

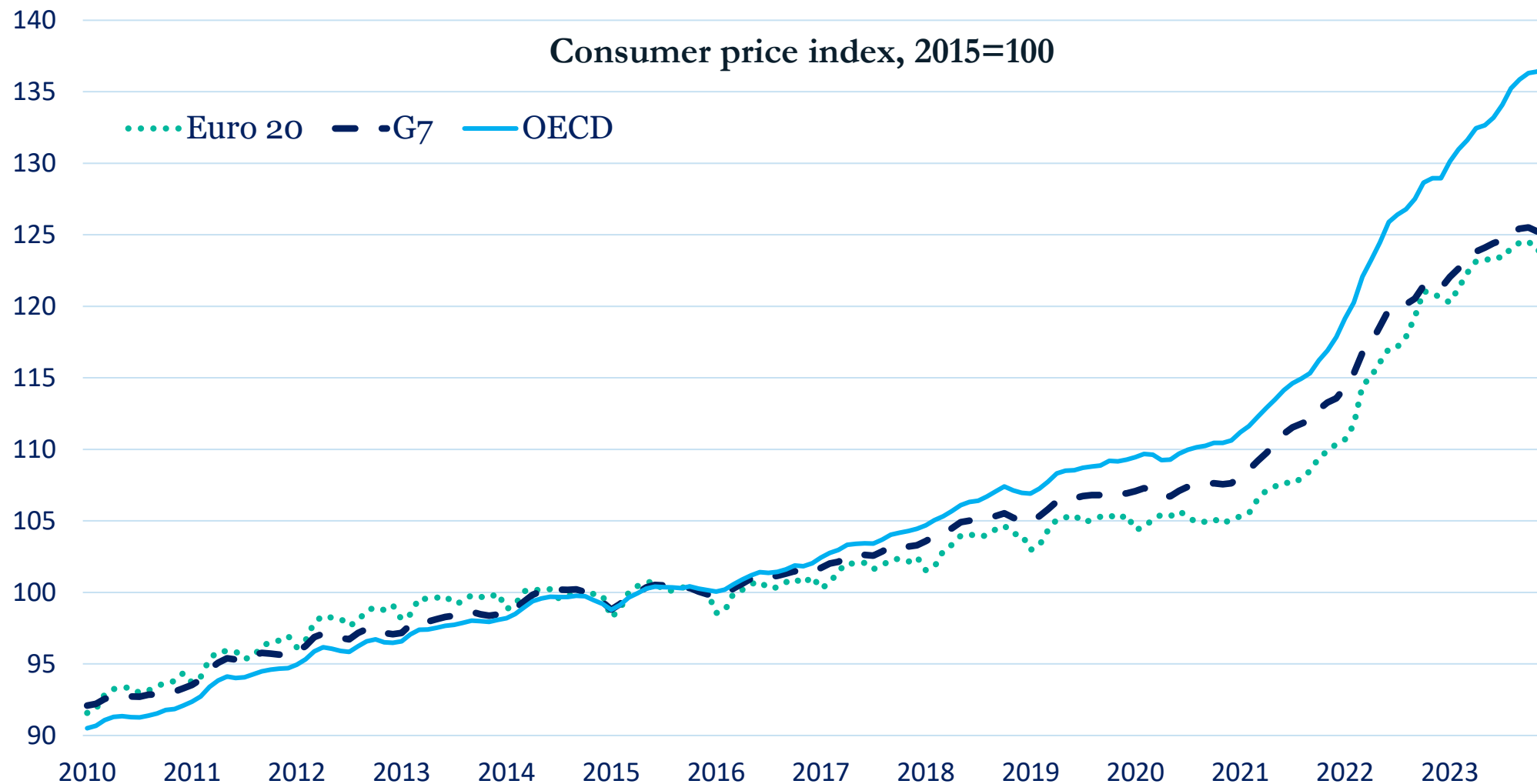
A cost-of-living squeeze? Distributional implications of rising inflation

15th February 2024

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Price pressures abruptly accelerated in 2022

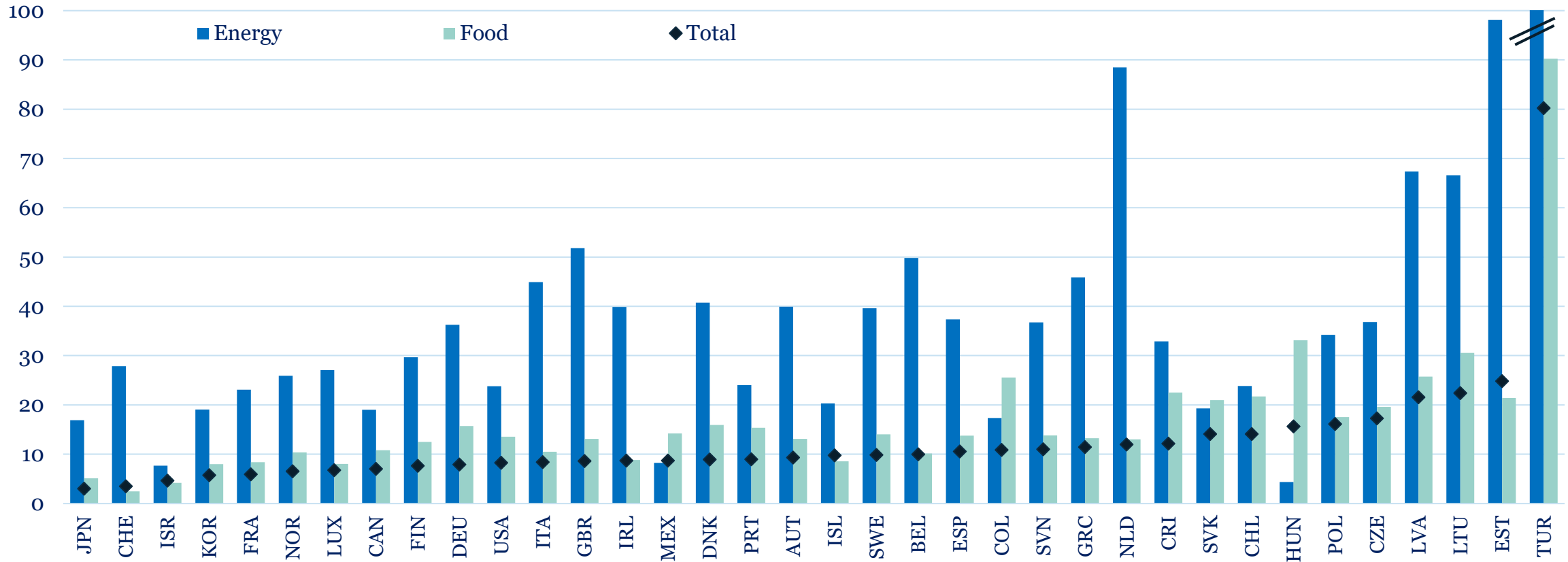


Note: EU and Euro CPI is the harmonized monthly price index
Source: OECD Database on Consumer Price Indices



Inflation was particularly large for energy and food

Consumer price inflation, change from same period previous year, August [2022](#) (%)



Note: Year on year energy price inflation for Türkiye: 133.
Source: OECD Database on Consumer Price Indices.



