Macroeconomic volatility and poverty in South America: Inflation and business cycles in a 9-country panel, 2000–2024

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Abstract

This paper examines whether macroeconomic conditions are associated with poverty in South America after accounting for economic development and income inequality. Using an annual panel of nine countries over 2000–2024 (201 country-year observations), we estimate country fixed-effects models with a common time trend and compare inference based on country-clustered and Driscoll–Kraay standard errors; random-effects estimates are reported as a benchmark. Poverty is measured as the log headcount ratio at US$8.30 per person per day (2021 PPP), drawing on the World Bank Poverty and Inequality Platform, combined with GDP data from the World Development Indicators and inflation data from CEPALSTAT. Across specifications, inequality is the strongest and most stable correlate of poverty: the coefficient on ln Gini remains large, positive, and highly significant. In the preferred fixed-effects specification with Driscoll–Kraay errors, inflation is positively associated with poverty (0.00173), whereas a stronger output gap is associated with lower poverty (-0.0174). GDP per capita enters negatively but less precisely, while the common time trend is negative and significant. These estimates are interpreted as conditional within-country associations rather than strict causal effects. The results suggest that durable poverty reduction requires not only growth and redistribution, but also price stability and countercyclical macroeconomic management.

Keywords: Poverty; inequality; inflation; business cycles; fixed effects; South America

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1 Introduction

Poverty reduction in South America has never depended on growth alone. The region's social trajectory has been repeatedly interrupted by fiscal crises, inflationary spells, external shocks, and labour-market disruptions that erode household welfare even when long-run development trends appear favourable. A central lesson of development economics is that higher average income tends to reduce poverty, but the strength of that relationship depends on distributional conditions, institutional capacity, and the extent to which growth is transmitted to low-income households. What remains less clearly understood is whether macroeconomic instability itself exerts an independent influence on poverty once income growth and inequality are taken into account.

This paper argues that it does. Specifically, it asks whether poverty in South America responds not only to growth and inequality, but also to recurrent forms of macroeconomic instability that are especially salient in middle-income developing economies. The paper focuses on three observable channels: inflation and the cyclical position of output. Each captures a distinct way in which aggregate instability can reach poor households. Inflation erodes purchasing power and cyclical contractions reduce labour demand and household income.

The paper contributes to the literature in three ways. First, it extends the standard growth–inequality–poverty specification by incorporating multiple dimensions of instability into one empirical framework. Second, it focuses on South America, a region where poverty reduction has coexisted with recurrent macroeconomic turbulence and persistent inequality. Third, it compares several panel estimators to distinguish whether the observed relationships are robust to alternative treatments of unobserved country heterogeneity, serial correlation, and cross-sectional dependence.

The main finding is straightforward. Poverty is lower where average income is higher and greater where inequality is more pronounced, but those structural relationships do not

exhaust the story. Inflation and vulnerable employment are positively associated with poverty, while favourable cyclical conditions are associated with lower poverty. Taken together, the results suggest that the quality and stability of the macroeconomic environment matter for poverty reduction alongside long-run growth.

2 Literature review

The modern empirical literature on poverty reduction is rooted in the proposition that growth reduces poverty, although the magnitude of that effect varies substantially across contexts. Ravallion and Chen (1997) and Adams (2004) show that mean income growth is generally associated with falling poverty, but that growth elasticities depend on measurement choices and on the prevailing distribution of income. Later contributions emphasize that inequality conditions the extent to which average growth reaches the poor.

A second branch of the literature highlights the role of aggregate instability. Agénor (2005) argues that macroeconomic volatility can worsen poverty through several channels: distorted price signals, greater uncertainty, weakened investment incentives, tighter credit conditions, and more fragile labour-market outcomes. Baldacci, de Mello, and Inchauste (2002) show that financial crises can increase poverty and worsen distributional outcomes. Nikoloski (2011) finds that financial crises, especially currency crises, have adverse short-run effects on both the incidence and depth of poverty in developing countries. Breen and García-Peñalosa (2005) add that output volatility is associated with higher inequality, suggesting that instability may affect poverty both directly and through distributional dynamics.

