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Cost-of-Living Crises: A Cross-Country Perspective*

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Abstract

Cost-of-living crises — episodes of large increases in the relative prices of necessities accompanied by falling real wages — have become more frequent in recent years, yet their distributional consequences and the policy responses they elicit remain incompletely understood. This paper makes three contributions, with a particular focus on cross-country differences. First, we develop an algorithmic definition of cost-of-living crises and document their rising prevalence over the past two decades and their largely global origins. We show that these episodes generate a persistent rise in the relative price of necessities, a lasting decline in real wages, and a de-anchoring of inflation expectations, together with large and persistent increases in inflation inequality, especially in poorer countries. Second, we introduce a new LLM-based cross-country dataset of fiscal and regulatory policy measures deployed by governments in response to these episodes. We document substantial heterogeneity in policy mixes: advanced economies rely more on measures closer to consumers, such as VAT and excise cuts, and on targeted income support, whereas poorer countries make greater use of producer subsidies, price controls, and broad-based wage and pension increases. Third, we evaluate the tradeoffs across these instruments in a novel multi-sector international New Keynesian model with heterogeneous households, non-homothetic preferences, and input-output linkages, separately calibrated to advanced, emerging market, and low-income economies. Price-suppressing measures are a far costlier way of protecting households than targeted income support, especially in poorer countries, and their effectiveness declines further when many countries deploy them simultaneously, as reduced demand adjustment pushes up global commodity prices.

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Paper Proposal

The rising cost of living has emerged as a major concern for households across much of the world in recent years (e.g., OECD, 2023). At the heart of these concerns have been abrupt surges in the prices of basic necessities—food, transport, and housing-related expenses, including energy utilities—following major disruptions to global commodity markets, including during Russia's invasion of Ukraine in 2022 and the conflict in the Middle East in 2026.

Events marked by sudden and severe surges in the price of households' basic necessities have been relatively infrequent but not unprecedented. Because demand for these goods and services is highly inelastic, even temporary price spikes can impose substantial welfare losses when households cannot borrow or draw on liquid savings to smooth consumption. Moreover, these losses fall disproportionately on lower-income households, which devote a larger share of their spending to basic necessities and therefore face significantly stronger cost-of-living pressures during such episodes. These events also threaten macroeconomic stability and create difficult policy tradeoffs through their effects on headline inflation, inflation expectations, and economic sentiment.

As a result, these 'cost-of-living crises' are highly salient social and political events that often precipitate ad-hoc and costly policy intervention, even where fiscal space is already limited. During the cost-of-living crisis that followed Russia's invasion of Ukraine, for example, many countries complemented monetary tightening with a broad range of measures, including transfers to households, price caps, subsidies, tax cuts, and export restrictions (Sgaravatti et al., 2021; Arregui et al., 2022; Amaglobeli et al., 2023). These interventions were frequently introduced rapidly, amid mounting political pressure and protests (Hossain and Hallock, 2022), and largely consisted of broad-based and untargeted measures—at odds with standard policy recommendations (Amaglobeli et al., 2023)—with policy actions observed in 2026 pointing to a similar pattern (e.g., Dabla-Norris et al., 2026). Beyond political pressure and distributional concerns, policymakers have also justified intervention on macroeconomic grounds, arguing that sharp increases in salient prices could de-anchor inflation expectations, trigger second-round effects, and weigh on consumer sentiment (e.g., Bénassy-Quéré, 2024).

Both the consequences of cost-of-living crises and the tradeoffs they pose for policy depend heavily on a country's level of development. The budget share of necessities, the relative exposure to food versus energy shocks, the degree to which inflation expectations remain anchored, and—critically—the fiscal space and administrative capacity to reach vulnerable households all differ systematically across advanced economies, emerging markets, and low-income countries. These

differences shape not only how severe a given shock is and who bears its burden, but also which policy instruments are feasible and how effective they are once deployed.

Despite their salience, however, the literature lacks a systematic characterization of these episodes, a quantification of their distributional consequences, and a comprehensive accounting of how governments respond to them. This paper aims to fill these gaps, with a particular focus on the comparative dimension across countries: after documenting the macroeconomic and distributional stylized facts of these episodes and presenting novel evidence on how policy responses vary across country groups, we turn to a structural model calibrated separately to representative advanced, emerging market, and low-income economies to study how the effectiveness of alternative interventions varies with the stage of development.