The impact of inflation is
not borne equally



Households differ along many dimensions, including:

1) Share of budget spent on food and energy

- Bottom of the income distribution: spend >30% on this
- Top of the income distribution: spend <15% on this
- Important (and related) differences across urban/rural areas and over the lifecycle

2) Ability to smooth consumption, adapt expenditure patterns, and tap on savings

- OECD average: almost 50% of lower-income individuals lack emergency savings



Survey evidence: Financial stress rose especially in the lower part of the income distribution



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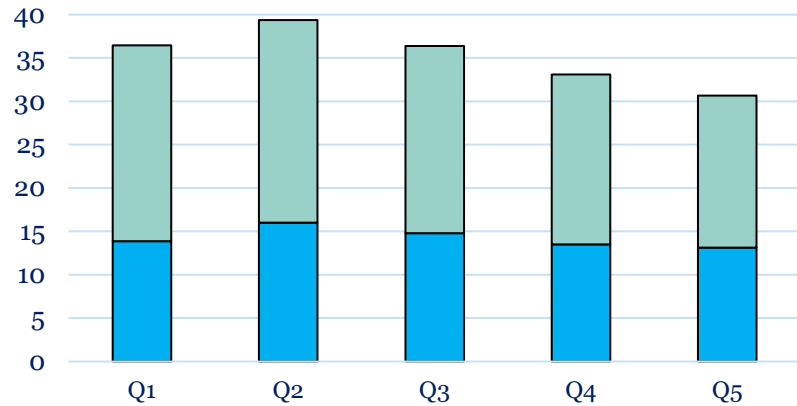
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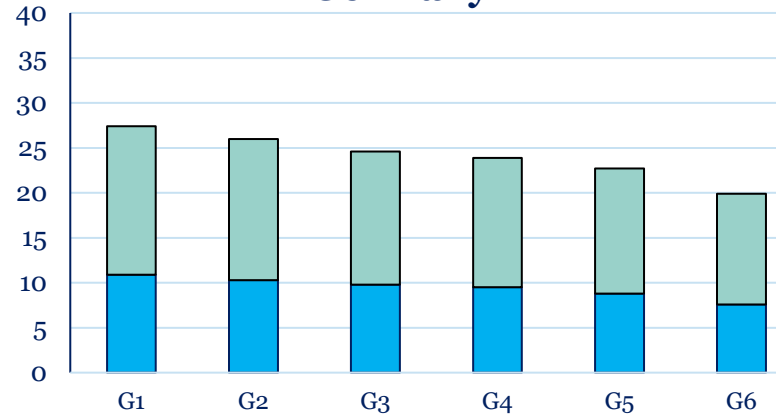


