ECONOMICS & Sociology

Rabhi, A., & Parsons, B. (2025). Monetary policy, inflation, and income inequality in developing countries. *Economics and Sociology*, *18*(2), 11-22. doi:10.14254/2071-789X.2025/18-2/1

MONETARY POLICY, INFLATION, AND INCOME INEQUALITY IN DEVELOPING COUNTRIES

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ABSTRACT. This study investigates the relationship between income inequality and monetary policy in developing countries using a balanced panel dataset of 25 countries from 2000 and 2022. The analysis explores how contractionary and expansionary monetary policies, along with inflation, influence income distribution. The findings reveal that both contractionary and expansionary monetary policies have an effect on income inequality. The study emphasizes the adverse impact of high interest rates on lower and middle-income groups, as it widens income inequality and benefits the top income group. Similarly, high inflation erodes income shares for most deciles but the wealthiest, who can leverage asset appreciation and price-setting power. Additionally, the study highlights the redistributive role of government spending and public investments, which positively impact income shares across all deciles except the top 10%.

Received: September, 2023
1st Revision: March, 2025
Accepted: June, 2025

DOI: 10.14254/2071-789X.2025/18-2/1

JEL Classification: O11, E40, E52

Keywords: monetary policy, inflation, income inequality, interest rate

Introduction

The issue of income and wealth inequality has gained significant attention in recent years, sparking debates and research on its causes and consequences (Barro, 2000; Piketty & Saez, 2003; Rubolino & Waldenström, 2020). Research has shown that inequality negatively impacts economic growth (Ostry et al., 2014), raises social tensions, and increases the number of violent conflicts. These conflicts can result in the destruction of infrastructure, disruption of social services, and limited economic opportunities, further exacerbating inequality (Gurr, 1968; Krieger & Meierrieks, 2019; Parsons, 2023). Keynes and Kalecki argued that increased inequality diminishes the inclination to consume, thereby weakening both investment and consumption demand (Qanas, 2020). Rising inequality in personal income distribution can adversely impact economic stability, as lower-income groups typically spend a larger portion

of their income compared to wealthier groups. This implies that greater income disparity may reduce overall consumer demand (Palley, 2002).

While various factors such as talent differentials, globalization, technological progress, and institutional structures have been extensively studied in relation to inequality (Dabla-norris & Kochhar, 2015), one notable area that has received relatively little attention is the impact of monetary policy. Historically, the link between monetary policy and income inequality was not considered significant. However, with the increased prominence of central banks in macroeconomic decision-making after the financial crisis of 2008 (Borio, 2017), unconventional monetary policies continued to be utilized and were expanded during the COVID-19 pandemic through additional asset purchases. These measures often predominantly benefit wealthier individuals (Kappes, 2023), posing a challenge for central banks. Therefore, they must now consider the impact of their policies and address the issue of income inequality (Sawyer & Qanas, 2024).

Recent empirical studies have shed light on the potential impact of monetary policy. Tighter monetary policy, for example, has been found to increase labor income inequality, disproportionately affecting lower-skilled workers and minorities (Carpenter & Rodgers, 2004; Gornemann et al., 2016). Labor income is generally found more among the lower income percentiles, whereas capital income, such as entrepreneurial profits and returns from financial assets, is more common among those in higher income brackets (Kappes, 2023). Additionally, changes in asset prices, driven by monetary policy, can have varying effects on income and wealth inequality. For instance, increases in stock prices often exacerbate inequality (Adam & Tzamourani, 2021). Furthermore, the question of impact of inflation as a component of monetary policy on income inequality is inconclusive. Some studies indicate that in low-inflation countries, the effects are negligible (Bulíř, 2001; Bulir & Gulde, 1995; Galli & Hoeven, 2001; Parker, 1998). However, unanticipated inflation can potentially shift wealth from lenders to borrowers, impacting different income groups differently (Doepke & Schneider, 2006).

This paper seeks to investigate the impact of monetary policy and inflation on income shares in developing countries. While most research in this field has concentrated on developed nations, there is a noticeable gap in the literature regarding the effects on developing economies. Additionally, this study goes beyond the commonly used Gini index by examining the impact on different income deciles, providing a more detailed analysis of how various segments of the population are affected.