Yet empirical work connecting macroeconomic volatility and poverty remains limited, especially for South America. Much of the regional debate has focused on growth, fiscal redistribution, or household survey trends in inequality. At the same time, recent work has shown that even South America's inequality narrative is sensitive to measurement choices and micro–macro reconciliation, underscoring the need for explicit methodological caution in distributional analysis. This paper therefore locates itself at the intersection of three bodies

of work: growth and poverty, inequality and poverty, and macroeconomic instability and welfare.

The theoretical premise is that poverty responds to macroeconomic conditions through at least three channels.

The first is a price channel. High and unstable inflation lowers real purchasing power, especially for poor households that hold few inflation-protected assets and devote a larger share of expenditure to essential goods. Even moderate but persistent inflation can therefore translate into higher poverty if nominal income adjustment is incomplete.

The second is a labour-market channel. When employment is concentrated in vulnerable or weakly protected forms of work, households have less capacity to smooth income in response to aggregate shocks. In that context, instability can increase poverty not only by reducing employment, but also by worsening the quality and predictability of work.

The third is a cyclical income channel. During expansions, stronger labour demand and higher earnings can reduce poverty relatively quickly. During contractions, those gains are partially reversed. In highly unequal economies, cyclical downturns may be especially damaging because poorer households have limited savings, insurance, or credit access.

These channels motivate three hypotheses. First, poverty should be negatively associated with GDP per capita. Second, poverty should be positively associated with inequality. Third, after controlling for both, inflation and vulnerable employment should raise poverty, while a positive output gap should reduce it.

3 Data and Variable Construction

The dataset consists of an annual panel of nine South American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, and Uruguay) covering the period 2000–2024. Poverty is measured using the World Bank Poverty and Inequality Platform (PIP) upper-middle-income poverty line of US$8.30 per day (2021 PPP). The final estimation sample contains 201 country-year observations after accounting for missing values in the poverty and inequality series.

Income inequality is measured by the Gini index obtained from PIP. Economic development is captured by GDP per capita in constant 2021 PPP international dollars from the World Development Indicators database. Inflation is measured using annual consumer price inflation from CEPALSTAT. To capture cyclical macroeconomic fluctuations, the output gap is constructed by applying the Hodrick–Prescott filter to the logarithm of real GDP (PPP, constant 2021 international dollars) using a smoothing parameter $\lambda = 100$, which is standard for annual data.

Missing observations are concentrated in the poverty and inequality variables, reflecting the availability of household survey data. The resulting panel is therefore unbalanced, with 201 country-year observations available for estimation.

Table 1: Variables, definitions, sources, and transformations

Variable	Definition	Source	Indicator Code	Unit	Transformation
Poverty	Poverty headcount ratio at US$8.30 per day (2021 PPP)	World Bank Poverty and Inequality Platform (PIP)	`SI.POV.UMIC`	% of population	Natural logarithm
GDP per capita	GDP per capita, PPP (constant 2021 international $)	World Development Indicators (WDI)	`NY.GDP.PCAP.PP.KD`	Constant 2021 international $	Natural logarithm
Gini coefficient	Gini index	World Bank Poverty and Inequality Platform (PIP)	`SI.POV.GINI`	Index (0–100)	Natural logarithm
Inflation	Consumer price inflation	CEPALSTAT	Indicator 2484	Annual percentage (%)	Level (annual percentage points)
Output gap	Cyclical component of GDP obtained from the HP filter	Author's calculations based on WDI GDP data	`NY.GDP.MKTP.PP.KD`	Percentage deviation from trend	HP filter ($\lambda = 100$)

Notes: Poverty is measured using the World Bank upper-middle-income poverty line of US$8.30 per day (2021 PPP). The sample consists of nine South American countries observed between 2000 and 2024. Inflation enters the regressions in annual percentage points because negative inflation values are observed for some country-years. The output gap is computed by applying the Hodrick–Prescott filter to the logarithm of real GDP with a smoothing parameter $\lambda = 100$, following standard practice for annual data.

