variables are stationary. These results have implications for the econometric modeling strategy, as non-stationary variables may require special treatment, such as differencing or cointegration analysis. As noted by Dickey and Fuller (1979), the ADF test is a useful tool for determining the order of integration of a time series.

Following the descriptive statistics, the cross-sectional dependence test (CD) introduced by Pesaran (2004) is employed to determine whether there is cross-sectional dependence among the individual units in the panel. As noted by Dogan and Seker (2016), it is essential to assess the presence of cross-sectional dependence when conducting a panel study. Also, the study employs Wooldridge's test for autocorrelation to assess the presence of possible serial correlation amongst the variables. The Breusch-Pagan test was introduced to test the presence of heteroscedasticity in the model and measures to correct these issues. The results of these tests are presented in the Tables below.

Table 4. Preliminary Tests

	Indicator	T-statistics	Prob > F
Wooldridge test for autocorrelation	F(1, 35)	175.504	0.0000
	Ho: no first-order autocorrelation		
	Indicator	T-statistics	Prob > Chi(2)
Breusch-Pagan/Cook-Weisberg test for heteroscedasticity	Chi2(1)	3.76	0.0525
	Ho: Constant Variance		
Pesaran's test for cross-sectional independence = 2.672, Pr = 0.0000			
Average absolute value of the off-diagonal elements = 0.185			
Ho: no cross-sectional dependence			

Source: Authors.

The table above presents the findings from various preliminary tests conducted to assess the impact of real inflation on interest rates. The results of Wooldridge's test for autocorrelation indicate that the model is significant, leading us to reject the null hypothesis, which posits that there is no first-order autocorrelation. Additionally, the results from the heteroscedasticity test also demonstrate the model's significance, prompting us to reject the null hypothesis that asserts constant variance. Regarding the test for cross-sectional dependency, the results reveal the existence of cross-sectional dependence among the countries, suggesting that a shock in one country is likely to influence the other countries in the panel.

A comprehensive presentation and interpretation of empirical findings regarding the impact of real interest rates on socioeconomic prosperity is seen in Table 5 below, which illustrates the empirical results derived from our analysis, highlighting the nuanced effects that fluctuations in real interest rates can have on economic growth, income distribution, and overall societal welfare.

To achieve this objective, we utilized a fixed effects model as our baseline analytical framework. This approach allows for the control of unobserved heterogeneity by focusing on variations within the same entity over time. Additionally, to address potential endogeneity concerns wherein the real interest rate may be influenced by socioeconomic conditions rather than solely affecting them, we employed a two-step system Generalized Method of Moments (GMM) estimation technique. This robust method enhances the reliability of our findings by providing consistent estimates even in the presence of endogenous variables. The results obtained from this advanced estimation technique are presented in the subsequent tables, offering further insights into the intricate dynamics between real interest rates and socioeconomic prosperity.

Table 5. Estimates of the effects of interest rate on SEP using Fixed Effects

VARIABLES	Socioeconomic prosperity
Real Interest rate	-0.0154*** (0.00573)
Broad money	0.0395*** (0.00743)
Unemployment	-0.0965*** (0.0363)
Human capital	5.922*** (0.519)
FDI	0.00432 (0.00648)
Population growth	-0.513*** (0.151)
Constant	36.24*** (1.041)
Observations	598
Number of ID	37
R-squared	0.362

Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.

Table 5 illustrates the impact of interest rates on socioeconomic prosperity in Sub-Saharan Africa (SSA) through the application of a fixed effects model. This methodological choice was informed by the results of the Hausman

specification test, which indicated that the fixed effects model is more appropriate for our data. By focusing on within-entity variations, the fixed effects model effectively controls for unobserved heterogeneity, thereby providing more reliable estimates of the relationship between interest rates and socioeconomic outcomes in the region.

Table 6. Hausman specification test

	Coef.
Chi-square test value	35.254
P-value	0.00

Source: constructed by authors.

The Hausman test results indicate that the fixed effects model is preferred over the random effects model. Since the Hausman test results indicate that the FE model is preferred over the RE model, with a chi-square test value of 35.254 and a p-value of 0. This suggests that the FE model provides a better fit to the data than the RE model.