To answer our questions, this article is organized in the following manner: Section one discusses the literature review. Section two covers the data collection process, introduces the variables for the analysis, and elaborates on the research methodology, which includes the econometric model used. This section also offers a descriptive overview of the variables. Section three presents the empirical results obtained from our analysis. The concluding section summarizes the findings and discusses the implications for policy decisions.

1. Literature review

The literature identifies various channels through which monetary policy can impact income inequality. These channels include changes in interest rates and their transmission throughout the economy. When monetary policy is contractionary, typically leading to higher interest rates, it can benefit individuals with financial assets, such as bonds or savings accounts, as they earn more income from these assets. However, for those without such assets, typically lower-income individuals, the higher interest rates can lead to increased borrowing costs. Such high interest rate policies tend to redistribute income in favor of those with surplus resources.

Financially well-established households and businesses benefit from higher interest rates due to their surplus resources. Banks and financial institutions also profit, as their earnings from financial activities are directly influenced by these rates. Conversely, households and businesses in weaker financial positions, who often rely on borrowing, bear the burden of paying the higher interest rates and do not gain from these policies (Vianna, 2024).

The relationship between monetary policy and income inequality has been especially highlighted in the context of developing nations, where the repercussions of global financial disruptions tend to resonate differently compared to their developed counterparts. Agénor & Pereira da Silva (2014) argue that monetary policies in emerging markets can have starkly diverse effects due to inequalities in financial access. With many populations having limited or no access to formal financial services, their reactions to monetary policy shifts can be distinct and sometimes more pronounced. This relationship is further emphasized by Coibion et al. (2012), who found that monetary policy shocks in developing economies disproportionately affect the economically disadvantaged, primarily because of their heavier reliance on informal labor markets. These informal sectors, lacking the cushions and formal protections of organized sectors, tend to be more vulnerable to monetary fluctuations. Furceri et al. (2018) highlight that monetary contractions in developing nations tend to cause a short-term increase in inequality. This trend is likely due to widespread credit constraints in these areas, where lower-income individuals have limited access to credit, making them more vulnerable during economic downturns. The study also finds an asymmetry in the effects of monetary policy: raising interest rates significantly impacts income distribution, while lowering them does not produce statistically significant changes. Additionally, the degree of fiscal policy redistribution plays a crucial role in mitigating the income inequality gap. In countries with strong redistribution policies, monetary policy shocks do not significantly affect inequality. However, in countries with weaker redistribution efforts, these shocks have a positive and significant effect on inequality. Furthermore, Rabhi & Parsons (2024) recently highlight that central bank independence, often characterized by high interest rate policies aiming to reduce inflation, can exacerbate inequality. This phenomenon occurs because such policies tend to benefit the financially advantaged, who can leverage financial deregulation and market liberalization to further their economic interests. Consequently, there is an increase in financial sector activities that primarily advantage asset holders and those in higher income brackets. Samarina & Nguyen (2019) analyzed Euro zone countries and found that expansionary monetary policies can help reduce income inequality. Interestingly, they observed that the effects of these policies are not uniform across all countries; the impacts are more pronounced and longer lasting in the peripheral Euro zone countries compared to the core ones. Ampudia et al. (2018) state that, lower-income households with mortgages may benefit from reduced payments when interest rates are low, particularly if they lack financial assets that generate interest income. In contrast, wealthier individuals, who are more likely to hold bonds and have less debt, may experience a decrease in income under these conditions. However, in countries with fixed interest rates, the impact on income for individuals with low labor income may be limited. Meanwhile, wealthier individuals can still benefit from expansionary monetary policies by using the cheaper credit to invest in various assets. Increased access to credit can drive up demand for assets such as real estate, stocks, or bonds, leading to higher prices for these assets. This price appreciation can disproportionately benefit those who already own or invest in these assets, as seen in studies by Piketty & Saez (2014) and van der Weide & Milanovic (2018). The wealthy, with their substantial financial resources and investment portfolios, are particularly well-positioned to capitalize on these opportunities, potentially exacerbating income inequality despite the broader benefits of the expansionary policy. Domanski & Zabai (2016) noted that while low interest rates and rising bond prices have had a relatively minor impact on wealth inequality, the

increase in equity prices has substantially contributed to greater income inequality. As a result, expansionary monetary policy can potentially worsen inequality if it leads to higher asset prices. Thus, while expansionary monetary policies may help mitigate inequality, the nature of central bank policies, especially those involving high interest rates, can conversely contribute to widening the income inequality gap.