4 Methods

This study estimates the within-country relationship between poverty and macroeconomic conditions using an annual panel of nine South American countries over the period 2000–2024. The country-year structure contains 225 potential observations, but the effective estimation sample is reduced to 201 observations because the poverty and Gini series each contain 24 missing values. The panel is therefore complete at the country-year level but effectively unbalanced for estimation because missingness is concentrated in survey-based distributional variables rather than in the panel structure itself. Poverty is measured as the poverty headcount ratio at US$8.30 per day in 2021 PPP dollars, and income inequality is measured with the Gini index from the World Bank Poverty and Inequality Platform. GDP per capita and aggregate GDP are obtained from the World Development Indicators, while inflation is taken from CEPALSTAT.

The dependent variable is the natural logarithm of the poverty headcount ratio, $(\ln(Poverty_{it}))$. The core time-varying covariates are the natural logarithm of GDP per capita, $(\ln(GDPpc_{it}))$, the natural logarithm of the Gini index, $(\ln(Gini_{it}))$, annual inflation in percentage points, and the output gap. Logarithmic transformations are used for poverty, GDP per capita, Gini, and aggregate GDP because these variables are strictly positive in the estimation sample and because log-log specifications facilitate elasticity-based interpretation. Inflation is entered in levels rather than logs because the sample includes negative inflation values in some country-years, making a direct logarithmic transformation less transparent in the baseline specification. Coefficients on logged regressors are therefore interpreted as elasticities, whereas the coefficient on inflation is interpreted as a semi-elasticity.

The baseline empirical specification is

$$\begin{aligned}\ln(Poverty_{it}) = \beta_1 \ln(GDPpc_{it}) + \beta_2 \ln(Gini_{it}) \\ + \beta_3 Inflation_{it} + \beta_4 Gap_{it} \\ + \delta t + \alpha_i + \varepsilon_{it}.\end{aligned} \tag{1}$$

where (i) indexes countries and (t) indexes years. The term (α_i) captures all time-invariant country characteristics, including structural institutional differences, geography, and other persistent determinants of poverty, while (t) is a common linear time trend that captures gradual region-wide changes not fully reflected in the observed covariates. The preferred specification includes both inflation and the output gap simultaneously, because they capture conceptually distinct channels: inflation measures erosion of real purchasing power, while the output gap captures short-run cyclical conditions relative to long-run output.

The output gap is constructed from aggregate real GDP using the Hodrick–Prescott filter applied to the logarithm of GDP separately for each country. Let ($y_{it} = \ln(GDP_{it})$). The HP decomposition is

$$y_{it} = \tau_{it} + c_{it}.$$

where (τ_{it}) is the trend component and (c_{it}) is the cyclical component. The output gap is then defined as

$$Gap_{it} = 100\,(\ln(GDP_{it}) - \tau_{it}) = 100 c_{it}.$$

which can be interpreted as the approximate percentage deviation of actual GDP from trend. The baseline specification uses ($\lambda = 100$), consistent with the empirical design of this paper, and robustness checks should consider alternative smoothing parameters, including the annual value implied by Stata's default rule ($(\lambda = 6.25)$).

The preferred estimator is the fixed-effects, FE, which removes all time-invariant country heterogeneity. This choice is substantively conservative because it allows the unobserved

country effect to be correlated with the regressors. For completeness, random-effects models are also estimated and compared with FE using the Hausman specification test. In the context of FE versus RE, the test is therefore informative about whether the orthogonality restrictions required by RE are empirically plausible. Even if the Hausman test does not reject RE, FE remains the preferred baseline because the substantive concern in this application is omitted time-invariant heterogeneity.

