GPH-International Journal of Business Management
(E-ISSN 3027-0537 || P-ISSN 3027-0375)
Volume 09 | Issue 10 | October 2026
Published by: Global Publication House
DOI: https://doi.org/10.5281/zenodo.23614098
Available online at: www.gphjournal.org
Journal homepage: https://gphjournal.org/index.php/bm/index

Remittances as a Bottom-Up Equalizer in Sub-Saharan Africa: Evidence from Nigeria, Kenya, and South Africa

EKO-RAPHAELS Melvin Urhoromu[1]; Dr. S. Okorie[2]; Prof. I. E. Kalu[3]
[1,2,3] *Institute of International Trade and Development (IITD), University of Port-Harcourt.*

Abstract

Sub-Saharan Africa (SSA) remains among the most unequal regions in the world, and its two principal external capital inflows: foreign direct investment (FDI) and migrant remittances are frequently treated as interchangeable instruments of globalization. This study tests whether that assumption holds by isolating the distinct distributional effects of remittances and FDI on income inequality in Nigeria, Kenya, and South Africa over 1990–2024. Because inequality is a structurally persistent, path-dependent phenomenon, the study departs from static Fixed and Random Effects models and instead employs the System Generalized Method of Moments (System GMM) estimator, which accommodates a lagged dependent variable and corrects for the endogeneity this persistence otherwise introduces. The results show a highly significant, negative relationship between remittances and the Gini coefficient ($\beta = -4.91E\text{-}10$, $p = 0.0000$), indicating that diaspora transfers systematically narrow the income gap. By contrast, FDI is statistically insignificant ($\beta = 5.02E\text{-}11$, $p = 0.6646$), consistent with an "enclave" pattern in which capital-intensive, extractive investment fails to generate broad-based distributive spillovers. These findings, read through the New Economics of Labour Migration (NELM) framework, position remittances as a bottom-up, household-level redistributive mechanism that operates independently of, and more effectively than formal capital inflows in the SSA context. The paper concludes with policy recommendations for lowering remittance transaction costs, mobilising diaspora capital productively, and reorienting FDI promotion toward linkage-generating, employment-intensive sectors.

Keywords:

Remittances; foreign direct investment; income inequality; System GMM; New Economics of Labour Migration; Sub-Saharan Africa.

1. Introduction

Globalization reaches households in Sub-Saharan Africa (SSA) through several distinct channels: trade, capital markets, technology, and migration, and there is no reason to expect these channels to have the same distributional signature. Yet policy discourse and, at times, the empirical literature treat "capital inflows" as a single undifferentiated category, obscuring the fact that a dollar of foreign direct investment (FDI) and a dollar of migrant remittances travel through entirely different institutional pathways before they reach or fail to reach the poor. FDI is typically intermediated by governments, regulators, and corporate structures, and in SSA it is heavily concentrated in capital-intensive extractive sectors such as oil and mining that generate limited employment (Acheampong et al., 2023). Remittances, by contrast, are sent

© 2026 Author(s). Published by Global Publication House (GPH).
This is an Open Access article distributed under the terms of the CC BY 4.0 License.

directly from migrant to household, bypassing formal fiscal and corporate channels altogether (Tabit & Moussir, 2016).

This distinction matters acutely for SSA, a region whose pooled Gini coefficient across major economies averages just under 49 (among the highest in the world), and where remittance inflows (2.6% of regional GDP in 2021) have grown to exceed aggregate FDI inflows (1.8% of regional GDP) as a source of external finance (Adjei et al., 2020; Chand & Singh, 2024). Nigeria alone received US$20.1 billion in remittances in 2022, equivalent to 4.2% of GDP, against FDI inflows of just 0.1% of GDP in the same year. Kenya shows a similar pattern (3.8% remittances against 0.8% FDI), while South Africa, a comparatively FDI-oriented, migrant-receiving rather than migrant-sending economy inverts it (2.5% FDI against 0.3% remittances). This divergence provides a natural empirical setting in which to test whether remittances and FDI operate as genuinely different distributional forces rather than as interchangeable proxies for "global capital."

The empirical literature on remittances and inequality is unresolved: some studies find an equalizing effect (Lankoande, 2023; Mallela et al., 2023), others find remittances widen the gap when migration costs concentrate benefits among already-advantaged households (Borja & Hall, 2018; Akçay, 2021), and still others report conditional or inverted U-shaped effects (Kóczán & Loyola, 2021). This study contributes to resolving that ambiguity for the SSA context by using a dynamic panel estimator explicitly designed for the structural persistence of inequality, and by placing remittances in direct empirical contrast with FDI; the capital flow against which its distributional character is most informatively judged. Specifically, the study asks: does the growing wave of diaspora remittances into SSA function as a genuine bottom-up equalizer of income, and how does its distributional signature compare with that of foreign direct investment?

Correspondingly, two null hypotheses anchor the empirical analysis: Foreign Direct Investment does not have a significant effect on income inequality in Sub-Saharan African countries (H01); and Remittances do not have a significant effect on income inequality in Sub-Saharan African countries (H02).

2. Literature Review and Theoretical Framework

2.1 Conceptual Review: Remittances as Household-Level Globalization

Remittances, the portion of migrants' earnings sent back to their home countries, in cash or in kind have become one of the largest sources of external finance for developing economies, now consistently exceeding official development assistance in aggregate volume (Chand & Singh, 2024; Tùng, 2018). Unlike FDI or aid, which are routed through governmental, corporate, or multilateral channels, remittances flow directly to recipient households, giving them a distinct capacity to shape micro-level consumption, investment, and welfare outcomes (Adjei et al., 2020). The motivations behind remittance behaviour are typically classified as altruistic; supporting family welfare, education, and health, or self-interested; investment, debt repayment, or maintenance of social ties (Githaiga & Kabiru, 2015; Mannan & Farhana, 2023). Whatever the motivation, the transfer mechanism itself is what matters distributionally: remittances reach households directly, financing consumption smoothing, human capital investment, and small-enterprise activity in ways that bypass the intermediating institutions through which FDI and trade revenues typically pass (Tabit & Moussir, 2016).

