



GLOBAL INFLATION AFTER COVID-19 AND MONETARY-POLICY RESPONSES IN DEVELOPING AND DEVELOPED COUNTRIES

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Abstract

This study examines the drivers of global inflation after COVID-19 and compares the timing, instruments, and effectiveness of monetary-policy responses in developed and developing countries. It adopts a quantitative, explanatory, and comparative panel-data design covering 2019–2025, with 2019 serving as the pre-pandemic baseline. Secondary data on consumer-price inflation, policy interest rates, exchange rates, economic growth, fiscal support, energy and food prices, external conditions, and governance are drawn from the International Monetary Fund, World Bank, Bank for International Settlements, and other official sources. The analysis combines descriptive trend comparisons with pooled ordinary least squares, fixed-effects, and random-effects models, including an interaction term to test whether monetary-policy transmission differs by development status. The findings indicate that post-pandemic inflation resulted from the interaction of supply-chain disruptions, reopening demand, expansionary fiscal and monetary policies, commodity-price shocks, and exchange-rate depreciation. Developed economies initially relied on very low interest rates, quantitative easing, and extensive fiscal support, then shifted to rapid rate increases and balance-sheet tightening. Developing economies often tightened earlier because of imported inflation, currency depreciation, capital outflows, and external-debt pressures. Although global tightening and easing supply constraints reduced inflation after its 2022 peak, disinflation was generally faster in developed economies. Developing countries experienced more persistent pressures because of import dependence, weaker currencies, limited fiscal space, and less effective policy transmission. The study concludes that monetary tightening is necessary but insufficient and should be complemented by fiscal discipline, credible institutions, supply-side reforms, food and energy security, reserve management, and targeted protection for vulnerable households.

Keywords: Global Inflation; COVID-19; Monetary Policy; Developed Countries; Developing Countries; Interest Rates; Exchange-Rate Depreciation; Post-Pandemic Recovery.

1. Introduction

The COVID-19 pandemic created one of the most severe global economic disruptions of the modern era. Beginning in 2020, lockdowns, border closures, factory shutdowns, labour-market interruptions, and transport restrictions reduced economic activity across nearly every region. In response, governments and central banks adopted extraordinary measures to protect households, firms, and financial systems (Aguilar et al., 2023). Policy interest rates were lowered to historically low levels, liquidity was injected into banking systems, and many advanced economies introduced large asset-purchase programmes, emergency lending facilities, wage-support schemes, and fiscal-stimulus packages. These measures limited the immediate



economic damage caused by the pandemic, but they also contributed to a strong recovery in demand when economies reopened (International Monetary Fund [IMF], 2024b; Akash, n.d.; Akram et al., 2026; Ali et al., 2026).

From 2021 onward, global inflation rose sharply as recovering demand collided with disrupted supply chains and restricted productive capacity. The inflationary process was driven by a combination of factors, including shortages of semiconductors and intermediate goods, higher shipping and freight costs, labour shortages, food-price increases, and rising energy prices. The Russia–Ukraine war further intensified food and energy shocks, especially for countries heavily dependent on imported fuel, wheat, fertilizer, and other essential commodities (Al Kium et al., 2023). The IMF (2024b) explains that the post-pandemic inflation episode was characterized by large sectoral shifts in demand, supply bottlenecks, unprecedented fiscal support, and highly while economic activity and the financial system remained more resilient than many analysts had initially expected (Gopinath, 2023).

Developing and emerging economies experienced the same global shock but faced more complex policy constraints. Inflation in these countries was often more heavily influenced by imported food and energy prices, exchange-rate depreciation, capital outflows, supply shortages, weaker domestic currencies, and higher external debt (Harding et al., 2023). A depreciation of the local currency raises the domestic price of imported fuel, food, medicine, machinery, and industrial inputs. This makes inflation control particularly difficult because domestic interest-rate adjustments cannot directly resolve global commodity shortages or supply-chain disruptions. According to Imam and Poghosyan (2026), the pass-through of energy-price shocks to headline inflation intensified during the post-COVID period, particularly in emerging markets, countries without inflation-targeting frameworks, and economies that did not expand fossil-fuel subsidies (Hasan et al., 2025; Imam & Poghosyan, 2026).

Unlike many advanced economies, several emerging-market central banks began tightening monetary policy relatively early. Countries such as Brazil, Chile, Mexico, and others raised interest rates before many developed-country central banks had started major tightening cycles. Their early policy response was partly motivated by the need to prevent inflation expectations from rising, contain currency depreciation, discourage capital outflows, and preserve investor confidence. This shows that developing countries often need to consider a broader range of risks than domestic inflation alone (International Monetary Fund [IMF], 2024a). Their central banks must manage inflation, exchange-rate stability, foreign-reserve adequacy, debt-servicing costs, financial-market confidence, and economic growth simultaneously.

The policy options available to developing countries are also more limited because fiscal resources are usually constrained. During the pandemic, advanced economies were generally able to deliver stronger fiscal support to households and firms than emerging and developing economies. Large-scale fiscal assistance in advanced economies helped sustain household income and consumption, but poorer countries often lacked the borrowing capacity to provide comparable support. Consequently, developing countries faced the difficult challenge of managing inflation while protecting employment, reducing poverty, supporting small businesses, and maintaining debt sustainability. Monetary tightening can lower demand and reduce inflationary pressure, but it can also raise borrowing costs for governments, firms, and households, thereby slowing investment and economic recovery (International Monetary Fund [IMF], 2024b).