The real interest rate has a negative and significant impact on SEP, with a coefficient of -0.0154. This suggests that higher real interest rates are associated with lower levels of socioeconomic prosperity. Similar findings have been reported by Taylor (1993), who found that high real interest rates can have negative impacts on economic growth and prosperity. Broad money has a positive and significant impact on SEP, with a coefficient of 0.0395. This suggests that an increase in broad money is associated with higher levels of socioeconomic prosperity. These findings are consistent with the results of King and Levine (1993), who found that financial development, including broad money, has a positive impact on economic growth. Unemployment has a negative and significant impact on SEP, with a coefficient of -0.0965. This suggests that higher unemployment rates are associated with lower levels of socioeconomic prosperity. Similar findings have been reported by Blanchard and Wolfers (2000), who found that unemployment harms economic growth and prosperity.

For robustness check, we use the SGMM, but before interpreting the coefficients, we analyze the different preliminary tests related to GMM. From the results of the Arellano-Bond test for Autocorrelation of residuals and the Hansen and Sargan test of over-identification restrictions above, we found that there is an absence of Autocorrelation of order one since its p-value was significant at 5% and the presence of Autocorrelation of order two since its p-value was insignificant at 5%. The Hansen and Sargan test of over-identification restrictions, the instruments were valid. Therefore, the Hansen test failed to reject the null hypothesis.

Table 7. Estimates of the effects of interest rate on SEP using SGMM

	Socioeconomic prosperity
VARIABLES	
Prosperity index, lag-1	1.108*** (0.0312)
Real Interest rate	-0.00763** (0.00384)
Broad money	-0.0140** (0.00615)
Unemployment	0.00487 (0.00836)
Human capital	-1.287*** (0.415)
Population growth	0.0524

	(0.106)
Constant	-2.208***
	(0.822)
Observations	561
Number of ID	37
Hansen p-value	0.376
AR (2) p-value	0.899
AR (1) p-value	1.85e-05

Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.

Source: Constructed by the author from secondary data (2025).

The System Generalized Method of Moments (SGMM) estimates provide a robustness check, which examines the impact of interest rates on socioeconomic prosperity (SEP). The results show that the lagged prosperity index has a positive and significant impact on SEP, with a coefficient of 1.108. This suggests that past levels of prosperity have a positive effect on current levels of prosperity.

The real interest rate has a negative and significant impact on SEP, with a coefficient of -0.00763. This suggests that higher real interest rates are associated with lower levels of socioeconomic prosperity. Similar findings have been reported by Taylor (1993), who found that high real interest rates can have negative impacts on economic growth and prosperity. Broad money has a negative and significant impact on SEP, with a coefficient of -0.0140. This suggests that an increase in broad money is associated with lower levels of socioeconomic prosperity. Human capital has a negative and significant impact on SEP, with a coefficient of -1.287. This suggests that an increase in human capital is associated with lower levels of socioeconomic prosperity.

5. Conclusion and Policy Recommendations

This paper aimed to investigate the impact of interest rates on socioeconomic prosperity across 38 Sub-Saharan African (SSA) countries from 2003 to 2024, utilizing secondary data from the World Development Indicators. Employing robust estimation techniques, including fixed effects models and system generalized method of moments (GMM), the findings consistently demonstrate that interest rates can enhance socioeconomic productivity in SSA. Consequently, policymakers should prioritize strengthening monetary policy transmission mechanisms. For Cameroon and other CEMAC member states, this entails improving the pass-through of the Bank of Central African States (BEAC) policy rates to commercial bank lending rates through enhanced banking sector competition, robust credit information systems, and effective regulatory frameworks.

Additionally, implementing measures to mitigate risk premiums, such as credit guarantee schemes and improved collateral systems, could lower interest rates for small and medium-sized enterprises (SMEs) and underserved populations. Cameroon should also promote financial inclusion initiatives to broaden credit access beyond urban areas. Moreover, interest rate policies should be applied flexibly to manage inflation while avoiding undue constraints on investment and consumption, acknowledging the inherent trade-offs. Despite its contributions, the study is limited by its regional focus on SSA; future research could expand to include developing and developed countries for a more comprehensive understanding of the interest rate-prosperity nexus. Employing less biased indicators of socioeconomic productivity would further refine these insights.

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