FDI, by contrast, is frequently characterized in the SSA literature through the lens of "enclave" investment, that is, capital that is resource-seeking, capital-intensive, and concentrated in extractive sectors (oil, gas, mining) with minimal backward and forward linkages to the domestic economy (Acheampong et al., 2023; Zeqiri & Bajrami, 2016). Where absorptive capacity, local content requirements, and institutional quality are weak, FDI can generate growth in aggregate output without generating broad-based employment or wage gains, leaving its net distributional effect ambiguous or neutral (Fazaalloh, 2019). This conceptual asymmetry between a household-routed capital flow (remittances) and an enclave-routed capital flow (FDI) is the analytical foundation on which this study's empirical comparison rests.

2.2 Theoretical Framework

The primary theoretical lens for this study is the New Economics of Labour Migration (NELM), developed by Stark and Bloom (1985). NELM departs from the neoclassical view of migration as an individual, wage-maximizing decision and instead frames migration as a collective household strategy for managing risk and overcoming missing or incomplete markets; for credit, insurance, and capital that are especially pervasive in developing economies. Under NELM, the household, not the individual migrant, is the relevant decision-making unit: it dispatches a member to a foreign labour market as a form of income diversification and self-insurance, with remittances functioning as the return flow of an implicit contractual arrangement between migrant and household (Stark & Bloom, 1985). This framing generates a direct and testable prediction: because remittances are motivated by household risk-sharing and directed at overcoming capital constraints, they should disproportionately benefit liquidity-constrained, lower-income households; precisely the population whose constraints are most binding, and should therefore exert an equalizing, bottom-up effect on the income distribution, particularly as migration networks mature and diffuse more broadly across the income spectrum (Kóczán & Loyola, 2021).

This prediction stands in useful contrast to the structural, capital-flow-side theories more commonly invoked for FDI and trade (World Systems Theory and Dependency Theory) which argue that externally sourced capital in peripheral economies tends to reinforce, rather than dissolve, existing concentrations of wealth, particularly where that capital is extractive and its returns are repatriated rather than reinvested locally. Where FDI theory predicts elite- and enclave-centred capture of globalization's gains, NELM predicts the opposite distributional trajectory for remittances: a transfer mechanism that operates below and around formal capital markets, reaching households that FDI structurally bypasses. Testing these two capital flows within a single empirical model, rather than in isolation is therefore a direct test of whether globalization's distributional character depends on the institutional route capital takes, not merely its volume.

2.3 Empirical Review

A substantial and growing empirical literature, concentrated in the post-2017 period, has examined the remittances-inequality relationship, with genuinely mixed results that reflect the conditional nature of the effect. Using fixed effects with Driscoll-Kraay standard errors across 34 SSA countries (2005–2019), Lankoande (2023) finds that remittances reduce inequality by lowering the income share of the richest decile while raising that of the rest of the distribution. Consistent with this, Ofori et al. (2023) show, using a threshold autoregressive distributed lag estimator for Africa, that remittances reduce inequality once financial-sector development crosses a productive threshold; evidence that the equalizing channel operates most strongly

where funds can be channelled into productive use. Song et al. (2021), examining remittances and FDI jointly across developing economies, similarly report a favourable distributional role for remittances that contrasts with the weaker, more ambiguous effect of FDI inflows; a direct precedent for the comparative framing adopted in this study.

Other post-2017 studies complicate this picture. Ofori et al. (2022) find that, unconditionally, remittances increased inequality per unit of inflow across a wider sample of developing economies, attributing this to migration costs that concentrate remittance access among relatively better-off households. Borja and Hall (2018) reach a similar conclusion: where the fixed costs of migration are high, only wealthier households can send migrants abroad, so early-stage remittance flows can be regressive. Kóczán and Loyola (2021), studying Mexico, reconcile these opposing findings by proposing an inverted-U trajectory in which remittances initially raise inequality but reduce it as migration networks mature and lower the cost of access for poorer households; a dynamic that Akçay (2021) also documents for the Philippines. Mallela et al. (2023), using panel quantile regression across 70 developing countries, find that remittances substitute for financial-sector development in reducing inequality specifically in more unequal countries, reinforcing the idea that remittances function as an informal, parallel redistributive channel where formal institutions are weak. Elsewhere, Khan et al. (2025) and Liu and Qamruzzaman (2021) report region-conditional effects, with remittances reducing inequality in some contexts (including SSA) while increasing it in others (such as South Asia), and Mlambo and Kapingura (2020) note that the poverty- and inequality-reducing effect of remittances in SADC economies is most pronounced among the poorest households and countries. Moustapha (2022), using household survey data and an instrumental variable approach for Senegal, adds granularity to this picture by showing that international remittances trigger internal cash-sharing within recipient countries, with the poorest households benefiting most from this secondary redistribution.

On the FDI side, the empirical consensus for SSA leans toward neutrality or ambiguity rather than a clear equalizing or disequalizing effect. Song et al. (2021) find FDI's distributional effect markedly weaker than that of remittances. Fazaalloh (2019) reports conditional, largely insignificant effects of FDI on inequality in Indonesia, while Elvis and Ewane (2023), using two-stage least squares and fixed-effects approaches for SSA, find that FDI has, if anything, failed to translate into a fairer income distribution. Acheampong et al. (2023) attribute this pattern to SSA's reliance on resource-curse-adjacent, extractive FDI that concentrates rents among narrow elite and corporate interests rather than diffusing them through domestic labour markets.