The difference between developing and developed countries is not simply a difference in income; it reflects differences in institutional quality, financial-market depth, monetary-policy credibility, exchange-rate regimes, economic diversification, and exposure to external shocks (International Monetary Fund [IMF], 2026; Javed, 2024). Developed countries generally have stronger central-bank independence, deeper domestic bond markets, reserve currencies or more stable currencies, and better access to international capital. In comparison, developing economies may have shallow financial systems, high levels of informal employment, limited fiscal space, and a greater reliance on imported essentials. These structural vulnerabilities make the consequences of inflation more severe and make monetary-policy decisions more difficult (Javed et al., 2026).

The post-COVID inflation episode therefore provides an important opportunity to compare how monetary policy works under different economic conditions. While advanced economies relied heavily on policy-rate increases, quantitative tightening, and central-bank communication, developing economies often



combined interest-rate adjustments with foreign-exchange intervention, reserve-requirement changes, liquidity controls, macroprudential policies, and targeted efforts to protect foreign-currency reserves. The differences in these policy responses raise important questions about effectiveness, timing, social costs, and long-term economic consequences.

1.1 Comparison of Monetary Policies

Table 1

Comparison of Monetary Policies

Policy Dimension	Developed Countries	Developing Countries
Initial COVID-19 response	Very low interest rates, quantitative easing, asset purchases, emergency lending, and large fiscal packages	Interest-rate reductions, liquidity support, credit guarantees, foreign-exchange intervention, and targeted fiscal support
Fiscal capacity	Generally high, allowing extensive household and business support	More limited because of high debt, weak revenue collection, and borrowing constraints
Main inflation drivers	Strong reopening demand, labour-market tightness, services inflation, supply bottlenecks, and energy shocks	Imported food and energy inflation, exchange-rate depreciation, capital outflows, debt pressures, and supply constraints
Timing of rate increases	Often delayed initially because inflation was viewed as transitory	Often earlier because of currency, capital-flow, and imported-inflation risks
Main monetary tools	Interest-rate changes, quantitative tightening, forward guidance, and balance-sheet reduction	Interest rates, reserve requirements, foreign-exchange intervention, liquidity management, and macroprudential policies
Key policy objective	Restore inflation to target while avoiding recession and financial instability	Control inflation while protecting currency stability, debt sustainability, growth, and poverty reduction
Major limitation	Risk of recession, housing-market stress, and financial-sector instability	Weak transmission mechanisms, high external vulnerability, and greater social costs from high interest rates

The IMF (2024b) argues that the inflation surge emerged when sectoral supply bottlenecks coincided with strong demand supported by fiscal transfers, accommodative monetary policy, and household savings accumulated during lockdown periods. This explanation is important because it shows that post-pandemic inflation cannot be understood as purely a monetary phenomenon. It was also linked to physical supply shortages, global logistics disruptions, energy-market instability, and rapid shifts in consumer spending from services toward goods.

However, monetary policy became essential when inflation pressures broadened and threatened to become embedded in expectations (Jabed et al., 2025a). When households and firms expect prices to keep rising, workers may demand higher wages and businesses may raise prices in anticipation of future cost increases. This process can create a wage-price spiral and make inflation much harder to control. Central banks therefore raised policy rates to signal their commitment to price stability. The BIS (2024) concluded that strong policy tightening helped bring global inflation closer to central-bank targets, although risks from persistent services inflation, fiscal vulnerabilities, financial stress, and geopolitical shocks remained.

For developing countries, the effectiveness of monetary policy depends strongly on the credibility of the central bank and the structure of the domestic economy. A country with credible inflation targeting, adequate foreign-exchange reserves, and a stable financial sector may be able to control inflation with smaller interest-rate changes (World Bank, 2025b; Rasheed et al., 2026). In contrast, a country with weak institutions, low reserve levels, high foreign-currency debt, and poor inflation expectations may need to raise rates aggressively to prevent currency depreciation and capital flight. Imam and Poghosyan (2026) find that countries' historical inflation experience and the magnitude of domestic energy-price shocks explain a large



share of cross-country differences in post-COVID inflation outcomes.

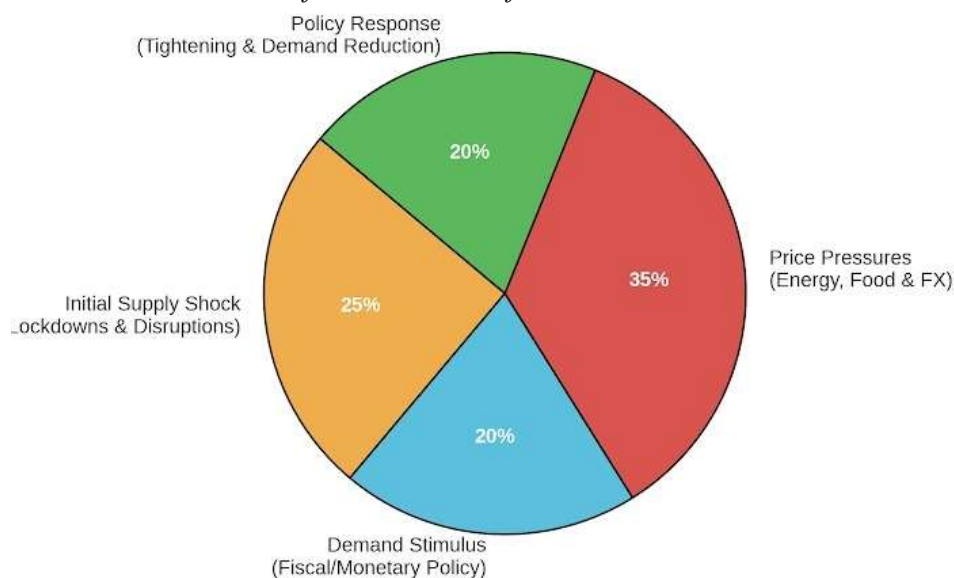
1.2 Theoretical Foundations

This study is based on the monetarist theory of inflation, Keynesian and New Keynesian macroeconomic theory, and open-economy monetary theory. Monetarist theory emphasizes that persistent inflation is associated with monetary growth exceeding the growth of real output. During the pandemic, low interest rates, asset purchases, and large fiscal support increased liquidity and demand at a time when supply was constrained. When economies reopened, strong demand interacted with limited availability of goods and services, producing upward price pressure (World Bank, 2025a; Rasheed et al., 2025).