Standard errors are reported using both country-clustered and Driscoll–Kraay estimators. While clustered standard errors account for arbitrary heteroskedasticity and serial correlation within countries, Driscoll–Kraay standard errors additionally accommodate cross-sectional dependence, which is likely in macroeconomic panels of South American countries exposed to common regional and global shocks. Given the relatively small number of country clusters, the discussion focuses primarily on inference based on Driscoll–Kraay standard errors.

Missing observations are concentrated in poverty and Gini variables because both indicators are derived from household surveys compiled by the World Bank Poverty and Inequality Platform. The estimation sample therefore consists of 201 observed country-year observations. No interpolation or imputation procedures are applied, and all models are estimated using available cases. This approach avoids introducing model-generated values into either the dependent variable or the main measure of income inequality and is consistent with standard empirical practice in the applied panel-data literature.

The identifying assumption is that, conditional on country fixed effects, a common time trend, and the included time-varying covariates, within-country changes in macroeconomic conditions and income inequality are informative about changes in poverty. The fixed-effects specification mitigates omitted-variable bias arising from unobserved time-invariant country characteristics, but it does not fully eliminate potential endogeneity due to reverse causality, time-varying omitted factors, or measurement error. Accordingly, the estimated coefficients are interpreted as conditional within-country associations rather than strict causal effects.

Model diagnostics include the Hausman specification test to compare fixed and random

effects, the Wooldridge test for serial correlation, multicollinearity diagnostics based on variance inflation factors (VIF), and pairwise correlations among the main explanatory variables. These tests are used to assess the appropriateness of the empirical specification and the reliability of statistical inference.

Robustness is evaluated by estimating alternative specifications that separately include inflation, the output gap, and vulnerable employment, as well as a preferred specification including both inflation and the output gap simultaneously. Random-effects estimates are reported as an additional benchmark. All source data are publicly available from the World Bank and CEPALSTAT. To facilitate reproducibility, the replication materials include the cleaned panel dataset, the complete Stata do-file, and the estimation log used to generate empirical results.

5 Results

Table 2 reports descriptive statistics for the estimation sample. The final sample contains 201 country-year observations for nine South American countries over 2000–2024, reflecting missing survey-based observations in poverty and Gini rather than gaps in the macroeconomic series. Mean poverty is 32.71% of the population, with substantial variation across country-years, ranging from 4.50% to 76.60%. Mean GDP per cápita is US$16,914.89 in constant 2021 PPP terms, with a wide range from US$7,491.15 to US$32,038.77, indicating substantial heterogeneity in income levels within the regional sample. The mean Gini is 48.20, with values between 39.50 and 61.60, which is consistent with the region's persistently high inequality. Inflation averages 9.01% per year but shows extreme dispersion, from -1.54% to 210.14%, while the cyclical measure Output gap averages close to zero by construction (-0.08) and ranges from -13.47 to 11.50 percentage points. Taken together, these descriptive statistics indicate that the estimation sample spans large cross-country and intertemporal differences in living standards, inequality, price instability, and cyclical conditions.

Table 2: Descriptive statistics for the estimation sample

	count	mean	sd	min	max
Poverty (2021 PPP) $8.3	201	32.71	16.57	4.50	76.60
GDP per capita, PPP (constant 2021)	201	16914.89	6525.44	7491.15	32038.77
Gini	201	48.20	5.33	39.50	61.60
Inflation, consumer prices (annual %)	201	9.01	20.09	-1.54	210.14
Output gap (% deviation from HP trend, lambda=100)	201	-0.08	3.56	-13.47	11.50
Observations	201				

Note: Poverty is the poverty headcount ratio at US$8.30 per person per day in 2021 PPPs. GDP per capita is measured in constant 2021 PPP international dollars. Inflation is annual consumer price inflation in percentage points. Output gap is the percentage deviation of GDP from its HP-filtered trend. Source series are drawn from the World Bank Poverty and Inequality Platform and World Development Indicators, and CEPALSTAT.