Expenditure shares on energy and food (%), by income group

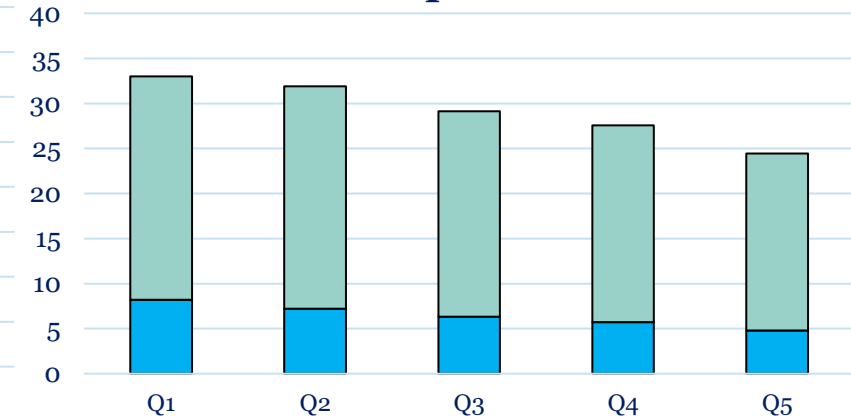
Czech Republic



Germany

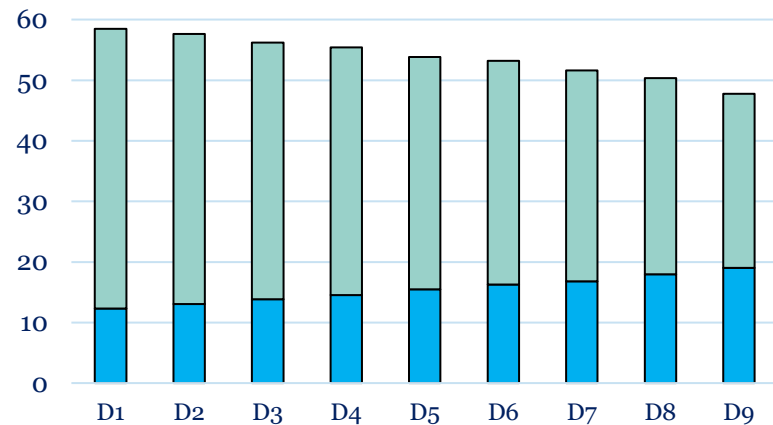


Japan

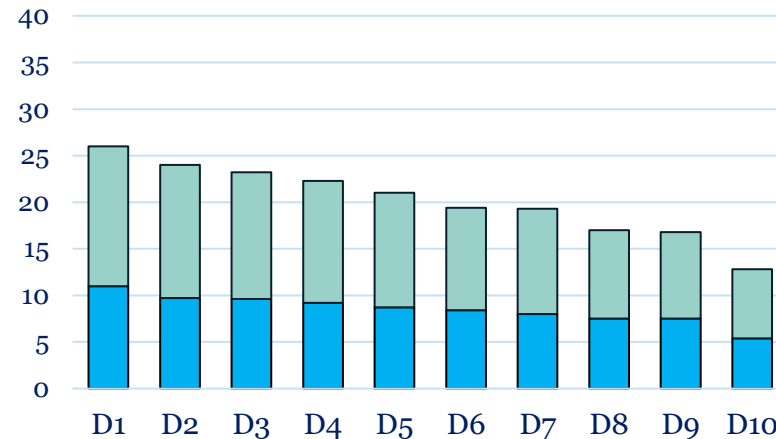


■ Energy ■ Food

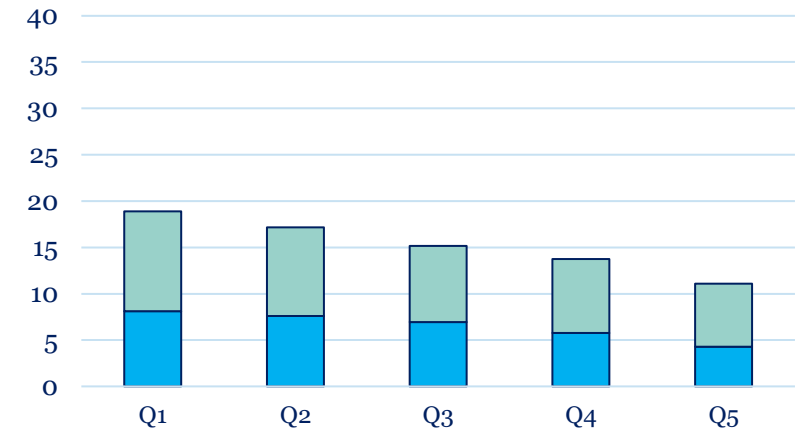
Mexico



United Kingdom



United States

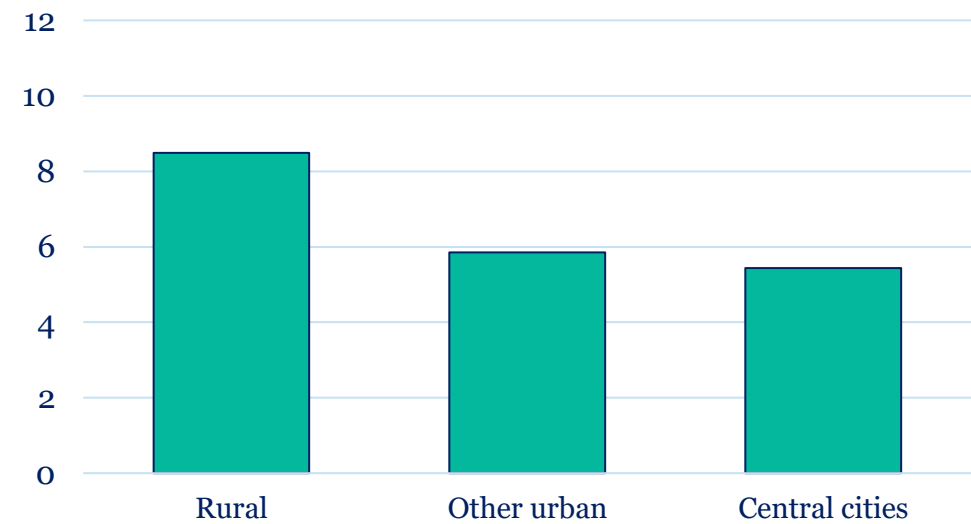


Expenditure shares on energy by area of residence (%)

France



United States



Methodology: the compensating variation approach



How much more do households spend to maintain the initial expenditure shares?

- Short run: composition of HH budget held constant
- Total effect= sum of category-specific effects



How much more do households spend to maintain the initial expenditure shares?

- Short run: composition of HH budget held constant
- Total effect= sum of category-specific effects
 - Each equal to the $\Delta_{\%}\text{Price} \times \text{Consumption Share}$
 - Intuition: for each HH, this equals the average of the % changes in prices across categories of expenditures, weighted by the HH's expenditure share on each category
- Standard in the literature to assess the effects of trade shocks (Deaton, 1989)