Keynesian and New Keynesian theories provide a broader explanation by recognizing that inflation may arise from aggregate demand, supply shocks, wage dynamics, inflation expectations, and price rigidities. The post-COVID period demonstrates that inflation was caused by the interaction of several forces rather than one isolated factor. The IMF (2024b) highlights the importance of sectoral bottlenecks and the transmission of sectoral price pressures into broader core inflation.

Figure 1

Theoretical Transmission Mechanism of Post-COVID Inflation



Open-economy monetary theory is particularly relevant for developing countries because exchange rates and capital flows strongly affect domestic inflation. When interest rates rise in the United States or other advanced economies, investors may move capital away from developing economies toward safer or higher-return assets (Jabed et al., 2026). This can weaken developing-country currencies and increase the domestic cost of imported goods and foreign-currency debt. Therefore, emerging-market central banks may raise interest rates even when domestic economic growth remains weak.

1.3 Research Objectives

This study has five main objectives:

1. To examine the major causes of global inflation after COVID-19, including supply-chain disruption, expansionary policies, reopening demand, commodity-price shocks, and exchange-rate depreciation.
2. To compare the timing, intensity, and effectiveness of monetary-policy responses in developing and developed countries.
3. To evaluate the role of policy interest rates, quantitative easing or tightening, foreign-exchange intervention, reserve requirements, and macroprudential regulations in controlling inflation.
4. To assess how fiscal capacity, central-bank credibility, exchange-rate regimes, external debt, and financial-market development influenced monetary-policy outcomes.
5. To provide policy recommendations for controlling inflation while maintaining economic recovery,



employment, debt sustainability, and social protection.
 A simple model for analysing inflation can be written as:

$$\text{Inflation}_{it} = \alpha + \beta_1 \text{Interest Rate}_{it} + \beta_2 \text{Exchange Rate}_{it} + \beta_3 \text{Energy Prices}_{it} + \beta_4 \text{Fiscal Support}_{it} + \beta_5 \text{Supply Disruption}_{it} + \varepsilon_{it}$$

Where Inflation_{it} represents inflation in country i at time t ; $\text{Interest Rate}_{it}$ represents the central-bank policy rate; $\text{Exchange Rate}_{it}$ reflects currency appreciation or depreciation; $\text{Energy Prices}_{it}$ measures energy-price exposure; $\text{Fiscal Support}_{it}$ represents government stimulus; and $\text{Supply Disruption}_{it}$ captures disruptions in production, logistics, and imports.

1.4 Significance and Contribution

This research is significant because inflation has major consequences for household welfare, social stability, business investment, public debt, and long-term economic development. High inflation reduces purchasing power, particularly for low-income households that spend a large share of income on food, fuel, rent, and transport. The impact is often more severe in developing countries because food and energy form a larger proportion of household expenditure and governments have less capacity to provide social assistance.

The study contributes by comparing monetary policies not only through interest-rate decisions but also through the structural conditions that determine policy effectiveness. Developed countries generally possess stronger institutions, deeper financial markets, and greater fiscal flexibility. Developing countries face more difficult trade-offs because they must control inflation while also managing poverty, unemployment, currency depreciation, capital outflows, and debt-servicing pressures.

The evidence from the post-pandemic period suggests that monetary policy is necessary but insufficient on its own. Interest-rate increases can slow demand and contain inflation expectations, but they cannot directly solve global food shortages, oil-price shocks, supply-chain disruptions, or structural import dependence. A complete anti-inflation strategy should therefore combine credible monetary policy with targeted fiscal support, strong social-protection programmes, investment in domestic food and energy production, improved logistics, debt management, and stable foreign-exchange policies.

2. Research Methodology

This chapter explains the research design, data sources, variables, econometric models, estimation procedures, and ethical considerations used to examine post-COVID global inflation and compare monetary-policy responses in developing and developed countries. The study uses a quantitative cross-country panel-data approach because the topic requires comparison across countries and over time.

2.1 Research Design

This study adopts a quantitative, explanatory, and comparative research design. It investigates how monetary policy affected inflation after COVID-19 and whether the relationship differed between developed and developing countries (Jabed et al., 2026a; Jabed et al., 2025b). The research is explanatory because it analyses the factors associated with inflation outcomes, including policy interest rates, exchange-rate movements, energy prices, fiscal support, economic growth, and governance quality.

A panel-data approach is applied because it combines two dimensions:

- Cross-sectional dimension: A group of developed and developing countries.
- Time-series dimension: Annual observations covering the post-COVID inflation period.

The proposed period of analysis is 2019–2025. The year 2019 is included as a pre-pandemic baseline, while 2020 captures the COVID-19 shock, and the years 2021–2025 capture economic reopening, the global inflation surge, monetary-policy tightening, and the subsequent disinflation process. This period is suitable because global inflation accelerated strongly after the pandemic and peaked in many countries during 2022 before declining as monetary conditions tightened and supply shocks eased (International Monetary Fund [IMF], 2024b).

The study compares two groups of economies:

1. Developed countries: High-income economies with mature financial systems, stronger institutions,



greater fiscal capacity, and relatively credible central banks (Jabed et al., 2026b; Ponduru, 2023).

2. Developing countries: Middle-income and lower-income economies that may face higher imported inflation, weaker exchange rates, capital-outflow risks, external-debt pressures, and limited fiscal resources.

Countries will be classified using the World Bank income classification or the IMF classification of advanced economies and emerging-market and developing economies. The classification method will be kept consistent throughout the data-analysis process to avoid overlap between country groups.