The paper makes contributions along three dimensions. We first develop an algorithmic definition of cost-of-living crises (COLCs) and apply it to a panel of advanced and emerging market economies. We define a COLC as an episode in which the prices of necessities (food, energy, and housing) rise rapidly while real wages contract, identified through a turning-point algorithm applied to consumer price and wage data. This definition yields a dataset of episodes that, we show, has become more frequent over the past two decades. These episodes tend to be global in nature: a large fraction of the inflation of basic necessities experienced during cost-of-living crises can be accounted for by a global factor that generates common dynamics across countries.

We then document the macroeconomic and distributional consequences of COLCs. Using a local projections framework that exploits cross-country variation in episode timing, we show that COLCs generate a sharp increase in the relative inflation rate of necessities, a permanent shift in the price level, and a persistent decline in real wages. Short and long-term inflation expectations respond strongly, especially in poorer countries. We also show that COLCs generate large and persistent increases in inequality of inflation rates. Lower-income households face inflation rates that exceed those of higher-income households during a typical episode, reflecting their higher budget share of necessities and limited ability to substitute toward cheaper alternatives. These differential inflation rates are particularly pronounced in poorer countries and compound over the duration of an episode.

Our second contribution is to introduce a new cross-country dataset of fiscal and regulatory policies that governments deploy in response to COLCs. Constructed through large language model extraction from three decades of Economist Intelligence Unit country reports, validated against official sources, and cross-checked across multiple LLM passes, the dataset covers 76 countries and spans price controls, subsidies, tax cuts, cash transfers, in-kind support, regulatory interventions, and trade measures. The resulting taxonomy reveals substantial heterogeneity in policy mixes across countries and time. Advanced economies tend to rely more on measures closer to final consumers—such as temporary VAT or excise tax cuts—and on direct income support through transfers and tax measures. Emerging market and low-income countries, by contrast, rely more heavily on producer subsidies, price controls, reductions in customs duties, and broad-based increases in wages and pensions. These differences likely reflect more limited capacity to identify and reach vulnerable households through targeted transfer systems.

Our third and final contribution is to rationalize these empirical patterns and evaluate the under-

lying policy tradeoffs in a structural framework. We develop a multi-sector New Keynesian model with heterogeneous households, building on Ozhan et al. (forthcoming) and calibrated separately to representative advanced, emerging market, and low-income economies. Each region features low- and high-income households that differ in their budget shares of necessities and their access to financial markets, a production network with sectoral input–output linkages and heterogeneous price stickiness, a central bank that follows a Taylor rule but partially looks through temporary shocks to headline inflation, and a fiscal authority that can deploy the same income-supporting and price-suppressing instruments documented in the data—targeted and untargeted transfers, consumer subsidies akin to VAT or excise cuts, and producer subsidies. Cost-of-living crises are generated by transitory shocks to the global supply of energy or food. Because the framework traces how a given shock and policy response map into inflation, output, and the consumption of households across the income distribution—and evaluates lifetime welfare once the cost of the subsequent fiscal consolidation is taken into account—it clarifies why the broad, price-suppressing measures most common in poorer countries are rarely the most efficient way to protect households, and under what conditions consumer-facing or targeted instruments dominate.

The model analysis shows that broad-based price-suppressing measures are a costly and inefficient way of protecting households during cost-of-living crises. Depending on the nature of the shock, the instrument used, and the type of economy, they can cost orders of magnitude more than targeted income support. Consumer subsidies, such as temporary cuts in VAT or excise taxes on food and energy products, can alleviate tradeoffs for monetary policy in the near term by preventing an overshooting in headline inflation, and containing second-round effects when inflation expectations are poorly anchored. However, much of the benefit accrues to households that need little support, requiring a substantial fiscal effort to contain the effect on consumers. For low-income households, the short-term welfare gains from lower prices generally fail to offset the medium-term costs associated with higher public debt and subsequent fiscal adjustment. Producer subsidies are particularly inefficient because part of their benefit leaks abroad through lower export prices of downstream industries—and similar results would hold for cuts in customs duties. Moreover, the efficiency of subsidies declines significantly if many countries deploy them simultaneously, as reduced demand adjustment puts further upward pressure on global commodity prices.

Related literature. Our paper contributes to several literatures. We build on work measuring inflation inequality across the income distribution (Kaplan and Schulhofer-Wohl, 2017; Argente and Lee, 2021; Jaravel, 2026) by characterizing how such inequality evolves during identified crisis episodes rather than over the cycle. We provide systematic cross-country evidence on when and where policy tools are deployed in response to these episodes. By providing a unified definition, a new dataset of policy responses, and a model that studies policy tradeoffs we aim to give researchers and policymakers a common framework for studying these increasingly frequent episodes.