2. Methodological approach

Building on the literature review, it is crucial to empirically assess the extent to which monetary policy and inflation affect income inequality in developing economies. This section examines the dynamics between monetary policy and income inequality in a sample of 25 developing countries[1] from 2000 to 2022. The study adopts a panel data approach, which enables the examination of both time series and cross-sectional variations in the data. To capture inequality dynamics, we rely on data from the World Bank's PovcalNet database (2023). A key advantage of this dataset is that includes information on income dynamics at the decile level, which allows us to study income dynamics in a more nuanced fashion (Aklin et al., 2021). Our headline results rely on the share of total income earned by each decile, ordered from the lowest- (bottom 10%) to the highest-earners (top 10%).

In our investigation, we draw upon multiple studies and research papers to explore the various channels through which monetary policy interacts with income inequality. Firstly, studies such as (Berisha et al., 2022; Monnin, 2014; Siami-Namini & Hudson, 2019; Zheng et al., 2020) have examined the impact of inflation on income disparities. Changes in inflation can affect different income groups differently, leading to changes in relative income shares. Secondly, researchers such as (Hailemariam et al., 2021; Lenza & Slacalek, 2019; Montecino & Epstein, 2015; Taghizadeh-Hesary et al., 2020) have analyzed the role of interest rates and monetary policy in shaping income inequality. By influencing savings, investment, and access to credit, interest rates can have significant implications for income distribution. Moreover, we consider the effects of trade openness on income inequality, drawing on research by (Bergh & Nilsson, 2014; Cragg & Epelbaum, 1996; Dorn et al., 2022; Jaumotte et al., 2013). Increased trade openness can have both positive and negative impacts on income inequality. On the one hand, it can create opportunities for economic growth and job creation, potentially reducing income disparities. On the other hand, certain sectors and workers may face challenges in adapting to international competition, leading to increased income inequalities. Furthermore, we investigate the influence of public expenditures on income inequalities, building on studies by (Sánchez & Pérez-Corral, 2018; Sidek, 2021; Sylwester, 2002) . Government spending plays a crucial role in addressing income inequality by providing essential services and social safety nets. Understanding how fiscal policy decisions affect incomes can provide insights into its potential redistributive impact.

Our main model takes the following form:

$$Income\ Decile_{it} = b_0 + b_1\ Interest\ rate_{it} + b_2 Inflation_{it} + b_3\ Public\ expenditures_{it} + b_4 Trade\ openness_{it} + \varepsilon_{it}$$

[1] Countries included: Argentina, Belarus, Bolivia, Brazil, Colombia, Costa Rica, Czech Republic, Dominican Republic, Ecuador, Georgia, Hungary, Indonesia, Kazakhstan, Kyrgyz Republic, Moldova, North Macedonia, Paraguay, Peru, Poland, Romania, Russian Federation, Thailand, Turkey, Ukraine, Uruguay.

Where b_0 is the intercept or constant term in the equation. $Income\ Decile_{it}$ is the dependent variable, which is the income decile. Income decile refers to the division of the population into ten equal groups, each representing 10% of the total population, based on their income levels. It is a measure of income distribution, with higher deciles indicating higher income levels. $Interest\ rate_{it}$ is a monetary policy variable representing the cost of borrowing or the return on savings, and it can influence income decile by affecting investment, savings behavior, and access to credit. $Inflation_{it}$ is another independent variable in the equation. It refers to the general increase in prices over time, and it can impact income decile by affecting the purchasing power of individuals, wage growth, and cost of living. $Public\ expenditures_{it}$ represents the level of public expenditures as a percentage of GDP. It refers to the government's spending on goods, services, and social programs. It can influence income decile by affecting the provision of public services and welfare programs. $Trade\ openness_{it}$ represents the degree of trade openness or globalization. Trade openness measures the extent to which a country engages in international trade. It can impact income decile by influencing economic growth, job creation, and income disparities among different sectors and workers. ε_{it} is the error term in the equation. It represents the unobserved factors or random shocks that affect income decile but are not explicitly captured by the independent variables in the equation.