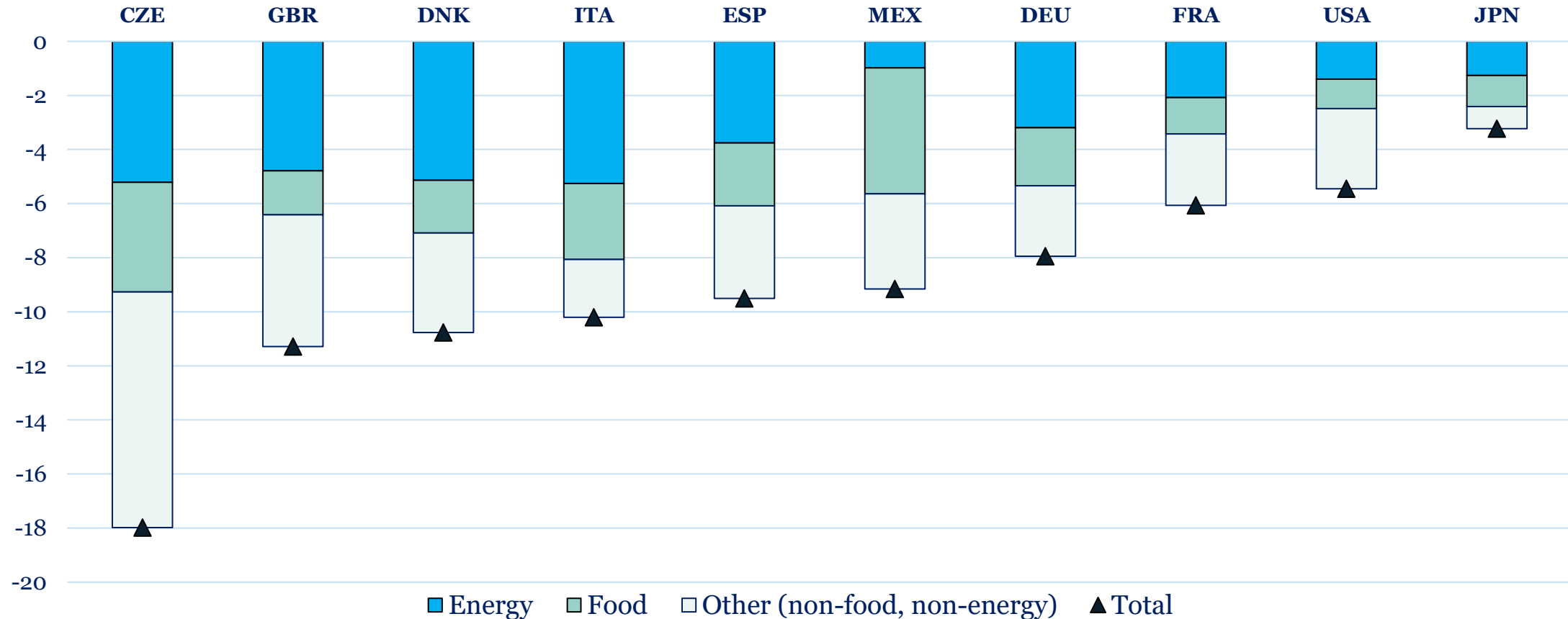


Main findings: the effect of food and energy prices



The cost-of-living squeeze for the average household

Purchasing power changes for the average household (%)

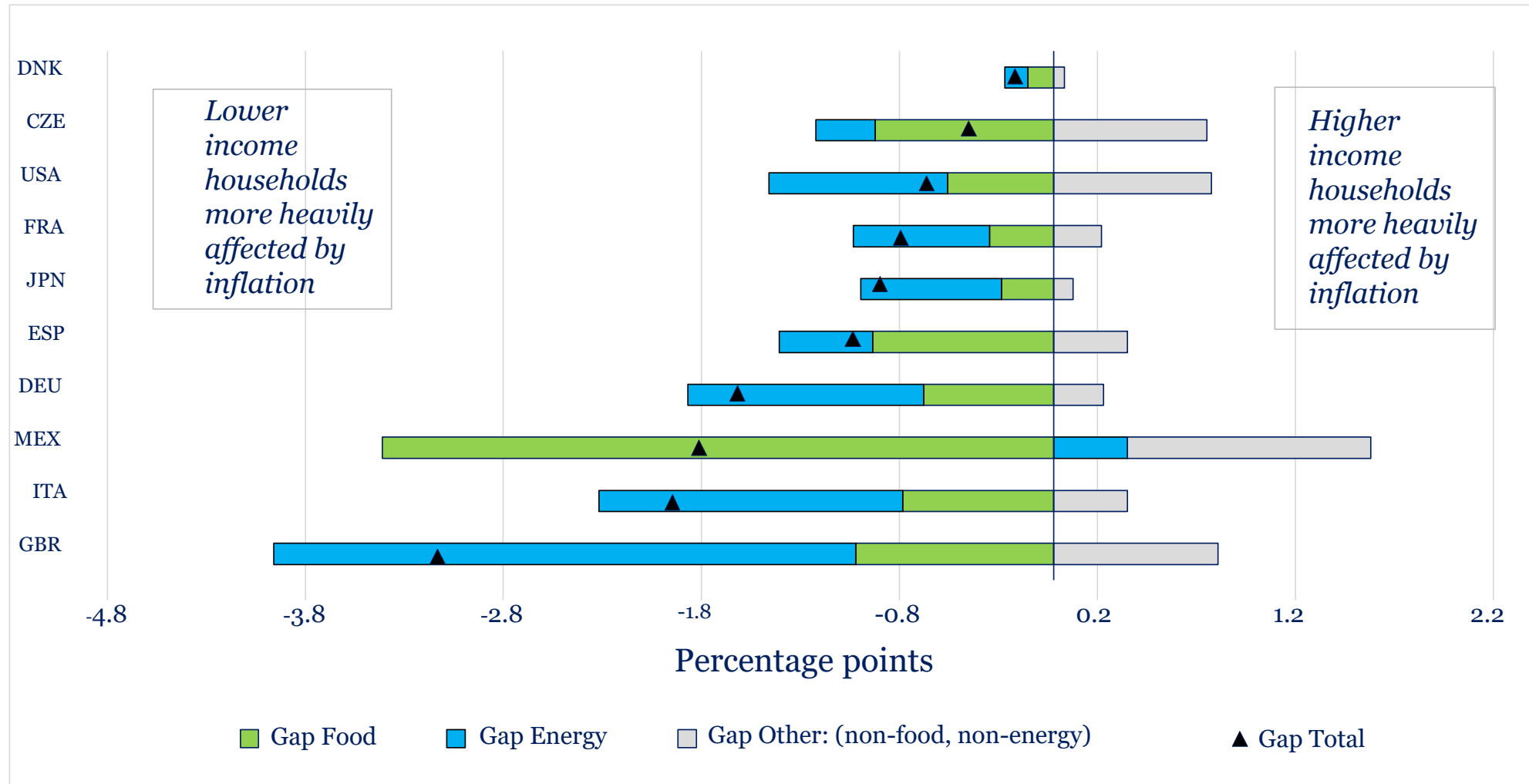


How to read: in Italy, the average household experienced a 10.2% decline in purchasing power. This is driven by three effects: the effect of changes in energy prices (- 5.3%), the food prices (- 2.8%) and non-energy non-food consumer prices (- 2.1% in purchasing power).

Source: National HBS and CPI.