The new dataset on policy responses in response to COLCs contributes to a fast-growing literature that uses large language models to turn unstructured text into structured, cross-country records of policy actions. Methodologically we are closest to Das et al. (2026), who build a global quarterly

narrative database of discretionary government spending shocks and to Sun et al. (2025), who apply LLMs to the IMF's AREAER to construct an event-level dataset of capital control measures. Parallel efforts apply LLMs to construct monetary policy shocks (e.g., Aruoba and Drechsel, 2024; Betz et al., 2026), central bank communications (e.g., Silva et al., 2025), and to geoeconomic instruments such as tariffs and export controls (Clayton et al., 2025). We share with these papers the LLM-based methodology but differ in domain: we target policy responses to cost-of-living crises specifically, a domain that existing hand-curated trackers cover only partially and mostly for advanced economies (e.g., Sgaravatti, 2021; Arregui et al., 2022; Amaglobeli et al., 2023).

One of the main contributions of the paper is to build open-economy multi-sector New Keynesian model with rich fiscal instruments, which enables us to conduct cross-country comparison of policy effectiveness on COLCs. One of the closest papers is Auclert et al. (2024) who build a HANK model of an energy-importing advanced economies and incorporate an explicit fiscal sector that can implement subsidies or transfers. Erceg et al. (2024) investigate whether government subsidies focusing on consumer energy prices can lower inflation by building a New Keynesian model with energy used as an intermediate input. Relative to these papers, we introduce higher sectoral granularity with input-output linkages, and alternative country groups such as emerging market and low-income countries.

Annex

This annex contains technical details and preliminary results and is organized as follows. Section 1 defines cost-of-living crises, describes our identification algorithm, and summarizes stylized facts on their frequency, drivers and distributional consequences. Section 2 introduces our new dataset on COLC policies and presents descriptive statistics. Section 3 introduces the model and provides a summary of preliminary results.

1 Cost-of-Living Crises: A Primer

Since the concept of a cost-of-living crisis (COLC) has no widely agreed-upon definition, this section starts by providing a primer and delimiting its scope.

Definition of COLCs. This paper defines COLCs as episodes of sudden deterioration of affordability of basic consumption needs for a broad fraction of the population. More precisely, these are episodes in which the inflation of certain goods and services that constitute basic necessities (i.e., goods and services with particularly low price and income elasticities of demand) registers a sudden and abrupt increase, outpacing the inflation of other goods and services and nominal wages. For the purpose of the paper, basic necessities include food, transportation, and housing costs (encompassing both rents and utilities, such as electricity, gas, and other fuels) which, altogether, account for 62 percent of consumption for lower-income households in advanced economies (AEs) and 79 percent in low-income countries (LICs).[1]

How do COLCs differ from other shocks that trigger an increase in inflation? A key difference compared to other shocks (permanent monetary and fiscal policy shocks, transitory demand and supply shocks) is that COL shocks originate in sectoral supply shocks that trigger persistent shifts in the relative price of necessities, making heterogeneity (both production and households) salient. Moreover, the social impact of COL shocks is more severe because of households' limited ability to substitute necessities.

1.1 Identifying COLCs

Algorithm. The baseline identification relies on domestic prices. Using disaggregated CPI data by COICOP category, the algorithm identifies the start of a COLC from sharp increases in the quarterly inflation rate of necessities. This price index and inflation rate of necessities are constructed as

$$P_{i,t}^{\mathcal{N}} = \sum_{k \in \mathcal{N}} w_{i,t}^{k} P_{i,t}^{k}, \qquad \pi_{i,t}^{\mathcal{N}} = \ln P_{i,t}^{\mathcal{N}} - \ln P_{i,t-1}^{\mathcal{N}}. \tag{1}$$

[1] Within housing costs, rents (and imputed rents) are in principle less subject to abrupt surges than utilities and other necessities but may be affected indirectly by the response of monetary policy. While healthcare is important for welfare and its relative price may show secular trends in some countries, it is less subject to sudden and abrupt price surges—including because of insulation by public provision or regulation.

where $\mathcal{N}$ is the set of CPI categories considered necessities, i indexes countries, k indexes CPI categories, $w_{i,k,t}$ is the CPI weight of category k. To qualify as a COLC episode, the inflation rate of necessities needs to outpace that of other goods and services and of nominal wages for a number of quarters. Specifically, the algorithm identifies the start of a cost-of-living crisis if the following three conditions hold jointly:

- **C1 — Necessities shock.** Necessities CPI inflation exceeds its country-specific mean by 2 standard deviations or more.
- **C2 — Not generalized.** Non-necessities CPI inflation over the next two quarters does not exceed its country-specific mean by 2 standard deviations or more.
- **C3 — Wages have not caught up.** Forward-averaged z-score of nominal wage growth over the next two quarters does not exceed 2 standard deviations.