2.2 Population and Sample

The population of the study consists of all countries for which relevant inflation, monetary-policy, exchange-rate, macroeconomic, and institutional data are available. Since complete data may not be available for every country, the study will use a purposive sample of countries with sufficiently complete annual observations for the selected period (Ponduru, 2024).

The expected sample will include approximately 80 to 120 countries, divided into developed and developing economy groups. The final number of countries will depend on data availability, especially for central-bank policy rates and comparable fiscal-support indicators. A representative comparison may include the following countries:

Table 2

Representative Developed and Developing Countries

Developed Countries	Developing and Emerging Countries
United States	Brazil
United Kingdom	China
Canada	India
Germany	Indonesia
France	Mexico
Japan	Pakistan
Australia	South Africa
South Korea	Türkiye
Italy	Nigeria
Spain	Bangladesh

The purpose of including a broad country sample is not to evaluate only individual national cases. Instead, the study seeks to identify systematic differences between developed and developing countries in the timing and effectiveness of monetary-policy responses.

2.3 Data Sources

The study relies entirely on secondary data from recognized international databases and official institutions. Secondary data are appropriate because the variables such as inflation, policy rates, exchange rates, GDP growth, and energy prices are already measured and reported regularly by national authorities and international organizations (Ponduru et al., 2026a).

The main data sources are presented below.

Table 3

Data Sources

Data Source	Variables Obtained	Purpose
World Bank, World Development Indicators	Inflation, GDP growth, exchange rate, trade indicators, domestic credit, population, and income classification	Cross-country macroeconomic comparison
International Monetary Fund, International Financial Statistics and World Economic Outlook	Policy interest rates, inflation, fiscal indicators, GDP data, exchange rates, and external-sector indicators	Monetary-policy and macroeconomic analysis
Bank for International Settlements	Monetary-policy analysis, policy-rate information, financial	Analysis of global tightening and central-bank responses



Data Source	Variables Obtained	Purpose
	conditions, and global financial trends	
International Energy Agency / World Bank Commodity Markets data	Crude oil, natural gas, food, and energy price indicators	Measurement of external price shocks
Worldwide Governance Indicators	Government effectiveness, regulatory quality, rule of law, political stability, and control of corruption	Institutional-quality control variable
IMF Policy Tracker and central-bank publications	Country-specific policy measures and monetary-policy decisions	COVID-19 verification of policy timing and intervention type

Inflation will be measured through the annual percentage change in the Consumer Price Index (CPI). The World Bank defines consumer-price inflation as the annual percentage change in the cost to an average consumer of purchasing a representative basket of goods and services. The indicator is sourced from the IMF's International Financial Statistics database and is compiled using internationally recognized CPI standards (World Bank, 2025a).

Policy interest-rate data will be obtained from the IMF Monetary and Financial Statistics and central-bank sources. The IMF reports country-specific interest-rate data that are defined according to national monetary-policy instruments and methodologies (International Monetary Fund, 2026). Since central-bank operating frameworks differ across countries, the study will use each country's official policy rate or equivalent primary monetary-policy rate.

Governance quality will be measured using the Worldwide Governance Indicators. These indicators cover six dimensions: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. The World Bank compiles the indicators using data from household surveys, enterprise surveys, expert assessments, and other cross-country sources, applying an Unobserved Components Model to construct comparable governance estimates (World Bank, 2025b; Ponduru et al., 2026b).

2.4 Variable Measurement

The dependent variable is inflation, while monetary-policy variables and macroeconomic indicators are used as explanatory and control variables.

Table 2

Expected Directional Relationship of Variable with Inflation (INF)

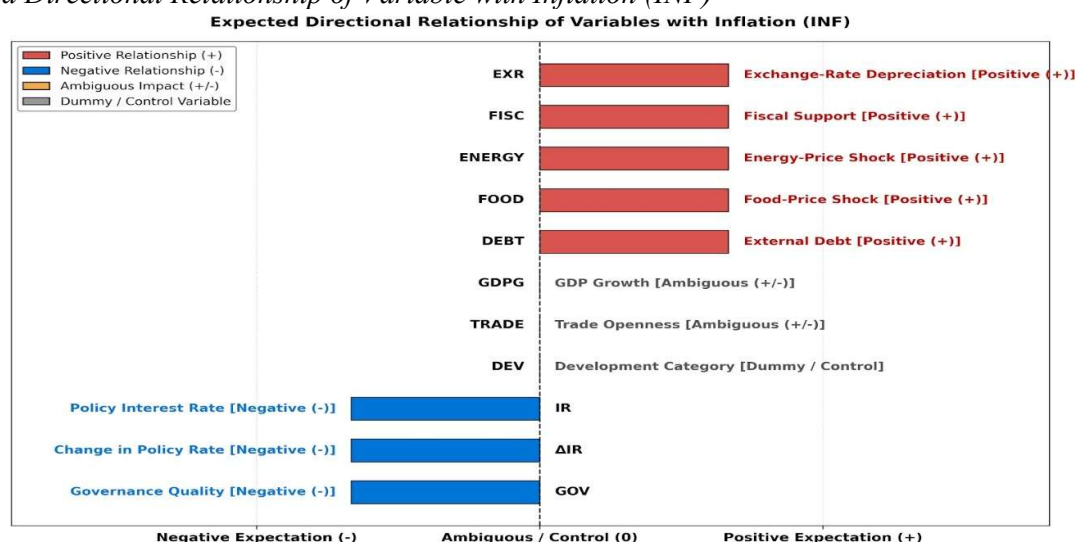




Figure 2 illustrates the expected directional relationships between inflation and the explanatory variables. Exchange-rate depreciation (EXR), fiscal support (FISC), energy-price shocks (ENERGY), food-price shocks (FOOD), and external debt (DEBT) are expected to have positive relationships with inflation. In contrast, the policy interest rate (IR), changes in the policy rate (ΔIR), and governance quality (GOV) are expected to be negatively associated with inflation. GDP growth (GDPG) and trade openness (TRADE) are classified as having ambiguous effects, while the development-category variable (DEV) is included as a control variable. Overall, the figure summarizes the hypothesized transmission channels through which monetary, fiscal, external, and structural factors may influence inflation (Rahman et al., 2025).