Beyond averages: Differences across income groups

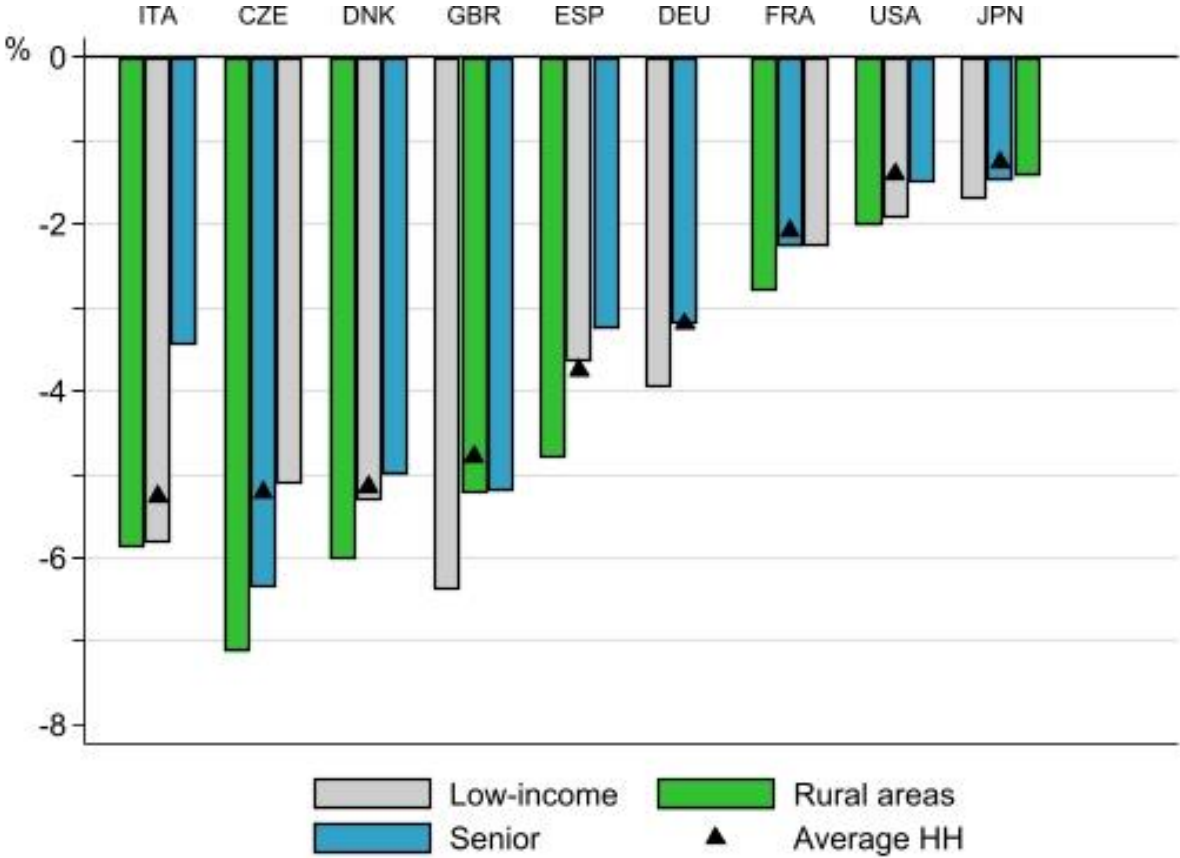


Note: How to read: in the United Kingdom, the decline in purchasing power following changes in consumer prices between August 2021 and August 2022 was 3.1 percentage points (pp) higher for low relative to high-income households (a negative 3.1 pp gap). This total gap is driven by three effects: the effect of changes in energy prices (a negative 2.9 pp gap), the effect of changes in food prices (a negative 1 pp gap) and the effect of changes in non-energy non-food consumer prices (a positive 0.8 gap).



Older age and rural residence also emerge as risk factors

Purchasing power losses from energy price increases: low-income, rural, senior households (%)



Note: How to read: in Denmark, households living in rural areas experienced a 6% decline in purchasing power, low-income households a 5.3% decline in purchasing power and senior households a 5% decline in purchasing power following changes in energy prices between August 2021 and August 2022.

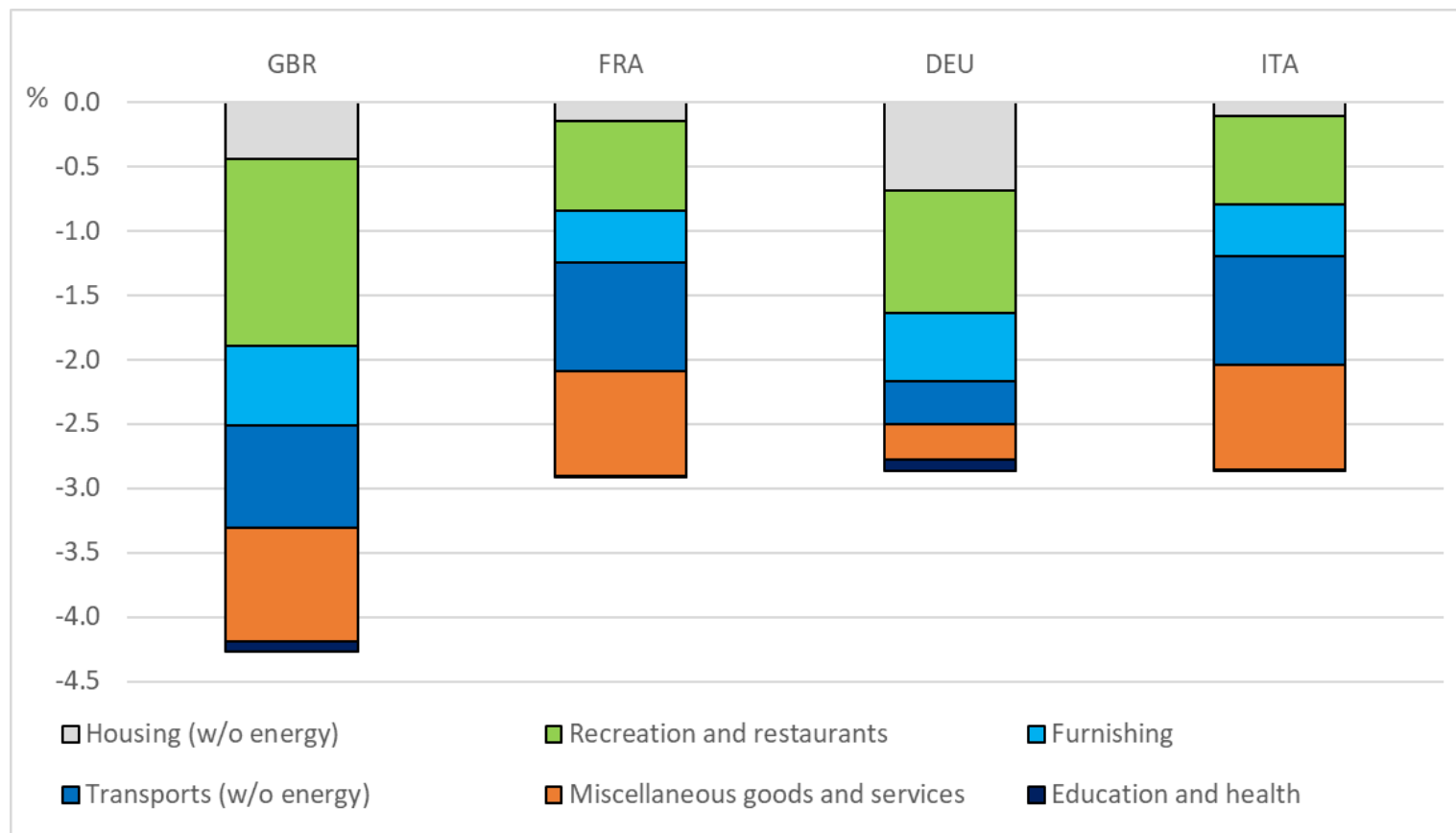
Source: National HBS and CPI.