Taken together, this literature suggests that the remittances-inequality relationship is real but conditional; shaped by migration network maturity, financial-sector depth, and the cost of remitting, while the FDI-inequality relationship in SSA is persistently weak or statistically indistinct from zero. What is comparatively rare in the literature is a single dynamic panel model that estimates both effects simultaneously, under an estimator designed for inequality's structural persistence, for SSA's three largest economies. This is the gap the present study addresses.

3. Methodology

3.1 Research Design, Study Area, and Data Sources

This study adopts a quantitative, explanatory, longitudinal (panel) research design, using annual macro-level data for Nigeria, Kenya, and South Africa — SSA's three largest economies and a deliberately heterogeneous trio spanning West, East, and Southern Africa over the period 1990–2024 (105 country-year observations). Income inequality, proxied by the Gini coefficient, is the dependent variable. The two capital-flow variables of central interest are Foreign Direct Investment (FDI, net inflows) and Remittances (personal remittances received), with Economic Globalization (KOF Index) and Trade Openness included as additional globalization dimensions, and GDP per capita, inflation, human capital, and institutional quality included as macroeconomic and structural controls. Data were sourced from the World Bank's World Development Indicators (World Bank, 2024), the Standardized World Income Inequality Database, and the Worldwide Governance Indicators.

3.2 Model Specification

The model is derived from an augmented Kuznets income-distribution framework. The Gini coefficient is first expressed as a function of the level of economic development, proxied by GDP per capita in quadratic form to permit an inverted-U (Kuznets) relationship, and a vector of structural domestic controls:

$$GINI_{it} = \theta_1 \ln(GDPPC_{it}) + \theta_2[\ln(GDPPC_{it})]^2 + Z_{it}'\gamma + u_{it} \quad - \quad - \quad (3.1)$$

This baseline in equation (3.1) is then augmented with a vector of globalization variables, $GLOB_{it}$ — Economic Globalization, Trade Openness, FDI, and Remittances which represent the channels through which international integration transmits to domestic income distribution:

$$GINI_{it} = \theta_1 \ln(GDPPC_{it}) + \theta_2[\ln(GDPPC_{it})]^2 + GLOB_{it}'\beta + X_{it}'\gamma + u_{it} \quad - \quad - \quad (3.2)$$

Because income inequality is highly persistent; structurally path-dependent due to historical land tenure systems, institutional legacies, and labour-market rigidities (North, 1990), current inequality is assumed to depend on its own past value. A lagged dependent variable is therefore introduced, yielding the dynamic panel specification actually estimated in equation (3.3) thus:

$$GINI_{it} = \alpha \cdot GINI_{i,t-1} + GLOB_{it}'\beta + X_{it}'\gamma + \eta_i + \lambda_t + \varepsilon_{it} \quad - \quad - \quad - \quad (3.3)$$

where α measures the speed of adjustment and persistence of inequality; $GLOB_{it}$ comprises Economic Globalization, Trade Openness, FDI, and Remittances; X_{it} comprises Institutional Quality, GDP per capita, Human Capital, and Inflation; η_i captures unobserved, time-invariant country-specific effects (e.g., colonial legacies, geography); λ_t captures time-specific effects common to all countries; and ε_{it} is the idiosyncratic error term. This is the specification estimated in Section 4.

3.3 Why System GMM: Modelling the Stickiness of Inequality and Remittance Dependence

The choice of estimator in this study is not a matter of econometric convenience but of correctly representing the phenomenon under study. Income inequality in Sub-Saharan Africa does not reset each year in response to that year's trade or capital flows; it is a stock-like, structurally "sticky" variable shaped by colonial-era land tenure systems, entrenched labour-market

segmentation, and long-standing policy regimes, such that a large share of today's inequality is mechanically inherited from yesterday's. The same path-dependence characterizes the remittance channel itself: household reliance on remittances is not a one-off event but a structural, long-term feature of household livelihoods built up over successive migration cycles, established diaspora networks, and accumulating trust in transfer relationships. A model that cannot represent this dynamic memory in either the outcome or the mechanism connecting migration to household welfare will misstate the true relationship between remittances and inequality.

This is precisely what static estimators such as Fixed Effects (FE) and Random Effects (RE) fail to do. Because these models omit the lagged dependent variable, they implicitly assume that each year's inequality outcome is independent of its own history, and they consequently misattribute persistence to whichever contemporaneous regressors happen to be correlated with it. Introducing a lagged dependent variable, $GINI_{i,t-1}$, is therefore essential precisely because it is what allows the model to separate the genuine, structural role of persistent remittance-dependence from the mechanical carry-over of historical inequality, but doing so creates a specific econometric problem: the lagged term is, by construction, correlated with the unobserved country-specific effect, η_i (Nickell bias). Under this condition, standard FE and RE estimators are biased and inconsistent even in reasonably long panels, and the bias does not vanish asymptotically in the way it would in a purely cross-sectional setting.