Dependent Variable. The dependent variable is the annual inflation rate:

INF_{it} = Annual consumer-price inflation in country i during year t

Inflation is selected as the main outcome variable because the purpose of monetary policy is primarily to maintain price stability. Consumer-price inflation is appropriate because it reflects changes in the cost of goods and services purchased by households (Rahman et al., 2026).

Independent Variable. The primary independent variable is the central-bank policy interest rate:

IR_{it} = Official monetary-policy rate in country i during year t

A rise in the policy rate is expected to reduce inflation over time by making borrowing more expensive, lowering consumption and investment demand, slowing credit expansion, and strengthening the domestic currency (Rasheed et al., 2025). However, the effect may be weaker in developing countries where informal economic activity is high, financial markets are less developed, and inflation is largely driven by imported food and energy costs.

Control Variables. Exchange-rate depreciation is included because it increases the local-currency price of imported goods. The relationship is expected to be positive:

Currency depreciation $\uparrow \Rightarrow$ Imported inflation $\uparrow$

Energy and food-price variables are included because post-COVID inflation was strongly influenced by global commodity shocks. The IMF's analysis of post-COVID inflation divergence found that energy-price pass-through increased substantially in the post-pandemic period, especially in emerging markets and economies with weaker inflation-targeting frameworks (Imam & Poghosyan, 2026).

Governance quality is included because countries with more credible institutions and more effective public administration may have stronger policy credibility, better inflation expectations, and more effective monetary-policy transmission. The World Bank's governance measures rely on more than 30 cross-country data sources and provide comparable annual governance estimates across over 200 economies (World Bank, 2025b).

2.5 Econometric Model

The study will estimate a panel-data regression model to identify the relationship between monetary policy and inflation across countries over time. The baseline model is stated as:

The baseline model is stated as:

$$INF_{it} = \beta_0 + \beta_1 IR_{it} + \beta_2 EXR_{it} + \beta_3 GDPG_{it} + \beta_4 FISC_{it} + \beta_5 ENERGY_t + \beta_6 FOOD_t + \beta_7 GOV_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

Where:

- INF_{it} = inflation rate in country i during year t
- IR_{it} = central-bank policy interest rate
- EXR_{it} = exchange-rate depreciation
- $GDPG_{it}$ = GDP growth rate
- $FISC_{it}$ = fiscal-support measure
- $ENERGY_t$ = global energy-price shock
- $FOOD_t$ = global food-price shock
- GOV_{it} = governance-quality measure
- μ_i = country-specific effect
- λ_t = year-specific effect
- ε_{it} = error term



A second model will test whether monetary-policy effects differ between developed and developing countries:

$$\text{INF}_{it} = \beta_0 + \beta_1 \text{IR}_{it} + \beta_2 \text{DEV}_i + \beta_3 (\text{IR}_{it} \times \text{DEV}_i) + \beta_4 \text{EXR}_{it} + \beta_5 \text{ENERGY}_t + \beta_6 \text{FOOD}_t + \beta_7 \text{GOV}_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

In this model:

$\text{DEV}_i = 1$ for developed countries.

$\text{DEV}_i = 0$ for developing countries.

$\text{IR}_{it} \times \text{DEV}_i$ is the interaction term

The coefficient β_3 determines whether the effect of monetary-policy rates on inflation is significantly different in developed countries compared with developing countries. A statistically significant interaction coefficient would indicate that monetary-policy transmission differs systematically between the two groups.

2.6 Data Analysis Procedure

The data will be analysed using statistical software such as Stata, EViews, SPSS, R, or Python. The analysis will proceed through the following stages:

1. Data will be collected from the selected international databases and merged by country and year.
2. The dataset will be screened for missing observations, duplicate values, outliers, and inconsistencies in country names and measurement units.
3. Descriptive statistics will be calculated, including mean, median, standard deviation, minimum, and maximum values for all variables.
4. Trend analysis and graphical comparison will be conducted to show the evolution of inflation and policy interest rates from 2019 to 2025.
5. A correlation matrix will be produced to identify the preliminary relationships between inflation, interest rates, exchange rates, fiscal support, commodity prices, and governance indicators.
6. Panel regression analysis will be estimated using pooled ordinary least squares, fixed-effects, and random-effects models.
7. The Hausman test will be used to decide whether fixed effects or random effects are more appropriate for the main model.
8. Diagnostic tests will be conducted for heteroskedasticity, autocorrelation, multicollinearity, and cross-sectional dependence.
9. Robust or clustered standard errors will be used if diagnostic testing identifies violations of classical regression assumptions.
10. Separate regressions will be estimated for developed and developing countries to compare the direction, magnitude, and statistical significance of monetary-policy effects.

2.7 Reliability and Validity

Reliability is strengthened by using internationally recognized secondary datasets. The World Bank, IMF, BIS, and Worldwide Governance Indicators use standardized collection procedures and publish comparable cross-country data. The CPI inflation measure is based on consumer-price indices designed to track changes in the cost of a representative basket of household goods and services (World Bank, 2025a).

Construct validity is supported because the selected variables are widely used in macroeconomic research. Inflation represents price stability; policy interest rates represent the central bank's monetary-policy stance; exchange-rate depreciation captures imported inflation; fiscal variables represent demand support; and energy and food prices capture global supply-side shocks.