The effect of non-food non-energy prices



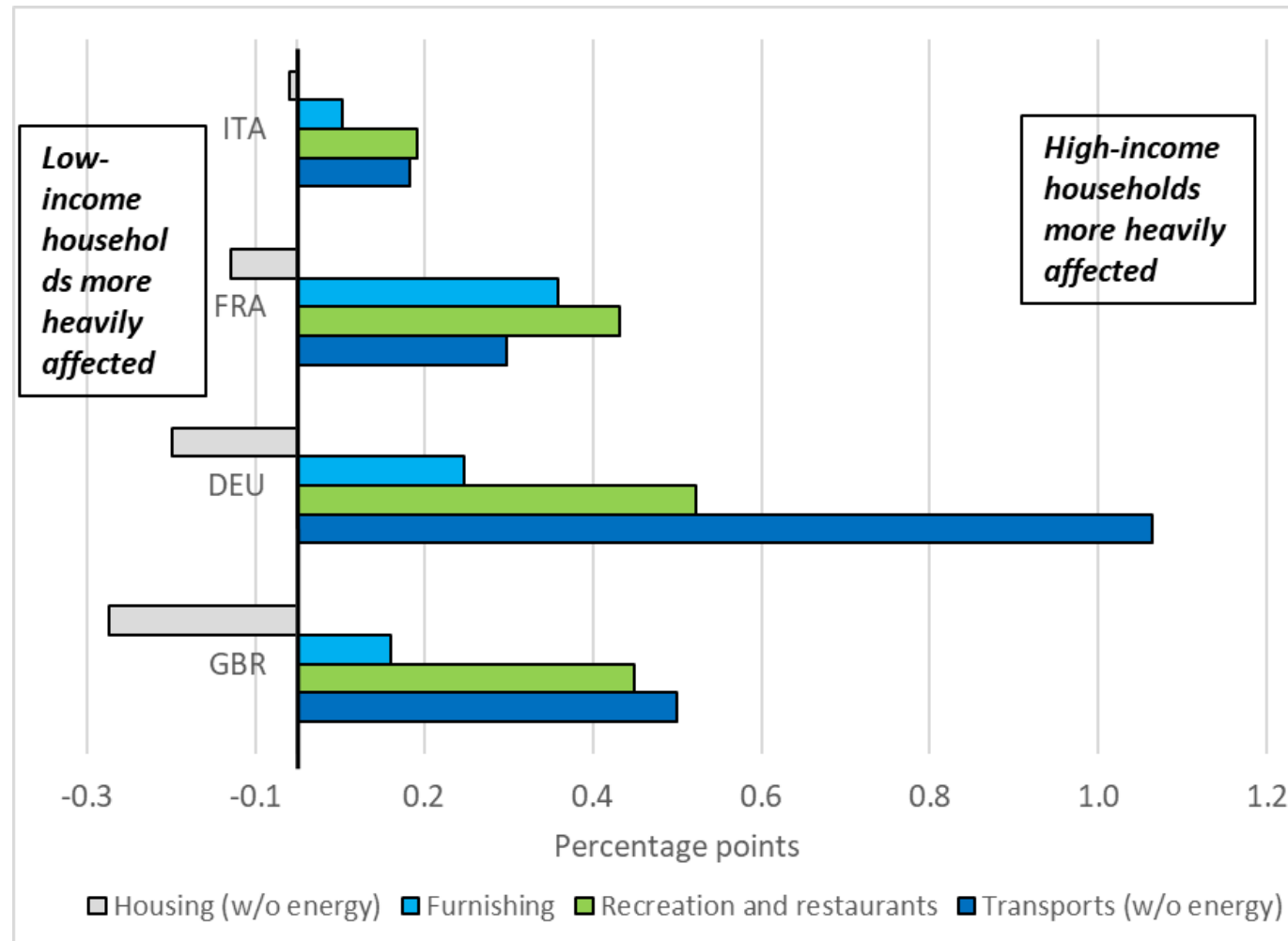
Purchasing power changes from non-energy non-food price inflation for the average household (%)



Rising prices of recreation and restaurants and of non-energy transport (e.g., buying a car or an airline ticket) are major drivers of purchasing power losses for the average household