The System GMM estimator, developed by Arellano and Bover (1995) and Blundell and Bond (1998), was adopted specifically to resolve this. It combines a first-differenced equation which removes the time-invariant country effect η_i altogether, with a levels equation, instrumenting each with suitably lagged values of the endogenous regressors (deeper lags of levels for the differenced equation; lagged differences for the levels equation). This "system" combination is particularly well suited to highly persistent series, such as the Gini index and remittance inflows in this sample, for which the standard Difference GMM estimator alone tends to produce weak instruments. $GINI_{i,t-1}$, Economic Globalization, ln(GDP per capita), FDI, and Remittances were all treated as endogenous and instrumented with their deeper lags; Trade Openness was treated as predetermined and instrumented with one-period lags; and time dummies entered the model as strictly exogenous. The two-step System GMM estimator was used throughout, with the Windmeijer (2005) finite-sample correction applied to avoid the downward-biased standard errors that the conventional two-step covariance matrix would otherwise produce, and the instrument set was collapsed to limit instrument proliferation.

For comparative purposes, static Fixed Effects and Random Effects models were also estimated. As Section 4 shows, these comparisons are not merely a robustness exercise: they demonstrate concretely why a dynamic estimator was necessary, since the static models fail the diagnostics that the System GMM specification passes.

3.4 Post-Estimation Diagnostics

Model validity was assessed through a battery of diagnostic tests appropriate to dynamic panel GMM. The Hausman test was used to adjudicate between Fixed and Random Effects as a preliminary, static benchmark. The Arellano-Bond tests for first-order [AR(1)] and second-order [AR(2)] serial correlation were applied to the differenced residuals; a valid specification requires significant AR(1) but insignificant AR(2). The Hansen J-test of overidentifying restrictions was used to assess the joint validity of the instrument set, with the number of

instruments kept below the number of cross-sectional groups to mitigate instrument proliferation. Finally, the Jarque-Bera test and pairwise 95% confidence ellipses were examined to assess residual normality and the absence of debilitating multicollinearity among the estimated coefficients.

4. Results

4.1 Descriptive Statistics: Two Capital Flows, Two Different Stories

Table 1 presents pooled descriptive statistics for the three-country panel (N = 105). The mean Gini index of 48.96 (SD = 10.98) confirms SSA's status as a high-inequality region, with substantial cross-country heterogeneity underlying the pooled figure. The capital-flow variables present a striking asymmetry. FDI shows a negative pooled mean (−US$1.80 billion), indicating that net outflows; profit repatriation and divestment have historically outweighed inflows across the panel, alongside extreme volatility (kurtosis = 45.34), consistent with the "lumpy," shock-driven character of extractive investment. Remittances, by contrast, show a robust positive mean of US$4.51 billion, with growth concentrated in high-volume corridors such as the Nigerian diaspora (skewness = 1.59). At the country level, Nigeria's remittance receipts (mean US$11.7 billion) dwarf its FDI inflows, while South Africa, structurally a net FDI recipient rather than a remittance-dependent economy shows the reverse pattern (FDI at 2.5–3.4% of GDP; remittances at just 0.3% of GDP).

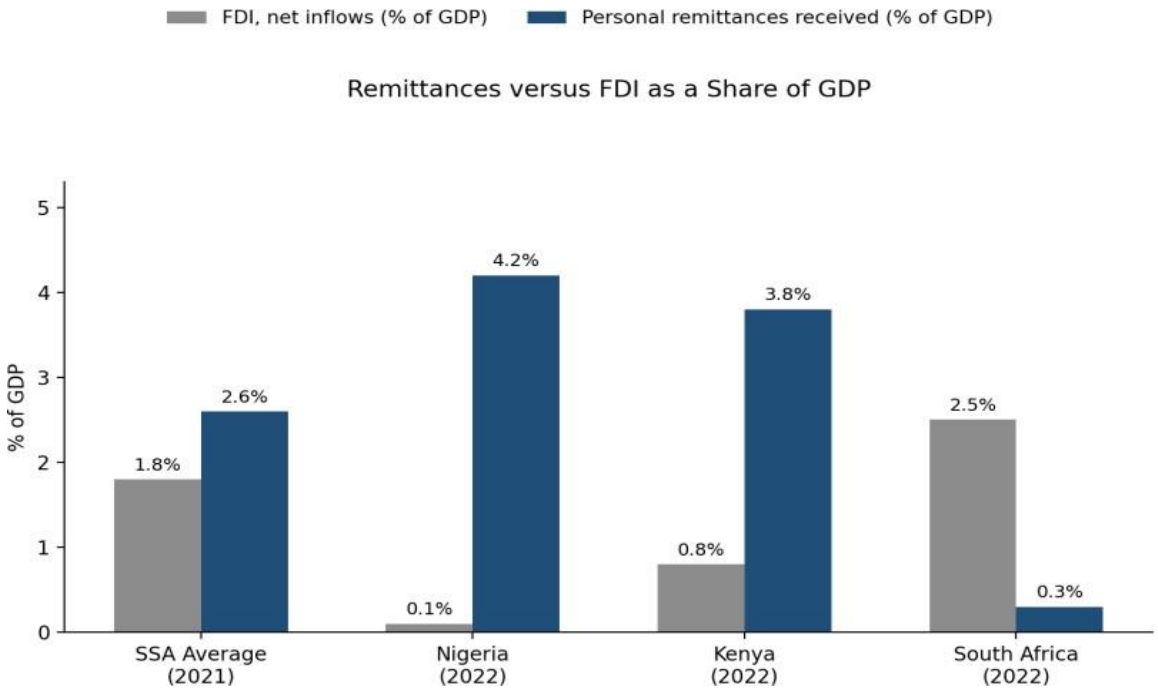


Figure 1. Remittances versus FDI as a share of GDP, most recent reported year

Source: Compiled by the author from World Bank World Development Indicators figures reported in the underlying dissertation dataset.