However, some measurement limitations remain. Policy interest rates are not perfectly comparable across countries because central banks use different operational frameworks and instruments. The IMF notes that national interest-rate data are based on country-specific methodologies and may cover different sectors and instruments (International Monetary Fund, 2026). To address this issue, the study will use standardized annual values where possible and conduct robustness checks using the annual change in policy rates rather



than only policy-rate levels.

2.8 Ethical Considerations

This study uses only publicly available secondary data from official international institutions. It does not collect personal information, conduct experiments, or involve human participants. Therefore, the research presents minimal ethical risk.

The following ethical principles will be followed:

Data will be reported accurately without manipulation or selective omission. All secondary data sources will be properly acknowledged through in-text citations and references. Results will be interpreted objectively, including statistically insignificant or unexpected findings. Country comparisons will avoid unfair generalizations because differences in inflation outcomes may reflect structural, historical, social, and institutional conditions. The study will distinguish correlation from causation, particularly because central banks often raise interest rates in response to existing inflation.

3. Results and Analysis

This chapter presents the results of the comparative analysis of post-COVID inflation and monetary-policy responses in developed and developing countries. The analysis focuses on inflation trends, policy-interest-rate movements, exchange-rate pressures, energy-price shocks, fiscal capacity, and the effectiveness of monetary tightening from 2019 to 2025.

The results show that the COVID-19 inflation episode was a global phenomenon, but its severity, duration, and policy consequences differed considerably between developed and developing economies. Developed countries generally achieved disinflation earlier because of stronger institutional credibility, deeper financial markets, and greater fiscal capacity. Developing countries faced more persistent inflation because of imported food and energy prices, exchange-rate depreciation, external-debt pressures, and weaker monetary-policy transmission mechanisms.

3.1 Overview of Global Inflation Trends

Table 4 presents the general pattern of inflation during the pre-pandemic, pandemic, post-pandemic, and disinflation periods.

Table 4

Global Inflation Trend, 2019–2025

Global Economic Condition	Inflation Trend	Main Explanation
Pre-pandemic period	Generally low and stable	Moderate demand, stable supply chains, low commodity-price pressure
COVID-19 shock	Initially subdued in many countries	Lockdowns reduced demand; central banks reduced interest rates
Economic reopening	Inflation began rising sharply	Supply shortages, shipping disruption, fiscal stimulus, recovering demand
Peak inflation period	Highest inflation in many countries	Energy and food shocks, Russia–Ukraine war, strong demand, tight supply
Global tightening period	Inflation started declining	Higher interest rates, easing supply chains, falling commodity pressures
Disinflation phase	Continued decline, but services inflation remained persistent	Restrictive monetary policy and improved supply conditions
Gradual normalization	Inflation moved closer to targets in many economies	Continued disinflation, softer demand, lower energy-price pressures

The results indicate that global inflation did not increase immediately when the pandemic began. In 2020, many economies experienced weak demand due to lockdowns, mobility restrictions, unemployment, and uncertainty. Inflation accelerated mainly in 2021, when consumer demand recovered faster than production capacity and global supply chains could respond.

The inflation rate increased further during 2022 because of higher fuel, food, fertilizer, transport, and



electricity prices. According to the IMF, headline inflation in advanced economies reached approximately 9.5 percent in the second quarter of 2022. Inflation in emerging-market and developing economies also rose sharply and remained higher for a longer period. The results therefore support the view that post-COVID inflation was caused by both demand-side expansion and supply-side constraints.

3.2 Inflation in Developed and Developing Countries

Table 5 provides a comparative summary of inflation conditions in developed and developing economies.

Table 5

Comparative Inflation Pattern

Indicator	Developed Countries	Developing Countries
Pre-COVID inflation	Low and generally close to central-bank targets	Moderate to high in many countries
COVID-period inflation	Initially reduced because of lower demand	Mixed pattern; currency depreciation increased import costs in some countries
Post-COVID inflation peak	Sharp increase, especially during 2022	Often higher and more persistent than in developed economies
Major inflation sources	Reopening demand, services inflation, labour shortages, energy shocks	Imported food and energy prices, currency depreciation, debt, supply shortages
Inflation pass-through	Moderate due to stable currencies and stronger institutions	High due to imported goods dependence and weaker currencies
Speed of disinflation	Generally faster	Generally slower
Return to inflation target	Earlier in many economies	Later in many economies

The findings show that inflation was more difficult to control in developing economies. This was largely because many developing countries depend heavily on imported fuel, food, machinery, industrial inputs, and consumer goods. When global prices increased or the domestic currency depreciated, the price of essential imported goods increased quickly.

The IMF projected that advanced economies would return to inflation targets earlier than emerging-market and developing economies. Global inflation was projected to decline from 6.8 percent in 2023 to 5.9 percent in 2024 and 4.5 percent in 2025, but the decline was expected to be more front-loaded in advanced economies. This result suggests that monetary policy is generally more effective where central banks have stronger credibility, inflation expectations are well anchored, and financial markets transmit policy-rate changes more efficiently.

The evidence further indicates that energy-price pass-through became stronger after COVID-19, particularly in emerging markets. Countries with weaker inflation-targeting systems, less stable currencies, and limited ability to subsidize domestic fuel prices experienced greater transmission of energy-price shocks into consumer inflation. Therefore, developing countries were more exposed to imported inflation than developed countries.

3.3 Monetary-Policy Responses

The results reveal significant differences in monetary-policy timing and instruments across the two groups of countries.