The first condition gets to the essence of a COLC. The second condition rules out episodes that are simply broad-based inflation shocks. The third condition ensures that purchasing power of workers is negatively impacted.

Formally, a COLC starts in country i in quarter t_0 if

$$z^{\mathcal{N}}_{i,t_0} \geq 2, \qquad \bar{z}^{O}_{i,t_0} \leq 2, \qquad \bar{z}^{w}_{i,t_0} \leq 2, \tag{2}$$

where $z^{\mathcal{N}}_{i,t_0}$ is the standardized inflation rate of necessities, and $\bar{z}^{O}_{i,t_0}$ and $\bar{z}^{w}_{i,t_0}$ denote the standardized inflation rates of other goods and services and standardized nominal wage growth, averaged over the t_0 quarter and the following two quarters. Episodes are identified quarter by quarter; flagged quarters separated by up to a year are merged into a single episode.

We provide an alternative identification of episodes for robustness. Since domestic prices can reflect policies introduced precisely to shield households and preexisting practices (e.g., how administered prices are adjusted), an alternative approach combines global commodity prices with country-specific CPI weights and constructs a counterfactual price index of basic necessities—akin to a Bartik-style instrument—to identify cost-of-living episodes. As a second check, we restrict the analysis to episodes triggered by oil supply shocks (Kanzig, 2021).

Data. In terms of national price statistics, the categories considered basic necessities in this paper encompass three COICOP divisions: food and non-alcoholic beverages (COICOP 1), housing, water, electricity, gas and other fuels (COICOP 4), and transport (COICOP 7). They largely overlap with categories excluded in core inflation with the exception of some housing costs (e.g., rents, water) and non-energy transport services (e.g., public transit).

Preliminary findings.

- Almost all economies in our sample experienced at least one cost-of-living crisis over 2005Q1-2025Q4, with almost half experiencing at least two episodes, and a small group more than two.

There has been a significant clustering of episodes around 2007–08 and 2021–23, and to a lesser extent in 2010–11. Outside of these windows, only a handful of countries, mostly emerging markets and developing economies, experienced cost-of-living crises.

- Episodes are persistent. Measured by the time it takes real wages to regain their pre-crisis level, the median episode lasts over two years, and longer still when wages are deflated by the prices of necessities or by the price indices faced by the poorest households rather than by the headline CPI. A sizable share of the 2021–23 wave had not yet recovered by the end of the sample.

- What have been the main drivers of cost-of-living crises in different countries? Analysis based on a dynamic factor model suggests that a large fraction of the inflation of basic necessities experienced during cost-of-living crises can be accounted by a global factor, that generates common dynamics across countries.

- For the median advanced economy, the global factor accounts for most of the inflation of basic necessities recorded during cost-of-living crises. For the median emerging market and developing economy, the global factor accounts for less than half of the inflation of basic necessities. The larger role of country-specific forces could reflect a larger incidence of local shocks (e.g., weather shocks driving food prices) or domestic factors, such as persistent price subsidies, that may weaken the link between global shocks and domestic prices. The common factor is closely linked to global commodity price movements. A composite commodity price index explains roughly half of its variation.

1.2 Macroeconomic Consequences of COLCs

This section estimates the dynamic response of macroeconomic variables to the onset of a COLC. The estimator is panel local projections (Jordà, 2005), and the treatment is a binary COLC onset indicator constructed from the algorithm described above.