Table 1. Pooled Descriptive Statistics for Capital-Flow Variables (N = 105)

Variable	Mean	Std. Dev.	Skewness	Kurtosis	Jarque-Bera (p)
GINI_INDEX	48.96	10.98	0.19	1.63	0.012
FDI (US$)	−1.80E+09	4.70E+09	−5.55	45.34	0.000
REMITTANCES (US$)	4.51E+09	7.62E+09	1.59	3.68	0.000

Source: Author's computation from the underlying panel dataset, 1990–2024.

4.2 Correlation Evidence

Preliminary bivariate evidence already anticipates the regression results. Remittances show a strong, statistically significant negative correlation with the Gini index ($r = -0.64$, $t = -8.48$), one of the strongest relationships in the correlation matrix, suggesting that as diaspora transfers rise, income inequality falls. FDI, by contrast, shows no significant linear association with inequality at the bivariate level ($t = -0.90$), foreshadowing the insignificance that persists once the full dynamic model is estimated.

4.3 Panel Properties: Why a Dynamic Estimator Is Required

Im-Pesaran-Shin panel unit root tests show that the Gini index, along with most explanatory variables including Remittances, is non-stationary at levels but stationary after first differencing, that is, integrated of order one, I(1), while FDI and inflation are stationary at level. Economically, the non-stationarity of the Gini index confirms that inequality in these economies follows a persistent stochastic trend rather than fluctuating randomly around a fixed mean: historical shocks accumulate rather than dissipate. The Johansen-Fisher panel cointegration test confirms a stable long-run relationship among the variables (rejecting the null of no cointegration up to "at most 3" vectors, $p < 0.05$ for each country individually), justifying the dynamic panel framework. A preliminary Hausman test further rejects Random Effects in favour of Fixed Effects ($\chi^2(8) = 27.44$, $p = 0.0006$), but the Fixed Effects model's own Durbin-Watson statistic (1.38) signals residual serial correlation, which, in the presence of a lagged dependent variable, renders even Fixed Effects inconsistent (Nickell bias). Together, these diagnostics rule out both static alternatives and confirm System GMM as the appropriate estimator.

4.4 System GMM Results

Table 2 reports the System GMM estimates, alongside Fixed-Effects and Random-Effects GMM comparators, for the full dynamic specification.

Table 2. System GMM Estimates of the Determinants of Income Inequality (Dependent Variable: GINI_INDEX)

Variable	System GMM (β)	Std. Error	p-value
GINI(−1)	0.2215***	0.0691	0.0015
ECO_GLOB	0.4578***	0.0491	0.0000
TRADEOPEN	0.0403***	0.0052	0.0000
FDI	5.02E-11	1.16E-10	0.6646
REMITTANCES	−4.91E-10***	8.51E-11	0.0000
HUMCAP	0.1063**	0.0452	0.0207

INFL	0.1493***	0.0504	0.0039
INSTQ	0.3946***	0.0475	0.0000
GDPPC	0.0003	0.0002	0.1551

*Note: *, **, *** denote significance at the 10%, 5%, and 1% levels respectively. Standard errors are heteroskedasticity-robust with the Windmeijer (2005) finite-sample correction. Observations = 105; Countries = 3; Instruments = 9. Arellano-Bond AR(1): z = −2.25, p = 0.025; AR(2): p = 0.423. Hansen J-test: $\chi^2(239) = 233.46$, p = 0.313.*

The central finding of this study is the sharp contrast between the two capital-flow coefficients. Remittances enter with a negative and highly significant coefficient (β = −4.91E-10, p = 0.0000), significant at the 1% level, confirming that remittance inflows systematically reduce the Gini coefficient. The coefficient's small numerical magnitude is an artefact of the variable's scale (billions of current US dollars) rather than a sign of weak substantive effect; the statistical significance is unambiguous. FDI, by contrast, is statistically indistinguishable from zero (β = 5.02E-11, p = 0.6646), nowhere close to conventional significance thresholds, and this pattern holds across all three estimators in Table 2, including the Fixed- and Random-Effects comparators (not shown in full here), lending additional robustness to the finding that FDI's neutrality is not an artefact of the GMM specification alone.

This is a "non-finding" that is nonetheless analytically important. It implies that aggregate FDI inflows, in their current sectoral composition, act neither as a definitive equalizer nor as a definitive widener of the income gap in these three economies. The most plausible explanation is the enclave nature of FDI in SSA: because a large share of FDI targets capital-intensive extractive industries; oil in Nigeria, mining in South Africa, that employ comparatively few workers, the capital does not circulate broadly enough through the domestic labour market to move the national Gini coefficient in either direction. FDI may still drive aggregate GDP growth, but that growth does not visibly pass through the wage structure faced by the median or bottom-income household. This finding indicates that the quality and sectoral destination of FDI matter far more for distributional outcomes than its sheer volume.

The lagged dependent variable, GINI(−1), is positive and significant at the 1% level (α = 0.2215, p = 0.0015): approximately 22% of today's inequality is mechanically carried over from the previous year, confirming the structural persistence that motivated the System GMM specification in the first place and validating the modelling choice described in Section 3.3. Economic Globalization (β = 0.4578, p = 0.0000) and Trade Openness (β = 0.0403, p = 0.0000) are both positive and highly significant, indicating that broader globalization and trade integration have, on net, widened inequality in these economies, a disequalizing pattern that stands in direct contrast to the equalizing role of remittances, and underscores that not all globalization channels behave alike. Among the controls, Human Capital, Inflation, and Institutional Quality are all positive and significant, while GDP per capita is statistically insignificant; the diagnostics reported in Table 2 (insignificant AR(2), Hansen p = 0.313) confirm that the instrument set is valid and the model is free of second-order serial correlation.