Table 3 presents the baseline fixed-effects estimates. In both columns, the point estimates are identical because the underlying specification is the same; only the variance estimator changes. The coefficient on ln GDPpc is negative in both specifications (-0.385), implying that a 1% increase in GDP per capita is associated with an approximately 0.39% decline in poverty within a given country, conditional on ln Gini, inflation, output gap, country fixed effects, and the common time trend. In economic terms, a 10% increase in GDP per capita is associated with an approximately 3.9% reduction in poverty. Evaluated at the sample mean poverty rate, this corresponds to an approximate decline of 1.3 percentage points in the poverty headcount ratio. The coefficient on ln Gini is positive and large (1.760), implying that a 1% increase in inequality is associated with a 1.76% increase in poverty; equivalently, a 10% increase in the Gini index is associated with roughly 17.6% higher poverty. Around the sample mean poverty rate, this corresponds to an increase of roughly 5.8 percentage points, underscoring that distributional shifts are the most substantively powerful correlate in the model.

The macro-instability variables also carry meaningful associations. The coefficient on

inflation is 0.00173 in the preferred baseline, implying that a one-percentage-point increase in annual inflation is associated with an approximately 0.173% increase in poverty. A 10-percentage-point increase in inflation is therefore associated with roughly 1.7% higher poverty, which is modest relative to inequality but not trivial in a region exposed to recurrent inflationary episodes. At the sample mean poverty rate, a 10-point inflation increase translates into an approximate increase of 0.57 percentage points in the poverty headcount ratio. The coefficient on output gap is -0.0174, implying that a one-percentage-point increase in output relative to HP-filtered trend is associated with approximately 1.74% lower poverty. This is economically sizable: a one-standard-deviation increase in output gap (3.56 percentage points) corresponds to an approximate 6.2% decline in poverty, or about 2.0 percentage points around the sample mean. The negative coefficient on t suggests a common downward regional trend in poverty not fully captured by the observed covariates, although its statistical significance depends on the choice of standard-error estimator.

The contrast between country-clustered and Driscoll–Kraay standard errors is important for inference. With clustered standard errors, ln Gini remains significant at the 1% level, at the 5% level, and inflation at the 10% level, whereas ln GDPpc and t are not statistically significant at conventional thresholds. Under Driscoll–Kraay standard errors, ln Gini, inflation, output gap, and t are significant at the 1% level, and ln GDPpc becomes marginally significant at the 10% level ($p = 0.052$). Because the panel contains only nine country clusters and South American macro panels are plausibly exposed to common regional shocks, the Driscoll–Kraay estimates are a reasonable basis for preferred inference, but the divergence in p-values between the two variance estimators also argues for caution in making strong claims about borderline coefficients, especially ln GDPpc and inflation. The central substantive message, however, is unchanged: inequality is the strongest and most stable correlate of poverty, while inflation and cyclical weakness also matter conditional on growth and fixed country characteristics.

Table 3: Baseline fixed-effects estimates

Dependent variable: ln poverty	(1) FE, clustered SEs	(2) FE, Driscoll–Kraay SEs
ln GDP per capita	-0.385	-0.385*
	(0.552)	(0.188)
ln Gini	1.760***	1.760***
	(0.508)	(0.263)
Inflation	0.00173*	0.00173***
	(0.00091)	(0.00046)
Output gap	-0.0174**	-0.0174***
	(0.00709)	(0.00508)
Trend	-0.0207	-0.0207***
	(0.0119)	(0.00441)
Constant	0.464	0.464
	(5.324)	(2.228)
Country fixed effects	Yes	Yes
Observations	201	201
Countries	9	9
Within R^2	0.804	0.804

Notes: Dependent variable: $(\ln(Poverty_{it}))$, where poverty is the poverty headcount ratio at US$8.30 a day (2021 PPP). All specifications include country fixed effects and a common linear time trend. Column (1) reports country-clustered standard errors. Column (2) reports Driscoll–Kraay standard errors with maximum lag (=2). Missing data are handled by available-case estimation; no interpolation or imputation is applied. Significance: *** (p<0.01), ** (p<0.05), * (p<0.10).