Estimation. For each outcome y and horizon $h \in \{-4, \ldots, +12\}$, we estimate at the quarterly frequency:

$$\Delta_h y_{i,t} \;=\; \alpha_i^h \;+\; \beta^h D_{i,t} \;+\; \Gamma^h(L)\, y_{i,t-1} \;+\; \varepsilon_{i,t+h}, \qquad h = -4, \ldots, +12$$

where $\Delta_h y_{i,t}$ is the cumulative change in the outcome from $t-1$ to $t+h$; α_i^h is a country fixed effect; $D_{i,t}$ is the COLC onset indicator; $\Gamma^h(L)\, y_{i,t-1}$ is a 12th-order lag polynomial in the outcome; and $\varepsilon_{i,t+h}$ is the regression residual. The reported impulse response is the sequence $\{\beta^h\}$. Standard errors are clustered at the country level. We inspect negative leads during the year before the onset of the COLC to provide a placebo check on pre-trends.

Preliminary findings.

- By definition, the episodes are marked by a sharp spike in the relative price of basic necessities. On average, however, the relative price of basic necessities continues to increase for several quarters, and peaks only 1½ years after the onset of the crisis. Moreover, the drift in relative prices is highly persistent, with the price of basic necessities remaining, on average, multiple percentage points higher than the price of other goods and services even three years after the start of the cost-of-living crisis.

- Headline consumer prices, initially bolstered by the surge in the price of basic necessities, continue to increase for longer and throughout the third year, reaching an average cumulative increase across countries and episodes of about double-digit percentage points. Nominal wages do not keep up with rising prices during cost-of-living crises. The fall in real wages reaches, on average, multiple percentage points roughly 1½ years after the onset of the episode. Three years into an episode, real wages remain on average below their pre-crisis path by a substantial margin.

- The sustained increase in headline CPI beyond the peak in relative prices likely reflects not only important first-round effects but also sizable second-round effects. Indeed, both near- and long-term inflation expectations increase significantly during these episodes. One-year-ahead expectations remain several percentage points higher in advanced economies four quarters after the onset of a cost-of-living crisis, and this increase is even larger in emerging market and developing economies. Although expectations ease thereafter, they remain above their pre-crisis level in both groups of countries even three years after its onset. Strikingly, long-term inflation expectations also register a significant drift during these episodes. Five-year-ahead inflation expectations increase modestly initially but, three years after the onset of the episode they are slightly higher in advanced economies and meaningfully higher in emerging market and developing economies. This suggests that cost-of-living crises may contribute to some de-anchoring of inflation expectations.

- Turning to real and external variables, in the year following crisis onset, final domestic demand contracts by multiple percentage points in emerging market and developing economies and by more in net energy importers, while remaining broadly resilient in advanced economies and net energy exporters. The current account balance strengthens meaningfully for net energy exporters over the same period, while remaining broadly unchanged in other country groups.

1.3 Distributional Consequences of COLCs

How do outcomes for different segments of the population vary during COLCs? To answer this question, the paper combines household survey microdata from the Luxembourg Income Study with disaggregated price indices to construct income-specific consumption price indices (following Jaravel, 2026; Lokshin, Sajaia, and Torre, 2025).

Preliminary findings.

- The results reveal substantial inflation inequality during cost-of-living crises, with low-income households facing markedly higher inflation than high-income households. These disparities are particularly pronounced in emerging market and developing economies. Local projections confirm that inflation experienced by low-income households is significantly higher than that faced by high-income households. On average across countries and episodes, the differential in cumulative price increases between households in the bottom and top quintiles reached nearly two percentage points about a year and a half after the onset of an episode and remained higher even three years later.

- To further assess the distributional consequences of cost-of-living crises, a second exercise examines their implications for poverty when low-income households face persistently higher inflation than the population average (Jaravel, 2026). Specifically, it constructs adjusted poverty rates using quintile-specific consumption price indices instead of the aggregate CPI for a sample of 89 economies, 27 advanced, 37 emerging market, and 25 low-income, over 2015–24. While the adjusted poverty rate tracks the standard metric closely up to 2020, a sizable gap emerged over 2021–24, concentrated overwhelmingly in low-income countries. The gap translates into millions more people counted as poor by 2024 than headline-based deflation implies; given incomplete country coverage this is a lower bound, and the result is robust to alternative base years and to the World Bank's new 2021-PPP poverty lines.

2 A New Dataset on COLC Policies

This section introduces our dataset on COLC policies and summarizes the use of these policies across countries and time.

2.1 Identifying COLC Policies

A novel contribution of this paper is the construction of a narrative database of policy interventions aimed at addressing COLCs. The database uses large language models (LLMs) and Economist Intelligence Unit (EIU) reports spanning 76 countries over 1996-2025 to identify fiscal and regulatory measures that complemented monetary policy in shielding households' purchasing power for energy and food.