4.5 Visual Evidence

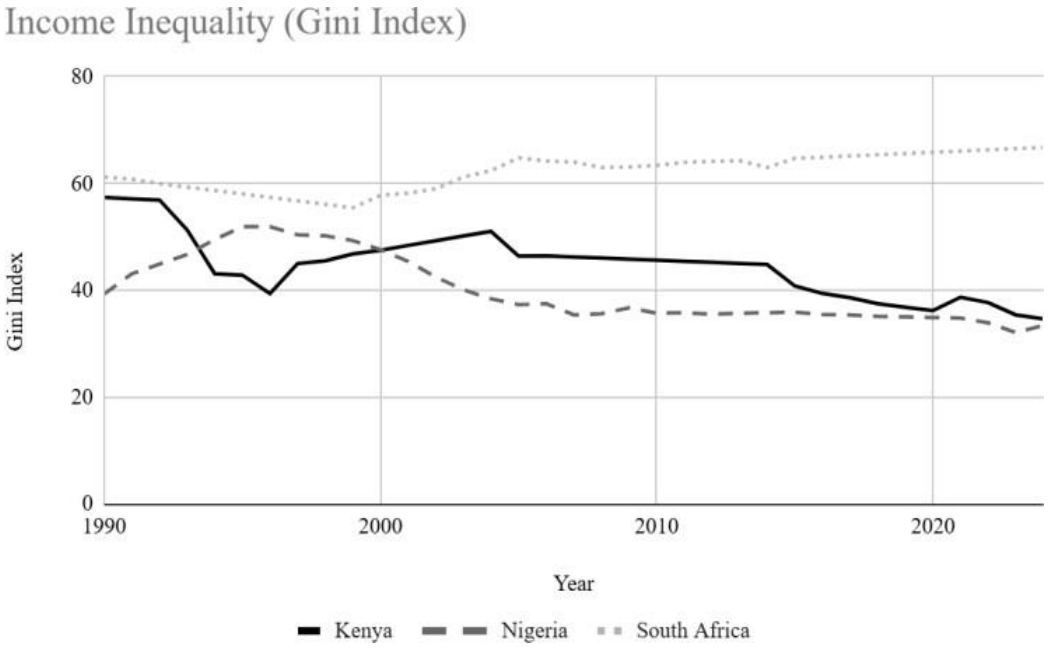


Figure 2. Income inequality (Gini index) trend, Nigeria, Kenya, and South Africa, 1990–2024 *Source: Author's computation from the underlying panel dataset.*

Figure 2 situates the regression results in historical context: Kenya and Nigeria achieved gradual, long-run reductions in inequality (Kenya from 57.40 to 34.63; Nigeria from 39.30 to 33.40) over a period in which both countries also saw substantial growth in diaspora remittance inflows, while South Africa's Gini index rose from 61.20 to 66.76 over the same period — a trajectory consistent with its comparatively marginal reliance on remittances (0.3% of GDP) and its position as a net FDI recipient rather than a remittance-receiving economy.

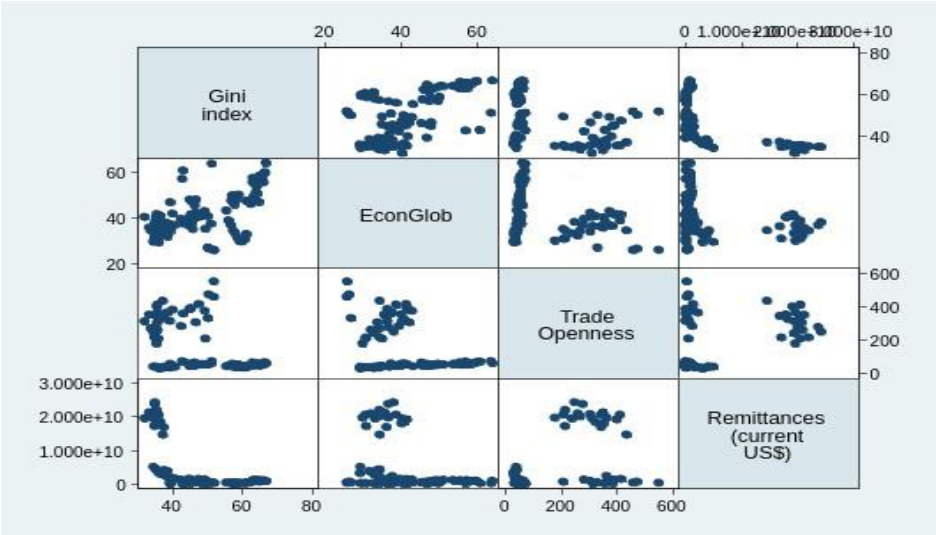


Figure 3. Bivariate scatterplot matrix: Gini index, Economic Globalization, Trade Openness, and Remittances

Source: Author's computation from the underlying panel dataset.

The bottom-left panel of Figure 3, plotting the Gini index against Remittances, offers a geometric confirmation of the regression finding: the relationship traces a distinct "L-shaped" or convex pattern rather than a simple linear one. Observations with low remittance inflows cluster across the full range of inequality outcomes, whereas observations with high remittance inflows are consistently associated with lower Gini values — visual evidence of a threshold effect in which substantial diaspora transfers are needed before the equalizing effect becomes clearly visible, consistent with the NELM-based prediction that remittances operate as a maturing, network-dependent redistributive channel (Kóczán & Loyola, 2021).