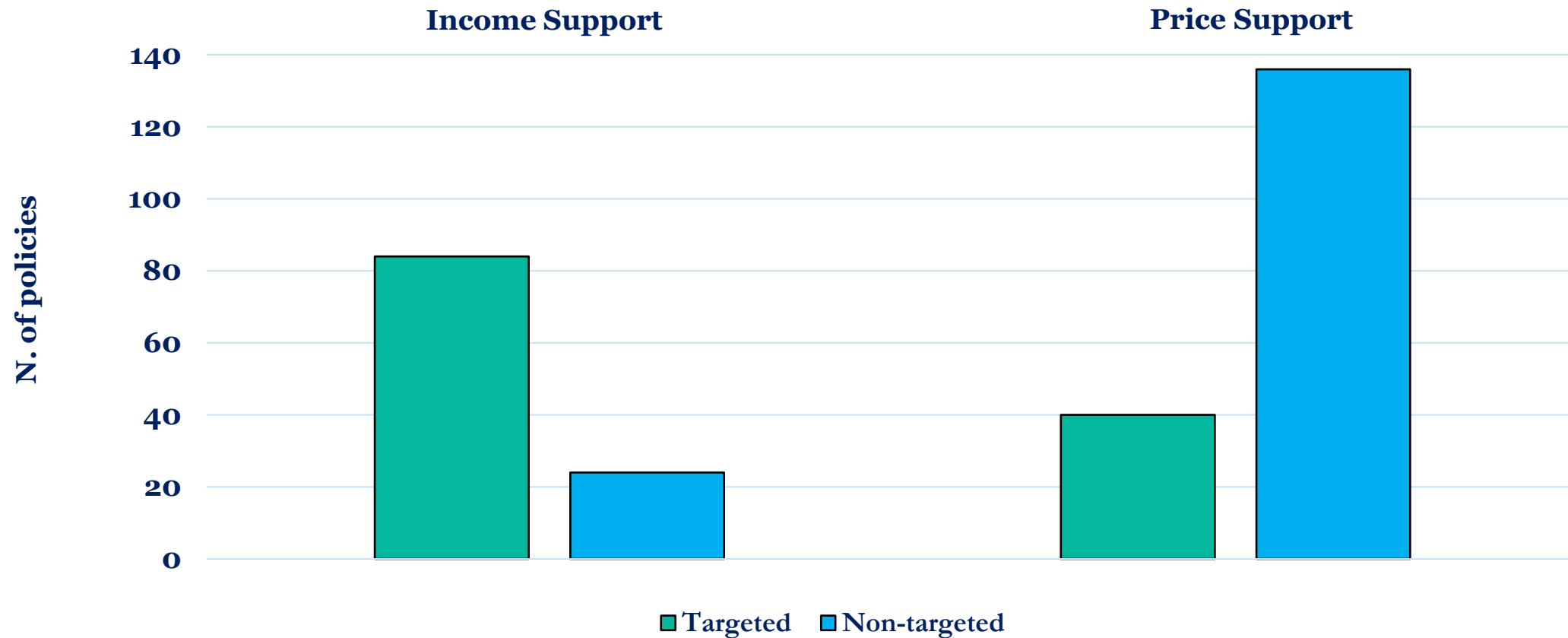
The effect of non-food non-energy prices on household purchasing power, by income (pp)



18 Hot to read: The effect of rising prices of recreation, restaurants, furnishing and non-energy transport is progressive, i.e., weighting more on high relative to low-income households. Example in DEU, high income households hit harder, by approximately 1pp (three-fold higher share of expenditures on purchasing vehicles).



Government support to cushion high energy prices is needed but should become more targeted



Note: Information on 284 measures was collected for 42 OECD and key partner economies between October 2021 and December 2022.

Source: OECD tracker of policy responses to energy price shocks (OECD, 2022).