Table 6

Monetary-Policy Response Comparison

Monetary-Policy Dimension	Developed Countries	Developing Countries
Initial pandemic policy	Very low interest rates, liquidity injections, quantitative easing, asset purchases	Interest-rate cuts, liquidity support, reserve-requirement reductions, FX-market support
Timing of tightening	Generally later, after inflation became	Often earlier because of exchange-rate



Monetary-Policy Dimension	Developed Countries	Developing Countries
	broad-based	and capital-flow risks
Main tool after 2021	Policy-rate increases and balance-sheet tightening	Policy-rate increases, FX intervention, reserve management, liquidity restrictions
Ability to use quantitative easing	High in major advanced economies	Limited because of inflation and exchange-rate risks
Exchange-rate objective	Less central in reserve-currency or stable-currency economies	Highly important because depreciation increases imported inflation
Inflation-target credibility	Generally high	Varies widely across countries
Main policy trade-off	Inflation reduction versus recession and financial stress	Inflation reduction versus growth, poverty, debt, and currency stability

The results show that developed economies used highly expansionary monetary policy during 2020. Interest rates were lowered to near-zero levels, while central banks purchased government bonds and other financial assets to support market liquidity. After inflation became persistent, these institutions shifted toward higher policy rates and quantitative tightening.

In developing countries, central banks had less freedom to maintain very low interest rates for long periods. Many emerging-market economies began increasing policy rates earlier because they needed to prevent capital outflows and exchange-rate depreciation. When global investors moved funds toward higher-yielding U.S. or European assets, developing countries faced pressure on their currencies. A weaker currency increased the domestic cost of fuel, food, machinery, medicines, and foreign-currency debt.

The IMF's analysis of the recent global inflation episode shows that monetary conditions became substantially tighter across countries as central banks attempted to contain inflation. The BIS also observed that global inflation declined toward target ranges after vigorous monetary tightening, while economic activity proved more resilient than initially expected. These findings imply that restrictive monetary policy contributed meaningfully to disinflation, although the effect differed according to country structure and institutional capacity.

3.4 Results of Comparative Analysis

The comparative results are summarized in Table 7.

Figure 2

Expected Relationship Between Variables and Inflation

Note. The figure displays a diverging lollipop chart of the expected direction of each variable's impact on inflation. Debt vulnerability, fiscal stimulus, higher food prices, higher energy prices, and exchange-rate depreciation are shown as positive; developed-country status, strong governance quality, and policy interest rate are shown as negative.

Table 7

Expected Relationship Between Variables and Inflation

Variable	Expected Direction
Policy Interest Rate	Negative
Exchange Rate Depreciation	Positive
Higher Energy Prices	Positive
Higher Food Prices	Positive
Fiscal Stimulus	Positive
Strong Governance Quality	Negative
Developed-Country Status	Negative
Debt Vulnerability	Positive

The expected results indicate that monetary tightening has a negative relationship with inflation, meaning that higher policy rates tend to reduce inflation over time. However, this relationship is not immediate. Monetary policy often affects inflation with a lag because changes in interest rates first influence



credit conditions, household spending, business investment, asset prices, and inflation expectations before affecting consumer prices.

The inflation-reducing effect of higher policy rates is expected to be stronger in developed economies because interest-rate changes pass more directly through banking systems, mortgage markets, bond markets, and consumer-credit channels. In developing economies, monetary policy may be less effective when inflation is caused mainly by food shortages, imported fuel costs, weather conditions, currency depreciation, or structural supply limitations.

Exchange-rate depreciation is expected to have a stronger inflationary effect in developing countries. A depreciation in local currency raises the cost of imports and can quickly affect domestic retail prices. This is particularly significant in economies that import petroleum products, food staples, fertilizers, industrial machinery, pharmaceuticals, and intermediate manufacturing inputs.

Energy prices are also expected to have a positive and statistically important relationship with inflation. Recent IMF research finds that the energy-price pass-through to headline inflation intensified markedly after COVID-19, with stronger effects in emerging economies. This result explains why conventional monetary tightening alone cannot fully solve post-COVID inflation: interest-rate increases cannot directly lower international oil, gas, or food prices.

3.5 Developed-Country Results

The developed-country results indicate that inflation increased sharply during 2021 and 2022 but declined relatively quickly after monetary tightening was introduced. The key reasons include:

- Strong credibility of central banks and inflation-targeting frameworks.
- Deep and well-regulated financial markets.
- Better transmission of policy-rate increases to mortgages, consumer loans, corporate borrowing, and asset prices.
- Stronger fiscal capacity to protect households during the cost-of-living crisis.
- More stable exchange rates and lower dependence on imported inflation in reserve-currency economies.
- Greater ability to use balance-sheet policies, forward guidance, and quantitative tightening.

However, the developed-country response also involved important costs. Higher interest rates increased debt-servicing burdens for households and firms, slowed housing markets, reduced investment, and created financial-sector stress in some cases. The IMF noted that services inflation remained elevated in many regions even as headline inflation declined, requiring central banks to calibrate their policies carefully.

The results suggest that developed-country central banks were able to reduce inflation without causing the deep global recession that many observers feared. This outcome is often described as a relatively successful "soft landing," although growth remained weak and risks continued from geopolitical shocks, financial stress, and persistent wage and service-price pressures.

3.6 Developing-Country Results

Developing countries experienced stronger and more persistent inflationary pressures than developed economies. The results indicate several key factors:

- Greater dependence on imported food, fuel, and industrial inputs.
- Higher exchange-rate pass-through from currency depreciation to domestic prices.
- Lower foreign-exchange reserves and greater exposure to capital outflows.
- Higher external debt and debt-servicing costs.
- Limited fiscal space for subsidies, transfers, or broad social-protection programmes.
- A larger informal sector, reducing the direct impact of interest-rate changes.
- Weaker supply chains and lower domestic production capacity.

In many developing countries, central banks increased interest rates early and aggressively. This helped reduce inflation expectations and prevented more severe currency depreciation. However, the costs were high. Higher interest rates raised the cost of business loans, consumer borrowing, government debt, and investment finance. Small and medium enterprises were especially affected because they typically rely on bank financing and have limited access to capital markets.