4.6 Hypothesis Testing

Based on the System GMM estimates, the study fails to reject H01: FDI does not have a significant effect on income inequality in Sub-Saharan African countries ($p = 0.6646$, statistically insignificant at conventional thresholds). The study rejects H02: Remittances do not have a significant effect on income inequality in Sub-Saharan African countries ($p = 0.0000$); remittances exert a negative and statistically significant effect on the Gini coefficient at the 1% level, confirming that remittance inflows meaningfully reduce income inequality in the sampled economies.

5. Discussion

The evidence assembled here supports a clear and theoretically coherent conclusion: remittances and FDI are not interchangeable forms of "global capital" but structurally distinct channels with opposite distributional signatures. The negative, highly significant remittances coefficient is consistent with a growing body of post-2017 SSA-focused evidence; Lankoande (2023), Ofori et al. (2023), and, at the cross-country developing-economy level, Song et al. (2021), all of which find remittances to be a comparatively robust equalizing force. The NELM framework (Stark & Bloom, 1985) offers the clearest theoretical account of why: because remittances arise from a household-level risk-diversification strategy rather than a corporate investment decision, their flow is targeted, almost by design, at the liquidity-constrained households that formal capital markets and extractive FDI structurally bypass. In the absence of extensive state welfare systems in Nigeria, Kenya, and South Africa, the diaspora is, in effect, functioning as an informal, bottom-up redistributive agency; financing consumption, education, and health expenditure directly at the household level (Onuchuku & Amaefule, 2020; Tapsoba, 2017).

This finding should not, however, be read as a claim that remittances are unconditionally equalizing everywhere. The literature reviewed in Section 2.3 shows that remittances can widen inequality where migration costs are high enough to restrict access to wealthier households (Borja & Hall, 2018; Ofori et al., 2022), and that the equalizing effect strengthens as migration networks mature and financial systems develop enough to channel funds productively (Kóczán & Loyola, 2021; Ofori et al., 2023). The L-shaped pattern visible in Figure 3 is consistent with this conditionality: it suggests SSA's three largest economies have, over the 1990–2024 period, moved into a regime of remittance volume and network maturity at which the equalizing effect dominates, rather than being fixed at some earlier, less inclusive stage.

The insignificance of FDI is equally informative, precisely because it is a non-result. It rules out FDI as either a straightforward driver or straightforward reliever of inequality in these economies and instead points toward a conditional, sector-specific story: FDI concentrated in extractive, capital-intensive industries generates limited employment linkages and can be

readily repatriated, leaving the wage structure faced by ordinary households largely untouched (Acheampong et al., 2023; Zeqiri & Bajrami, 2016). This is consistent with Elvis and Ewane's (2023) finding that FDI has failed to produce a fairer income distribution in SSA, and with the broader "enclave economy" literature's emphasis on absorptive capacity; human capital, institutional quality, and local content requirements as the missing ingredients that would be needed to convert FDI volume into distributive impact (Zeqiri & Bajrami, 2016).

Read together, these results caution against a "more capital is always better" framing of globalization policy in SSA. The type and institutional routing of capital, not merely its volume determines whether it reaches the households at the bottom of the income distribution. Remittances succeed where FDI, in its current sectoral composition, does not, precisely because they are structurally household-routed rather than enclave-routed.

6. Conclusion, Policy Implications, and Limitations

6.1 Conclusion

This study set out to test whether migrant remittances function as a genuine bottom-up equalizer of income in Sub-Saharan Africa, and how that role compares empirically with foreign direct investment. Using a System GMM estimator specifically designed to capture the structural persistence of inequality and the endogeneity introduced by a lagged dependent variable, the study finds a highly significant, negative relationship between remittances and the Gini coefficient, and a statistically insignificant relationship between FDI and the Gini coefficient. This asymmetry is not a statistical curiosity; it reflects a substantive difference in how the two capital flows are institutionally routed; remittances directly to households, FDI through capital-intensive, often extractive corporate structures with weak domestic linkages. The findings offer the first empirical validation, in this specific SSA context, of the New Economics of Labour Migration as a macro-distributional theory, and they demonstrate that not all forms of globalization-linked capital carry the same distributional consequences.

6.2 Policy Implications

Two sets of policy implications follow directly from the empirical contrast at the heart of this study:

1. Leverage remittances for inclusive development. Given the robust evidence that remittances reduce inequality, governments should actively lower the transaction costs of sending money home, which remain disproportionately high for SSA, by promoting competition among money transfer operators, supporting fintech and mobile-money innovation, and streamlining regulatory frameworks for digital remittance channels. Beyond consumption smoothing, instruments such as diaspora bonds, modelled on successful precedents in Israel and India, could channel diaspora savings into productive infrastructure investment in education, health, and energy, amplifying the equalizing effect identified in this study.

2. Rethink FDI promotion around quality, not just volume. Because aggregate FDI shows no significant distributional effect, a "quantity-first" approach to investment promotion is unlikely to reduce inequality on its own. Governments should shift toward a more selective approach that ties investment incentives to local content requirements, technology-transfer mandates, and job-creation targets, and that actively courts efficiency-seeking FDI in

labour-intensive manufacturing and services rather than relying solely on resource-seeking FDI in extractive industries. Supplier-development programmes linking domestic SMEs into multinational value chains could help convert FDI volume into broader-based employment and wage gains.