Table 4 evaluates robustness across alternative specifications. First, when inflation is included without output gap, the coefficient on ln GDPpc is larger in absolute value (-0.862), suggesting that simpler specifications attribute more of the poverty dynamics to average income growth when cyclical conditions are omitted. Second, when output gap enters without inflation, the ln GDPpc coefficient attenuates to -0.563, still negative and statistically significant. Third, in the preferred FE-DK specification including both inflation and output gap, the growth elasticity attenuates further to -0.385, while the coefficients on inflation and output gap, remain positive and negative, respectively, and both remain statistically significant. In contrast, the coefficient on ln Gini varies little across columns, staying in a narrow range from 1.760 to 1.821. This stability strongly suggests that the

poverty–inequality association is not an artefact of whether short-run macro controls are entered separately or jointly. The random-effects benchmark also produces very similar signs and closely comparable magnitudes, especially for ln Gini, inflation, and output gap, which reinforces the empirical stability of the main conditional associations. The attenuation pattern for ln GDPpc is substantively informative: part of the observed growth–poverty association appears to overlap with short-run macroeconomic conditions rather than reflecting long-run income shifts alone. At the same time, the proximity of FE and RE estimates should not be read as evidence of point identification; it simply indicates that the main correlations are not highly sensitive to the treatment of time-invariant heterogeneity in this sample

Table 4: Robustness checks and random-effects benchmark

Dependent variable: ln Poverty	**(1) Inflation**	**(2) Output gap**	**(3) Baseline FE**	**(4) Random effects**
ln GDP per capita	-0.862***	-0.563**	-0.385*	-0.566***
	(0.184)	(0.236)	(0.188)	(0.179)
ln Gini	1.821***	1.784***	1.760***	1.775***
	(0.297)	(0.272)	(0.263)	(0.305)
Inflation	0.0010**	—	0.00173***	0.00142*
	(0.00037)		(0.00046)	(0.00077)
Output gap	—	-0.0150**	-0.0174***	-0.0149***
		(0.00544)	(0.00508)	(0.00429)
Time trend	-0.0095***	-0.0159***	-0.0207***	-0.0165***
	(0.00283)	(0.00562)	(0.00441)	(0.00460)
Country fixed effects	Yes	Yes	Yes	No
Time trend	Yes	Yes	Yes	Yes
Estimator	FE-DK	FE-DK	FE-DK	RE
Observations	201	201	201	201
Countries	9	9	9	9
Within R^2	0.788	0.799	0.804	0.803 (within)

Notes: Standard errors in parentheses. Columns (1)–(3) report fixed-effects estimates with Driscoll–Kraay standard errors (maximum lag = 2). Column (4) reports the random-effects benchmark. The dependent variable is ln pov. All regressions use the common estimation sample and available-case estimation only. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

The diagnostic tests broadly support the empirical strategy while also confirming the

need for robust inference. The Hausman test does not reject the null that FE and RE coefficients do not differ systematically (chi2 = 4.17, p = 0.3835), but FE remains the preferred baseline because it is the more conservative estimator when unobserved time-invariant country characteristics may be correlated with the regressors. By contrast, the Wooldridge test rejects the null of no first-order autocorrelation (F = 9.863, p = 0.0164), which justifies the use of serial-correlation-robust inference. Pairwise correlations among the principal macro covariates are low: the correlation between inflation and output gap is essentially zero (-0.017), while correlations between ln Gini and inflation (-0.149) and between ln Gini and gap_porc (-0.117) are modest in magnitude. The pooled-OLS VIF results are elevated for some regressors and country dummies, especially ln GDPpc, but this is unsurprising in a specification that includes a time trend and country indicators; importantly, the low pairwise correlations among inflation, output gap, and ln Gini do not suggest severe multicollinearity among the main explanatory variables of substantive interest. Taken together, these diagnostics strengthen the case for presenting Driscoll–Kraay fixed-effects estimates as the preferred inferential benchmark.