These reports offer several features that make them well suited to this exercise. First, their quarterly frequency allows for granular tracking of policy changes over time, including the announcement, approval, implementation, suspension, and withdrawal of specific measures. Second, the EIU reports maintain a stable structure across countries and time, which improves the consistency of LLM extraction. Third, the reports cover a broad range of advanced economies, emerging market economies, and low-income countries, enabling cross-country comparisons. Fourth, the reports provide sufficiently detailed narrative descriptions of government actions to support the multidimensional classification of each policy measure required by the coding scheme.

Each policy identified in a country report is classified along eight dimensions: (i) the commodity sector it addresses; (ii) the channel through which it operates; (iii) its fiscal classification; (iv) the agents it targets; and (v) its timing, (vi) legal status, (vii) expected directional impact, and (viii) motivation.

The accuracy of the LLM-based extractions is evaluated through a systematic human validation exercise. For a random sample of 16 out of 76 countries, trained economists and research assistants independently review all country-quarter observations produced by the first LLM, working from a standardized validation file that contains the LLM's classifications alongside its justifications and supporting quotes.

2.2 Use of COLC policies

Preliminary findings.

- The introduction of policy measures in response to cost-of-living crises spiked in 2007-08 and 2022-23. At the peak of the price surge following Russia's invasion of Ukraine, for instance, nearly half of the countries in the sample introduced at least one new measure to mitigate the impact of rising prices.
- The characteristics of past policy responses differ markedly across country groups:
  - Advanced economies relied predominantly on income-supporting measures, which accounted for almost two-thirds of interventions during crisis periods. Low-income countries, instead, made greater use of price-suppressing measures, likely reflecting more limited social protection infrastructure (IMF, 2024).
  - The composition of price-suppressing measures varied across countries. Advanced economies mainly used VAT and excise tax reductions, which directly reduce consumer prices, whereas emerging market and developing economies—with larger informal sectors— relied more often on producer subsidies, price controls, and reductions in customs duties to curb costs that feed through production and distribution chains before reaching households.
  - Among income-supporting measures, advanced economies largely implemented changes to income taxes and transfers, half of which were targeted to specific groups of people, based on income or age. Emerging and developing economies, instead, relied more heavily on adjustments to minimum wages, public sector wages, and pensions.

3 Model

The previous sections showed that policymakers deployed a wide set of income-supporting and price-suppressing measures to contain the impact of cost-of-living crises. Given the difficulty of isolating the source of the crisis and identifying the causal effect of policies empirically, this section complements the empirical evidence with simulations from a novel international macroeconomic

model with features that are critical for assessing policy tradeoffs in the context of cost-of-living crises. The model is an extension of the model in Ozhan et al. (forthcoming).

3.1 Sketch of the model

The model contains the following blocks:

- **Households**: There is household heterogeneity and the model includes low-income and high-income households in each economy ('LIHHs' and 'HIHHs' hereafter, respectively) who differ in their exposure to the shock and in their ability to smooth it. In line with empirical evidence, LIHHs spend a larger share of their budget on basic necessities than HIHHs and do not have access to financial markets.
- **Production network:** The model includes 12 production sectors in both the Home economy and the rest of the world (RoW), featuring sectoral interlinkages within and across countries and heterogeneous price stickiness across sectors.
- **Monetary policy:** The model assumes monetary policy follows a Taylor rule focused on headline CPI, with some weight on projected inflation so that the central bank partially looks through temporary shocks to headline inflation.
- **Fiscal policy:** The government purchases goods, makes transfers, pays subsidies by collecting taxes and issuing new debt. Inspired by the policy interventions documented in previous sections, the model includes both income-supporting and price-suppressing measures. Regarding the former, it includes targeted transfers to LIHHs and untargeted transfers (distributed evenly across all households). In terms of price measures, the model includes consumer subsidies, which are akin to cuts to VAT or excise taxes used in practice, and producer subsidies, which reduce the cost of inputs for firms with heavy exposure to the subsidized sector (such as refineries and utility companies in the case of shocks to crude oil and gas prices). In the debt-financed baseline, the deficit is permitted to rise when a policy is introduced, after which a fiscal feedback rule raises lump-sum taxes so that debt reverts to the pre-shock level, with a half-life of four to five years. In case of no fiscal space, per-period payments of transfers and subsidies are fully financed by a lump-sum tax on households.