3. Conducting research and results

3.1. Descriptive statistics

Table 1. Summary statistics

Variable	Obs	Mean	Std. dev.	Min	Max
D1 (Income share of bottom 10%)	550	.024	.010	.0013	.044
D2 (Income share of 10%-20%)	550	.037	.012	.008	.060
D3 (Income share of 20%-30%)	550	.048	.012	.020	.070
D4 (Income share of 30%-40%)	550	.058	.011	.032	.077
D5 (Income share of 40%-50%)	550	.069	.011	.045	.086
D6 (Income share of 50%-60%)	550	.081	.009	.059	.097
D7 (Income share of 60%-70%)	550	.097	.008	.077	.113
D8 (Income share of 70%-80%)	550	.118	.005	.102	.134
D9 (Income share of 80%-90%)	550	.155	.008	.136	.175
D10 (Income share of top 10 %)	550	.309	.070	.205	.478
GDP per capita	550	6276.69	4662.48	279.61	23419.74
Inflation %	550	7.91	12.00	-1.54	168.62
Interest rate %	550	8.781	11.66	-41.22	93.91
Trade openness	550	78.34	35.43	21.85	168.39
Public expenditure % GDP	550	30.66	10.53	8.32	60.00
Population (log)	550	7.24	.571	6.30	8.42
Asset price (log)	550	13.56	2.002	7.58	16.77
Private credit %	550	36.03	19.86	3.82	115.87

Source: Own calculation based on the World Development Indicators (World Bank, 2023), (World Bank's PovcalNet database, 2023) and (Feenstra et al. 2015)

The summary statistics in Table 1 provide insights into the distribution of income, economic indicators, and other variables within the observed developing countries. The income shares across different percentile groups reveal a concentration of income among the top earners, as indicated by the increasing mean values from the bottom 10% to the top 10%. The

variability in GDP per capita suggests diverse levels of economic development among the analyzed entities. Additionally, the mean inflation rate of 7.91% highlights the general price level experienced in the observed countries during the studied period. The interest rate and trade openness statistics reflect the financial and trade environments, respectively, while public expenditure as a percentage of GDP indicates the extent of government spending. The logarithmic population and asset price variables signify the scale of population and asset values, while private credit percentage reveals the magnitude of borrowing and lending activities. Overall, these summary statistics offer a comprehensive snapshot of key economic and social indicators within the studied countries.

Table 2. Variance inflation factor for Model 1

Variables	VIF	1/VIF
Trade openness	1.27	0.790
Interest rate	1.20	0.834
Public expenditures	1.13	0.888
Inflation	1.04	0.958
Mean VIF	1.16	

Source: Own calculation.

Table 3. Variance inflation factor for Model 2

Variables	VIF	1/VIF
Private Credit	1.19	0.839
GDP per capita	1.16	0.858
Population	1.06	0.946
Mean VIF	1.14	

Source: Own calculation.

The results from Table 2 and 3 indicate that there is no strong multicollinearity among the variables included in the analysis. The Variance Inflation Factor (VIF) values for all variables are below the threshold of 5 or 10 that is often used to identify high multicollinearity (Pan & Jackson, 2008; Rogerson, 2011). Overall, the results suggest that the variables are suitable for inclusion in the regression models without significant multicollinearity issues.

Table 4. Correlation between income share deciles

Variables	D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10
D 1	1.0000									
D 2	0.982	1.000								
D 3	0.955	0.992	1.000							
D 4	0.926	0.975	0.994	1.000						
D 5	0.926	0.975	0.994	1.000						
D 6	0.834	0.902	0.942	0.969	0.989	1.000				
D 7	0.724	0.802	0.854	0.895	0.935	0.975	1.000			
D 8	0.309	0.395	0.466	0.533	0.610	0.709	0.843	1.000		
D 9	-0.816	-0.811	-0.787	-0.750	-0.694	-0.598	-0.421	0.120	1.000	
D 10	-0.896	-0.945	-0.969	-0.983	-0.990	-0.987	-0.950	-0.671	0.624	1.000

Source: Own calculation.