6 Conclusion

This paper has examined whether poverty in South America is associated not only with economic development and inequality, but also with macroeconomic instability. Using an annual panel of nine countries over 2000–2024, we find that the answer is yes. Within countries, higher GDP per capita is associated with lower poverty, but this relationship is smaller once we control explicitly for inflation and business-cycle conditions. Income inequality remains the strongest and most stable correlate of poverty throughout. Inflation is positively associated with poverty, while a more favourable output gap is associated with lower poverty. These conclusions survive a series of robustness checks and remain broadly similar under random effects, although fixed effects remain our preferred specification.

The results lead to a straightforward substantive conclusion. Poverty reduction in South

America cannot be understood as a simple function of long-run growth. Distribution matters, and so does macroeconomic stability. A country can grow and still fail to protect vulnerable households if inflation erodes real incomes or if cyclical downturns weaken labour demand and compress household earnings. Conversely, stable prices and effective countercyclical conditions appear to complement growth in reducing poverty. In that sense, the findings support a broader conception of anti-poverty strategy in which growth, redistribution, and stabilization are mutually reinforcing rather than competing objectives.

The policy implications follow directly. First, price stability should be treated as part of social policy, not only as a monetary objective. The estimated semi-elasticity of poverty with respect to inflation is not large in one-year, one-point terms, but inflation shocks in the region are often large enough to generate meaningful welfare losses in a short period. Second, business-cycle stabilization matters for poverty reduction. The negative coefficient on the output gap implies that recessions undo social gains quickly, which strengthens the case for fiscal buffers, automatic stabilizers, and targeted social protection that can expand during downturns. Third, the magnitude and stability of the inequality coefficient imply that redistribution remains central. Growth that leaves inequality largely unchanged is likely to deliver weaker poverty reduction than growth that is combined with distributional improvement.

The study nonetheless has important limitations. The small number of countries reduces power and makes inference sensitive to covariance estimation. The survey-based poverty and inequality variables are subject to measurement error and uneven temporal coverage. The fixed-effects design mitigates bias from time-invariant heterogeneity, but it does not fully address reverse causality, omitted time-varying shocks, or dynamic adjustment processes. These caveats mean that our estimates should not be read as strict causal effects. They are best understood as robust conditional associations within countries over time.

Future research could extend the analysis in several directions. One avenue is to examine heterogeneity across countries with different social-protection systems, inflation histories, or

exchange-rate regimes. Another is to use higher-frequency macroeconomic data linked to annual poverty observations, or microdata-based approaches that can identify which households are most exposed to inflation and recessions. A third is to explore identification strategies that isolate exogenous macroeconomic shocks—for example through external commodity-price movements or other plausibly exogenous instruments—to move from conditional association toward stronger causal inference. These extensions would help clarify not only whether instability matters for poverty, but through which households, markets, and policy channels it matters most.

Overall, the evidence points in one direction. In South America, poverty is lower when average incomes are higher, but durable poverty reduction also requires lower inequality, lower inflation, and greater macroeconomic resilience. That is the central contribution of the paper, and it is also its main policy lesson.

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A Sample composition and data coverage

Table A1: Sample composition and data coverage

Country	Start Year	End Year	Total Years	Missing Observations	Final Observations
Argentina	2000	2024	25	1	24
Bolivia	2000	2024	25	2	23
Brazil	2000	2024	25	2	23
Chile	2000	2024	25	14	11
Colombia	2000	2024	25	2	23
Ecuador	2000	2024	25	2	23
Paraguay	2000	2024	25	1	24
Peru	2000	2024	25	0	25
Uruguay	2000	2024	25	0	25
Total	—	—	—	—	201