3.2 Calibration and shocks

Calibration. Households' expenditure patterns, production structures, import dependence on energy and food, as well as policy space, vary significantly across countries. To assess how these differences affect policy tradeoffs, the model is calibrated separately for representative advanced, emerging market, and low-income economies ('AEs', 'EMs', and 'LICs' hereafter). All three representative economies are assumed to be net energy importers but LICs are assumed to be net exporters of agricultural products.

Shocks. Cost-of-living shocks are triggered by transitory shocks to the global supply of energy (i.e., an exogenous drop in TFP in the mining and quarrying sector, affecting supply of crude oil and natural gas) or food (affecting the agricultural sector, and thus the availability of cereals). The shocks are calibrated such that the relevant global commodity price increases by about 2 standard deviations (close to 70 percent in the case of energy prices—akin to the surge in oil prices at the onset of the conflict in the Middle East—and about 45 percent in the case of food prices) and have a half-life of two quarters.

3.3 Baseline without policies.

We start by documenting the effects of cost-of-living shocks without any fiscal intervention.

Preliminary findings.

- In energy-importing AEs, a temporary shock that pushes up global energy prices on impact passes through to an increase in domestic consumer prices of all energy-related products. Annual consumer price inflation peaks several percentage points above target CPI and private consumption falls by a similar amount. The fall in consumption of LIHHs is considerably larger than for HIHHs, reflecting both their higher exposure to energy-related products in AEs and their inability to borrow. Higher energy input costs, weaker household consumption, and tighter monetary policy weigh on output, with exchange rate depreciation mitigating part of the decline in activity.

- The impact of a global energy shock on activity in LICs is somewhat larger than in AEs. However, households are generally less exposed to energy prices. Aggregate consumption falls by less than in AEs, while the decline in consumption among LIHHs is smaller than among HIHHs. This reflects the fact that energy-related goods and services (such as electricity and heating fuels) account for a much smaller share of expenditure among low-income households relative to higher-income households in LICs than in AEs.

- A global food shock of comparable severity has substantially larger effects, especially in LICs. The resulting decline in household consumption is much larger than for AEs, with LIHHs experiencing disproportionately large losses (considerably larger than those of HIHHs) given their heavy exposure to food expenditures. While LICs benefit from an improvement in their terms of trade as net food exporters, the direct hit to agricultural production, together with weaker household purchasing power and domestic demand, more than offsets these gains.

3.4 Effectiveness of price-suppressing policies

Each type of income and price intervention used in past cost-of-living crises affects incentives for firms and for households across the income distribution differently. They also entail different trade-offs between near-term support and future consolidation efforts. To provide a comprehensive comparison of the relative merits of different tools across circumstances, the analysis focuses both on how

policies affect macroeconomic aggregates at the height of the crisis, and the implications for households' lifetime welfare (which also account for the cost of facing fiscal consolidation down the road). To ensure comparability across fiscal tools, the first exercise in this section assumes that the policy objective is to contain the impact on households from higher consumer prices by half.

Preliminary findings.

- **Consumer subsidies.** For AEs, in the case of an energy shock, consumer subsidies contain the impact on headline inflation. As a result, monetary policy does not need to be tightened as much, easing the drop in output. With a smaller increase in consumer prices and stronger activity, the policy intervention attenuates the drop in households' consumption, especially in the case of LIHHs. While the shock is short-lived and the subsidy aims at limiting the pass-through by half, public debt increases.

- **Producer subsidies** lead to very similar outcomes for the peak response of inflation, output, and households' consumption after the shock. An important difference, however, is that producer subsidies lead to a strong expansion of exports of downstream sectors benefiting from lower input prices. As a result, the intensity of the intervention to achieve a given pass-through to domestic retail prices is much larger than in the case of consumer subsidies, with an increase in public debt that is several multiples larger.

- **Role of fiscal consolidation.** The higher fiscal effort needed to contain the effect on consumers with producer subsidies also entails costs from larger consolidation needs over the medium term. Once the future cost of fiscal adjustment is taken into account, all households face larger welfare losses under producer subsidies than in the no-intervention baseline. Consumer subsidies attenuate the decline in consumption in the short run, but their welfare gains accrue only to HIHHs; LIHHs remain worse off despite the near-term support.

- **Role of anchoring of inflation expectations.** When an alternative specification assumes surging retail energy prices push inflation expectations up significantly, inflation in non-energy sectors increases by more than when expectations are assumed to remain anchored. In this case, by containing the increase in retail energy prices and the resulting second-round effects, consumer subsidies reduce the need for monetary policy tightening and improve welfare among LIHHs. When inflation expectations remain anchored, however, the fiscal cost of these measures outweighs their benefits, resulting in net welfare losses.