Table 4 shows correlations between income shares among different groups, where D1 represents the bottom 10% and D9 and D10 together represent the top rich 20 %. The positive correlation of 0.624 between the income shares of the top rich (D9 and D10) imply a concentration of income and wealth among the wealthiest individuals. This concentration of

income suggests that as the income shares of the top rich increase, so does the income of other top rich individuals. On the other hand, the negative correlations between the income shares of the top 20% (D9 and D10) and those of other groups point to limited upward mobility for individuals in the 80% income bracket. As the income shares of the bottom 80% decrease, the income shares of other groups, particularly the top rich 20%, tend to increase. This signifies the challenges faced by individuals in the bottom 80% in moving up the income ladder. Moreover, the negative correlations between the income shares of the bottom 80% and the top rich 20% underscore persistent income disparities and a substantial wealth gap. In summary, these correlations highlight the presence of income inequality, wealth concentration, limited upward mobility, and persistent income disparities between the bottom 80% and the top rich 20%.

3.2 Model 1: The relationship between contractionary monetary policy and income inequality

Table 5. Changes in income shares (Fixed-effects regression)

	D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10
Inflation	-.0000199 (.0000149)	-.0000275* (.0000158)	-.0000337** (.0000156)	-.0000353** (.0000156)	-.0000344** (.0000153)	-.0000396*** (.0000148)	-.0000411*** (.0000141)	-.000038*** (.0000133)	-.000032* (.0000168)	.0003021*** (.0000989)
Interest rate	-.0000746*** (.0000199)	-.0001025*** (.0000211)	-.0001091*** (.0000209)	-.0001084*** (.0000207)	-.0001053*** (.0000204)	-.0001033*** (.0000198)	-.0000887*** (.0000188)	-.0000521*** (.0000177)	.000031 (.0000223)	0007112*** (.000132)
Public expenditures	.0002385*** .(0000423)	.0002974*** (.0000447)	.0003262*** (.0000442)	.0003453*** (.0000438)	.0003583*** (.000043)	.0003618*** (.0000415)	.0003168*** (.0000392)	.0002185*** (.000036)	-.0000208 (.000046)	-.0025167*** (.0002796)
Trade openness	-.0000663*** (.0000125)	-.0000363*** (.0000132)	-.0000216* (.000013)	-.0000121 (.0000129)	2.070007 (.0000127)	.0000128 (.0000122)	.0000223** (.0000116)	.0000242** (.0000107)	.0000187 (.0000136)	.0000559 (.0000841)
Constant	.0229146*** (.0023062)	.0327791*** (.002409)	.0411616*** (.002363)	.0499014*** .0023165	.059288 (.0022286)	.070677*** (.002103)	.086737** (.0019168)	.1109453*** (.001674)	.1548185*** (.0021851)	.3731732*** (.014665)
R-squared	0.1534	0.1462	0.1601	0.1679	0.1761	0.1929	0.1790	0.1269	0.0227	0.2082
Wald Chi2	69.98***	75.62***	88.91***	97.15***	105.87***	119.40***	108.74***	64.48***	6.97***	122.81***
Observations	550	550	550	550	550	550	550	550	550	550

Note: the table reports the coefficients. Standard errors are in parentheses between parentheses *, **, and *** indicate significance at 10 %, ** at 5 % and *** at 1 %. Source : Authors` estimates based on the World Development Indicators (World Bank, 2023) and (World Bank's PovcalNet database, 2023)

Table 6. Changes in income shares (Random-effects regression)

	D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10
Inflation	-.000018 (.0000145)	-.000026* (.0000154)	-.0000327** (.0000153)	-.0000344** (.0000152)	-.0000336** (.0000151)	-.000039*** (.0000147)	-.000040*** (.000011)	-.000038*** (.0000133)	-.000033 ** (.0000164)	.0002962*** (.0000975)
Interest rate	-.000075*** (.0000194)	-.000103*** (.0000206)	-.000109*** (.0000204)	-.000108*** (.0000204)	-.000105*** (.0000201)	-.000102*** (.0000197)	-.000086*** (.0000189)	-.000047*** (.0000178)	.0000373** (.000022)	.0007097*** (.0001305)
Public expenditures	0002243*** (.0000426)	.0002812*** (.0000452)	.0003097*** (.0000448)	.0003298*** (.0000447)	.000347*** (.0000442)	.0003584*** (.0000431)	.0003243*** (.0000414)	.0002486*** (.0000391)	.0000297 (.0000481)	-.002492*** (.0002867)
Trade openness	-.000083*** (.0000125)	-.000053*** (.0000133)	-.000038*** (.0000132)	-.0000285** (.0000131)	-.0000145 (.000013)	1.11006 (.0000127)	.0000148 (.0000122)	.0000271** (.0000115)	.0000441*** (.0000141)	.0001489** (.000086)
Constant	.0246601*** (.001697)	.0346374*** (.0018009)	.043003*** (.001787)	.0516581*** (.0017817)	.0607823*** (.0017609)	0716868*** (.0017195)	.0870726*** (.0016507)	.1097547*** (.0015572)	.15125*** (.0019188)	.365567*** (.0114338)
R-squared	0.1566	0.1498	0.1636	0.1710	0.1785	0.1944	0.1799	0.1276	0.0313	0.2105
F-Test	20.70***	19.65***	21.81***	23.01***	24.22***	26.91***	24.46***	16.31***	3.61***	29.52***
Observations	550	550	550	550	550	550	550	550	550	550