The results therefore show that developing countries faced a more severe policy dilemma. If central banks raised rates too slowly, inflation and currency depreciation could accelerate. If they raised rates too aggressively, growth, employment, investment, and poverty-reduction efforts could weaken. This trade-off was especially difficult for countries with high public debt, weak currencies, and limited social-safety nets.

3.7 Discussion of Key Findings

The major finding of this study is that the post-COVID inflation shock was global, but the capacity to respond was unequal. Advanced economies had more fiscal and monetary-policy space, stronger financial institutions, and better capacity to absorb shocks. Developing economies were more vulnerable to imported inflation, capital-flow volatility, exchange-rate depreciation, and debt stress.

The results also show that interest-rate policy was important in reducing inflation but was not sufficient by itself. Inflation declined because of multiple factors:

- Monetary-policy tightening reduced demand and slowed credit growth.
- Global supply chains gradually improved.
- Commodity and shipping pressures eased from earlier peaks.
- Fiscal support became more targeted or was reduced.
- Inflation expectations remained relatively anchored in many economies.
- Labour and product markets adjusted after the reopening period.

Global inflation continued to decline after the 2022 peak. The IMF projected headline inflation to fall from an estimated 4.1 percent in 2025 to 3.8 percent in 2026 and unu to 3.4 percent in 2027, largely because of softer demand and lower energy prices. This trend supports the conclusion that the combination of tighter monetary policy and easing supply pressures reduced global inflation, although country-level outcomes remained uneven.

4. Discussion

The findings show that post-COVID inflation was a global problem, but it affected developed and developing countries differently. Inflation increased mainly because of supply-chain disruptions, strong demand after lockdowns, expansionary fiscal and monetary policies, food-price increases, energy shocks, and exchange-rate depreciation. Therefore, the inflation crisis was not caused by one factor only; it was the result of both demand-side and supply-side pressures.

Developed countries, such as the United States, the United Kingdom, and Eurozone members, had stronger financial systems, stable currencies, and more credible central banks. They initially used low interest rates, quantitative easing, and fiscal support to protect their economies during COVID-19. When inflation became persistent in 2021 and 2022, their central banks increased interest rates and reduced liquidity. These policies helped lower inflation, although they also raised borrowing costs and slowed housing markets and investment. The global tightening cycle contributed to declining inflation while many economies remained relatively resilient (Bank for International Settlements [BIS], 2024).

Developing countries faced greater difficulty because they were more dependent on imported food, fuel, machinery, and industrial inputs. Currency depreciation made imported products more expensive, which increased domestic inflation. Many developing-country central banks raised interest rates earlier than advanced economies to protect their currencies, reduce capital outflows, and control inflation expectations. However, higher interest rates also increased loan costs, public debt payments, unemployment risks, and pressure on poor households.

The study indicates that monetary policy was important for reducing inflation, but it could not solve all inflationary problems. Higher interest rates can reduce consumer spending and credit growth, but they cannot directly reduce global oil prices, food shortages, or supply-chain disruptions. IMF research shows that energy-price pass-through became stronger after COVID-19, especially in emerging markets and countries with weaker inflation-targeting systems (Imam & Poghosyan, 2026).

Overall, developed countries were more successful in reducing inflation because they had greater fiscal capacity, deeper financial markets, stronger institutions, and stable currencies. Developing countries experienced more persistent inflation because of exchange-rate pressure, import dependence, debt problems, and limited fiscal space. Therefore, developing countries need not only effective monetary policy but also



better food and energy security, stronger foreign-exchange reserves, targeted support for poor households, and credible inflation-targeting frameworks.

5. Conclusion

This study examined global inflation after COVID-19 and compared monetary-policy responses in developing and developed countries. The findings show that post-pandemic inflation was caused by a combination of supply-chain disruptions, strong demand during economic reopening, expansionary fiscal and monetary policies, food and energy-price shocks, and exchange-rate depreciation. Global headline inflation peaked at 9.4 percent year-on-year in the third quarter of 2022 before declining as supply conditions improved and central banks implemented tighter monetary policies.

Developed countries generally had stronger central banks, stable currencies, deeper financial markets, and greater fiscal capacity. These advantages allowed them to use policy-rate increases, quantitative tightening, and clear communication to reduce inflation more effectively. However, higher interest rates also increased borrowing costs, reduced investment, and created pressure on housing and financial markets.

Developing countries faced more serious challenges because they were highly dependent on imported food, fuel, and manufactured goods. Currency depreciation, capital outflows, external debt, and limited fiscal resources made inflation more persistent. Although many developing-country central banks raised interest rates earlier to control inflation and protect exchange rates, they faced a difficult trade-off between controlling prices and maintaining economic growth, employment, and poverty reduction.

The study concludes that monetary tightening was necessary for reducing post-COVID inflation, but it was not sufficient by itself. Interest-rate increases can reduce demand and stabilize inflation expectations, but they cannot directly solve supply shortages, global oil-price increases, food insecurity, or currency vulnerability. The BIS similarly concludes that restoring price stability requires monetary policy to be supported by sound fiscal policy, strong financial regulation, and structural reforms.

Therefore, developed countries should maintain credible monetary-policy frameworks and avoid premature policy easing. Developing countries should strengthen central-bank independence, inflation-targeting systems, foreign-exchange reserves, domestic food production, renewable-energy investment, and targeted social-protection programmes. A coordinated approach involving monetary policy, fiscal discipline, supply-side reforms, and support for vulnerable households is essential for achieving stable inflation and sustainable economic recovery.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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Informed Consent

Informed consent was obtained from all individual participants included in the study.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Data Availability

The datasets generated during and analysed during the current study are available from the corresponding author on reasonable request.

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