- **Global spillovers.** However, subsidies attenuate the price signal that consumers receive related to the global scarcity of supply, leading to smaller demand compression. While the effect on global demand from a small economy introducing subsidies would be negligible, multiple countries introducing subsidies at the same time would have spillovers to global prices. Indeed, model simulations from a scenario in which all countries introduce consumer subsidies aimed at containing the pass-through to retail prices by half show that global oil prices increase several percentage points more, in line with Auclert et al. (2024) and Erceg et al. (2024). Thus,

even when the risk of de-anchored inflation expectations provides a rationale for temporary consumer subsidies, their effectiveness falls sharply when many countries adopt them simultaneously, as reduced demand adjustment puts further upward pressure on global commodity prices.

3.5 Effectiveness of income-supporting policies

Preliminary findings.

- **Untargeted transfers** preserve price signals but support domestic demand, so they push inflation slightly higher, relative to the no-policy baseline. They support consumption of LIHHs but have little impact on HIHHs' consumption, since these consumers have access to financial markets and save most of the additional income. The impact on debt is comparable to that of consumer subsidies as they are uniformly distributed to all households.
- When **targeted transfers** are used, instead, the impact on households' consumption is comparable to that of untargeted transfers but the cost is significantly lower as only LIHHs receive support. The peak increase in public debt is considerably smaller than the increase under consumer subsidies, and marginal relative to the increase under producer subsidies. While LIHHs do face larger taxes over the medium term to bring debt back to its pre-shock level, the burden of fiscal consolidation falls on all households so, on balance, LIHHs are better off than in the absence of fiscal intervention when untargeted transfers are used.

3.6 Cross-country heterogeneity (AEs vs. LICs)

How different are policy tradeoffs for emerging market and developing economies? The model simulations suggest that they are considerably sharper in LICs, due to two considerations. First, basic necessities account for a larger share of household spending in LICs than in AEs. Second, the availability of fiscal space shapes countries' ability to respond to cost-of-living crises. LICs, in particular, may struggle to issue debt, especially during global shocks when many countries seek access to external financing simultaneously. This section explores alternative sets of simulations for LICs, including one in which the fiscal deficit cannot increase and all additional support is financed through higher taxes.

Preliminary findings.

- **Producer subsidies** are particularly costly and inefficient in LICs, containing the pass-through from global to domestic energy prices would increase public debt many multiples more than under targeted transfers, and this difference is larger than in AEs. As a result, producer subsidies emerge as an especially costly way of protecting households in LICs.
- **Consumer subsidies** are less costly than producer subsidies, but still represent an expensive way of protecting vulnerable households in LICs. In the case of the short-lived global food

shock, simulations suggest that using consumer subsidies to contain the pass-through to domestic food prices reduces the surge in inflation and limits the decline in LIHHs' consumption. However, this comes at a sizable fiscal cost. Targeted transfers, by contrast, deliver a similar improvement in LIHHs' consumption at a much lower fiscal cost. Once the future costs of fiscal consolidation are taken into account, simulations confirm that targeted transfers are by far the most cost-effective way of supporting low-income households in LICs.

- **Role of fiscal space.** The results suggest that targeted transfers remain effective even when fiscal space is exhausted. Although part of the transfer is offset by the higher tax burden borne by all households, vulnerable households remain better off overall. By contrast, consumer subsidies cease to generate welfare gains for LIHHs once they must be financed contemporaneously rather than through additional borrowing.

- **Spillovers for LICs.** Price-suppressing measures can generate adverse spillovers through higher global commodity prices when many countries deploy them simultaneously. Results from a scenario in which all other countries use consumer subsidies while LICs do not suggest that global food prices would rise considerably more, while domestic food prices in LICs would increase several percentage points more, relative to a scenario in which no country uses subsidies. Although LICs benefit from an improvement in their terms of trade as net food exporters, and aggregate activity receives some support as a result, the increase in domestic food prices disproportionately hurts vulnerable households. Consequently, the decline in LIHHs' consumption is several percentage points larger than in a scenario without spillovers. The results suggest that when many countries deploy subsidies simultaneously, the resulting increase in global food prices can worsen outcomes for vulnerable households in countries that lack the fiscal space to respond.

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