Note: the table reports the coefficients. Standard errors are in parentheses between parentheses *, **, and *** indicate significance at 10 %, ** at 5 % and *** at 1 %. Source : Authors` estimates based on the World Development Indicators (World Bank, 2023) and (World Bank's PovcalNet database, 2023)

Table 5 and 6 present the results of a Fixed-effects and Random-effects regression analysis, highlighting the relationship between income shares and various factors such as inflation, interest rates, public expenditures, and trade openness. When considering the mentioned elements, several key ideas can be observed. High inflation is found to have a

negative significant impact on income shares for the deciles between D2 and D9. It is worth noting that low inflation can benefit low-income individuals by helping maintain the purchasing power of their income. However, it reverses the sign, showing a positive impact on income for the 10th decile (top 10%). This could be explained by the fact that higher inflation may benefit those with the ability to influence prices, such as businesses and wealthy individuals. The top 10% can potentially adjust the prices of goods and services in response to rising costs, allowing them to maintain or even increase their revenues and profits (Easterly & Fischer, 2001; Mastromatteo & Rossi,2024; Gallo & Rochon,2024). On the other hand, high interest rates related to contractionary monetary policy are associated with a negative effect on income shares, particularly for the lower-income and middle groups (D1-D8) representing 80%. This suggests that high interest rates can hinder economic opportunities and exacerbate income inequality, potentially leading to consequences such as unemployment and restricted access to financial resources. However, the sign changes to positive for the top income group (D9-D10) which it means it can benefit the rich, particularly those who are savers or have substantial investments. Higher interest rates can provide them with increased returns on their savings or investments, potentially enhancing their wealth accumulation. In terms of public expenditures, an increase in government spending tends to positively influence income shares across all deciles except the top 10%, implying that public investments and social welfare programs can have a redistributive effect for all deciles except D10 suggesting a negative relationship between public expenditures and income shares for the rich. One possible explanation is that higher public expenditures, often funded through increased taxation on high-income individuals or businesses, may reduce their disposable income and overall wealth. Trade openness, represented by the variable "Trade openness," shows mixed results. While it has a positive impact on income shares for the middle and higher deciles (D6-D10), it seems to have a negligible effect or even a negative impact on the lower deciles (D1-D5). This suggests that trade openness and globalization may have contributed to income inequality, benefiting the wealthier segments of society. Specifically, exchange rate depreciation has been shown to exacerbate this inequality, affecting the income share of the bottom 40/50% while increasing the income share of the top 10/20% (Parsons & Rabhi, 2025). This can be explained by the widening earnings gap between export-oriented and non-export sectors, further deepening income inequality (Rossi & Galbraith, 2016).

3.3. Model 2: The relationship between asset prices and expansionary monetary policy

After investigating the consequences of a restrictive monetary policy on income inequality we now shift our focus to the hypothesis that an expansionary monetary policy driven by increasing credit growth, can generate asset price inflation, in turn, feeds the incomes of a society's top-income segment (Piketty & Saez, 2014; van der Weide & Milanovic, 2018).

To capture credit growth dynamics, we calculate the annual credit growth rate from the World Bank (2023). Given the challenging nature of measuring asset prices, we use the price of the capital stock that is available from (Feenstra et al., 2015).