References

Acheampong, A. O., Dzator, J., Abunyewah, M., Erdiaw-Kwasie, M. O., & Osei Opoku, E. E. (2023). Sub-Saharan Africa's tragedy: Resource curse, democracy and income inequality. Social Indicators Research, 168, 471–509. https://doi.org/10.1007/s11205-023-03092-8

Adjei, M., Bo, Y., Nketiah, E., Adu-Gyamfi, G., & Obuobi, B. (2020). The effects of remittances on economic growth in West Africa. Journal of Human Resource and Sustainability Studies, 8(3), 312. https://doi.org/10.4236/jhrss.2020.83018

Akçay, S. (2021). Remittances and income inequality in the Philippines. Asian-Pacific Economic Literature, 36(1), 30. https://doi.org/10.1111/apel.12346

Arellano, M., & Bover, O. (1995). Another look at the instrumental-variable estimation of error-components models. Journal of Econometrics, 68(1), 29–51. https://doi.org/10.1016/0304-4076(94)01642-D

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. Journal of Econometrics, 87(1), 115–143. https://doi.org/10.1016/S0304-4076(98)00009-8

Borja, K., & Hall, J. D. (2018). Remittances, institutions, and inequality in developing countries. Journal for the Advancement of Developing Economies. https://doi.org/10.32873/unl.dc.jade7.1.3

Chand, S. A., & Singh, B. (2024). Role of remittance on sustainable economic development in developing and emerging economies: New insights from panel cross-sectional augmented autoregressive distributed lag approach. Journal of Risk and Financial Management, 17(4), 153. https://doi.org/10.3390/jrfm17040153

Elvis, S. W., & Ewane, E. B. (2023). The dynamics of economic globalization and income inequality in Sub-Saharan African countries: An empirical insight from two stage least square and fixed effect approach. South Asian Journal of Social Studies and Economics, 18(2), 33. https://doi.org/10.9734/sajsse/2023/v18i2654

Fazaalloh, A. M. (2019). Is foreign direct investment helpful to reduce income inequality in Indonesia? Economics & Sociology, 12(3), 25. https://doi.org/10.14254/2071-789x.2019/12-3/2

Githaiga, P. N., & Kabiru, C. G. (2015). Remittances as a determinant of financial sector development. DergiPark (Istanbul University). https://dergipark.org.tr/tr/pub/jbef/issue/0/121659

Khan, K. A., Akhtar, M. A., & Sultonova, F. (2025). Examining remittances, emissions, and tourism as drivers of financial well-being and sustainability in post-Soviet nations. E+M Ekonomie a Management, 28(3), 160. https://doi.org/10.15240/tul/001/2025-3-010

Kóczán, Z., & Loyola, F. (2021). How do migration and remittances affect inequality? A case study of Mexico.

Journal of International Development, 33(2), 360. https://doi.org/10.1002/jid.3526

Lankoande, L. S. (2023). Effects of remittances on income inequality in Sub-Saharan Africa. Research Square. https://doi.org/10.21203/rs.3.rs-3221030/v1

Liu, F., & Qamruzzaman, Md. (2021). An asymmetric investigation of remittance and trade openness impact on inequality: Evidence from selected South Asian countries. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.720887

Mallela, K., Singh, S. K., & Srivastava, A. (2023). Remittances, financial development, and income inequality: A panel quantileregression approach. International Economics, 175, 171. https://doi.org/10.1016/j.inteco.2023.07.003

Mannan, K. A., & Farhana, K. M. (2023). Digital financial inclusion and remittances: An empirical study on Bangladeshi migrant households. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4607128

Mlambo, C., & Kapingura, F. (2020). Economic growth and income inequality in SADC countries: A panel data analysis. Journal of Developing Areas, 54(3), 1–15.

Moustapha, M. (2022). Essays on the use of external revenues in Sub-Saharan Africa [Doctoral dissertation, Université Paris Dauphine – PSL].

North, D. C. (1990). Institutions, institutional change and economic performance. Cambridge University Press. Ofori, I. K., Gbolonyo, E. Y., & Ojöng, N. (2022). Foreign direct investment and inclusive green growth in Africa:

Energy efficiency contingencies and thresholds. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4278595

Ofori, P. E., Gyamfi, B. A., & Urom, C. (2023). Remittances and income inequality in Africa: The role of financial development. Journal of Applied Economics, 26(1), 1–19.

Onuchuku, O., & Amaefule, C. (2020). Global finance, competitiveness, and sustainable development goals in emerging and least developing economies (ELDCs): A review of literature. European Journal of Sustainable Development Research, 4(3). https://doi.org/10.29333/ejosdr/7899

Song, Y., Paramati, S. R., Ummalla, M., Zakari, A., & Kummitha, H. R. (2021). The effect of remittances and FDI inflows on income distribution in developing economies. Economic Analysis and Policy, 72, 255–267. https://doi.org/10.1016/j.eap.2021.08.011

Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. American Economic Review, 75(2), 173–178.

Tabit, S., & Moussir, C.-E. (2016). Macroeconomic determinants of migrants' remittances: Evidence from a panel of developing countries. International Journal of Business and Social Research, 6(7), 1–12. https://doi.org/10.18533/ijbsr.v6i7.969

Tapsoba, T. L. (2017). Essays on remittances and climate variability in Burkina Faso [Doctoral dissertation]. HAL. https://tel.archives-ouvertes.fr/tel-02301994

Tùng, L. T. (2018). The impact of remittances on domestic investment in developing countries: Fresh evidence from the Asia-Pacific region. Organizations and Markets in Emerging Economies, 9(2), 193. https://doi.org/10.15388/omee.2018.10.00010

Windmeijer, F. (2005). A finite sample correction for the variance of linear two-step GMM estimators. Journal of Econometrics, 126(1), 25–51. https://doi.org/10.1016/j.jeconom.2004.02.005

World Bank. (2024). World Development Indicators. World Bank. https://databank.worldbank.org

Zeqiri, N., & Bajrami, H. (2016). Foreign direct investment (FDI) types and theories: The significance of human capital. 2017 UBT International Conference, 43. https://doi.org/10.33107/ubt-ic.2016.23