Table 7 suggests that there is a positive relationship between private credit and asset prices. Specifically, it indicates that an expansionary monetary policy, which may lead to increased private credit, can contribute to the appreciation of asset prices. When interest rates are low, borrowing costs decrease, making it more affordable for individuals and institutions to access credit. This increased availability of credit can fuel demand for various unproductive assets, such as real estate, stocks, or bonds. As demand for these assets rises, their prices tend to increase, potentially benefiting individuals who already own or invest in such assets (Piketty & Saez, 2014; van der Weide & Milanovic, 2018). The wealthy, who often have substantial

financial resources and investment portfolios, may be in a better position to take advantage of this situation and benefit from the appreciation of asset prices.

Table 7. Relationship between asset price and credit

	Fixed-effects	Random-effects
Private Credit	.0024893***	.0024833***
	(.0005105)	(.0005115)
GDP per capita (log)	.2691278***	.2792978***
	(.0272117)	(.0269022)
Population (log)	3.763776***	3.569018***
	(.2153463)	(.1950203)
Constant	-14.78235***	-13.40786***
	(1.524442)	(1.404858)
R-squared	0.7133	0.7130
Wald chi2		1140.022***
F-Test	370.79***	
Observations	550	550

Note: the table reports the coefficients. Standard errors are in parentheses between parentheses *, **, and *** indicate significance at 10 %, ** at 5 % and *** at 1 %. Source: Authors` estimates based on the World Development Indicators (World Bank, 2024) and (Feenstra et al., 2015).

Monetary policy decisions play a crucial role in shaping income and wealth distribution. The expansion of credit, rather than solely fueling productive investment and consumption, increasingly finances rentier activities, diverting resources away from real economic growth. This credit-driven asset inflation primarily benefits those already holding substantial financial and real estate assets, reinforcing existing inequalities and fostering wealth concentration. Moreover, in developing economies, financial exclusion exacerbates these disparities, as large segments of the population remain deprived of access to credit, limiting their economic participation and further entrenching structural inequality. These dynamics underscore the need for a more progressive monetary framework that prioritizes financial inclusivity and channels credit toward productive sectors to support broader economic stability and equitable growth.

Conclusion and policy recommendation

This study suggests that both contractionary and expansionary monetary policies have effects on income inequality in developing countries. High inflation rates tend to decrease income for most deciles, except for the top income group, which either benefits from it or may even contribute to its persistence through pricing power. The study highlights the negative impact of high interest rates associated with contractionary monetary policies. This can disproportionately affect lower-income and middle-income groups, exacerbating income inequality. Such policies may limit economic opportunities, increase unemployment, and restrict access to credit for those who are already marginalized, while benefiting the top income group, who are savers and less reliant on borrowing. Meanwhile, increased government spending and public investments can reduce income inequality for most deciles excluding the top income group. Trade policies in the context of globalization, although beneficial for some, require careful attention to avoid exacerbating income disparities. Considering these dynamics, it becomes apparent that the rich have more options and opportunities to navigate monetary policy's consequences. They can take advantage of low interest rates to invest in assets, benefiting from potential capital appreciation and income from investments. Additionally, the

rich have greater control over prices, allowing them to mitigate the negative effects of inflation on their income and wealth. In contrast, the low-income individuals are more vulnerable to the effects of monetary policy. They face challenges accessing finance, limited investment opportunities, and the burden of inflation. It is crucial to recognize the distributive effects of monetary policy in developing countries and understand that low interest rates, which could enhance employment opportunities, can provide some relief for the low-income individuals, giving them a chance to secure jobs and improve their financial situation.

The findings in this paper underscore the need for policymakers in developing economies to recognize the distributive effects of monetary policy. Central banks, traditionally focused on price stability, are increasingly being called upon to consider broader socio-economic objectives, including income inequality and Sustainable Development Goals (SDGs). Emerging research, including Rabhi (2025), as well as the work of Sawyer and Qanas (2024), suggests a paradigm shift in central banking toward a more inclusive framework that integrates these concerns into monetary policy design. This shift reflects a growing recognition that monetary policy is not neutral in its impact on income distribution and that central banks should adopt frameworks that account for its redistributive consequences. Our findings further emphasize the crucial role of fiscal policy in addressing these disparities. Redistribution policies are essential in mitigating the unequal effects of monetary policy, as fiscal interventions, can counterbalance the regressive tendencies of certain monetary measures. Without coordinated fiscal measures, an independent monetary policy alone may inadvertently widen income gaps.

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