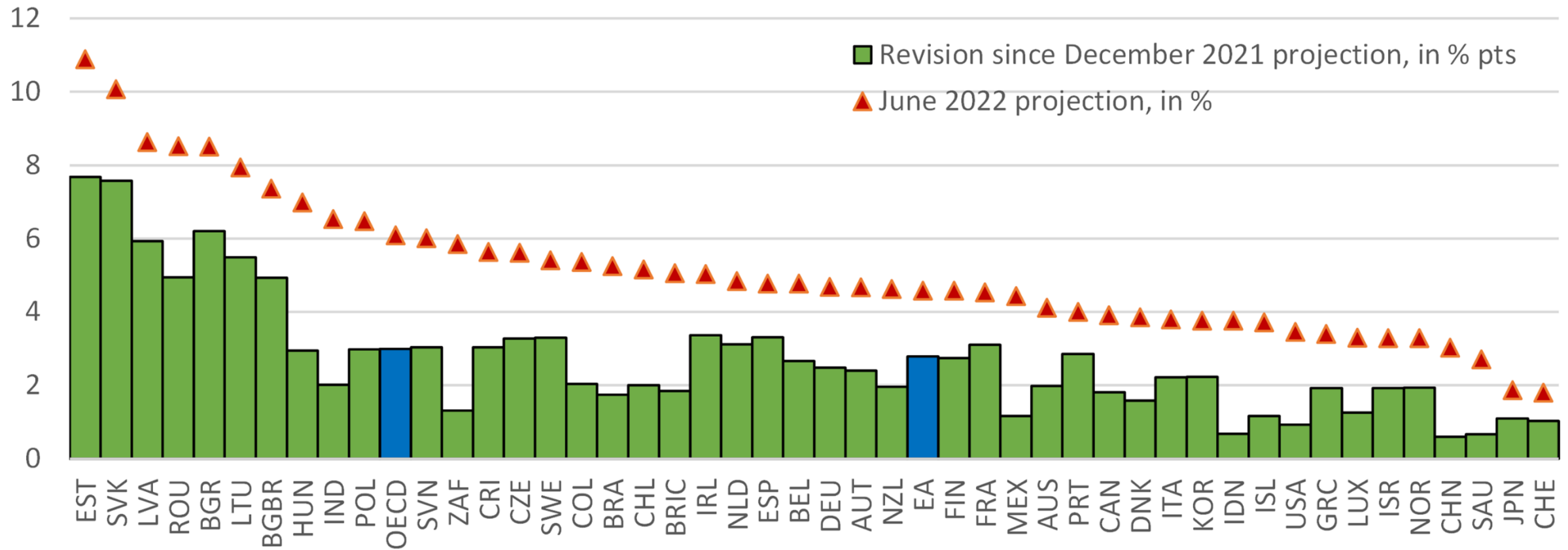


Supporting Material



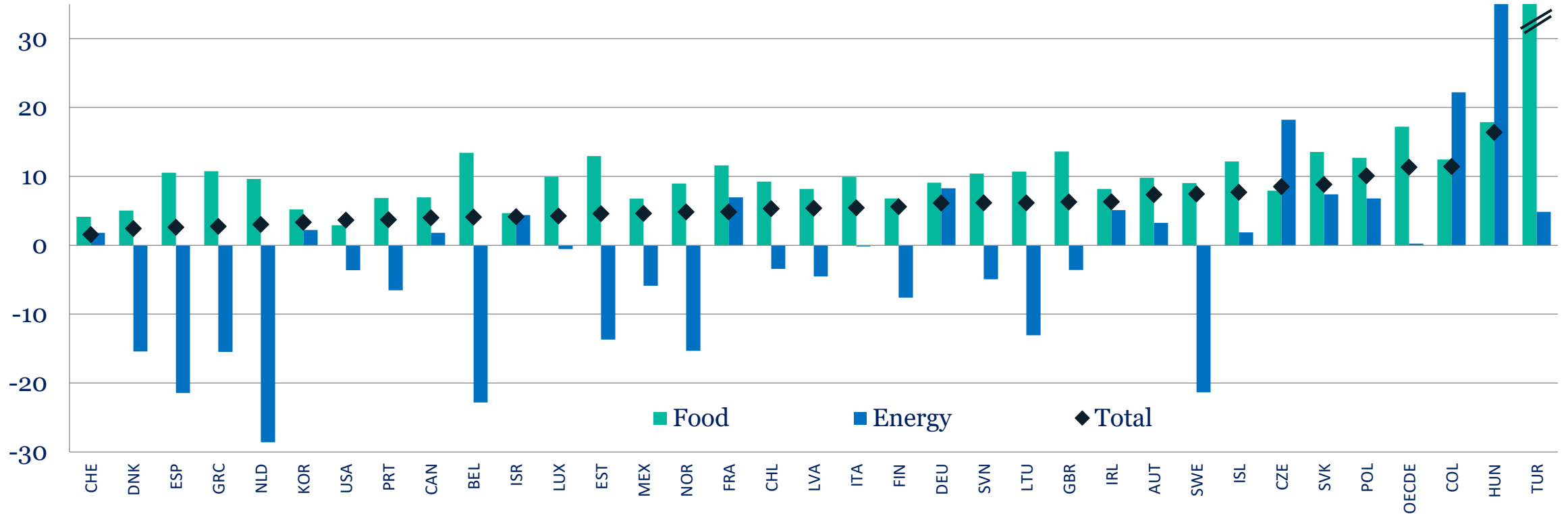
Much of the rise in inflation was unexpected

Projected 2023 headline inflation (%)

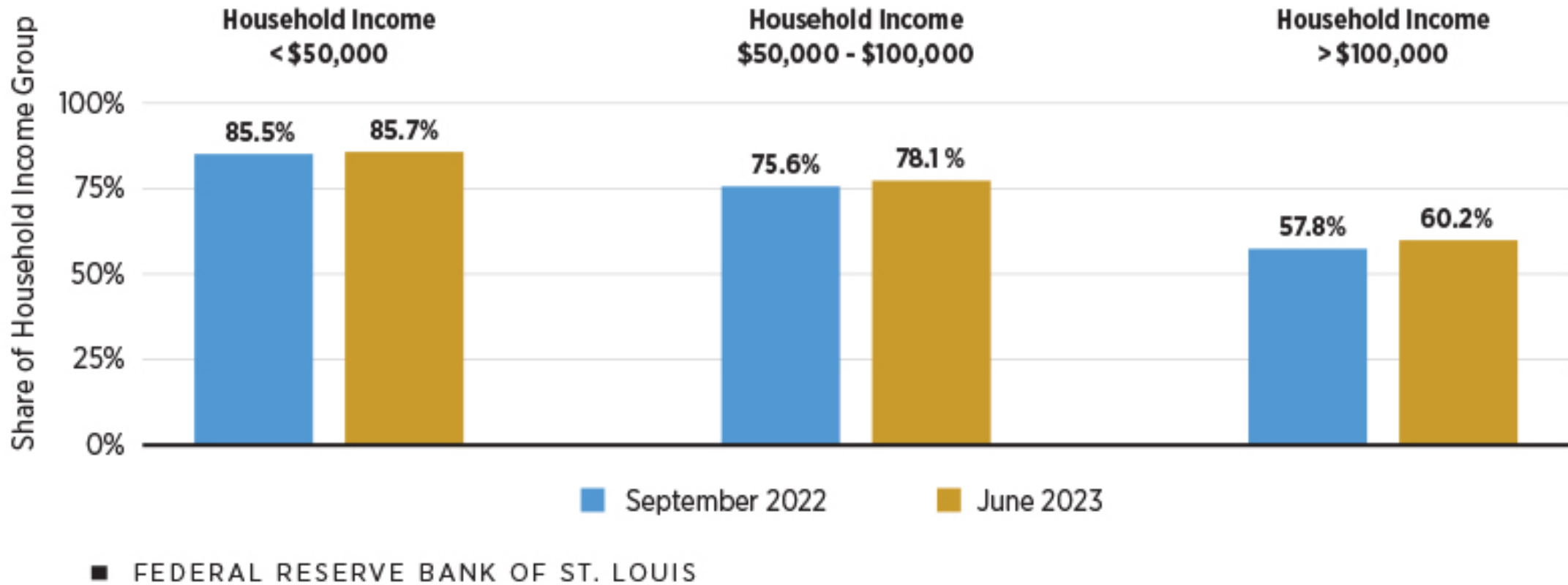


In 2023, energy prices decreased

Consumer price inflation, change from same period previous year, August 2023 (%)



Price pressures stress is higher among lower income households



Technical issues

Share of household (HH) budget mechanism:

- Gather comparable cross-country data on expenditure shares by risk factors
- Only microdata would allow to investigate the interplay of different factors
- Simulating the impact of inflation requires a crosswalk between price data and expenditure categories
 - For EU countries, prices and expenditures by COICOP category:
 - Energy
 - Food
 - Other

Adaptation

- Evaluating this channel requires modelling (additional assumptions and data required)



What is income?

Country	Income definition	Income categories
CZE	Net money income per person	Quintiles
DEU	Net monthly household income	Up to 1300 euro, From 1300 to 1700 euro, From 1700 to 2600 euro, From 2600 to 3600 euro, From 3600 to 5000 euro, 5000 euro or more
DNK	Household annual total income	Up to 250000 DKK, From 250000 to 449999 DKK, From 450000 to 699999 DKK, From 700000 to 999999 DKK, 1000000 DKK or more
ESP	Monthly net household income	Up to 499 euro, From 500 to 999 euro, From 1.000 to 1.499 euro, From 1.500 to 1.999 euro, From 2.000 to 2.499 euro, From 2.500 to 2.999 euro, From 3.000 to 4.999 euro, 5.000 euro or more
FRA	Equivalentized household disposable income	Deciles
ITA	Income proxied by education	Lower secondary, Upper secondary, Tertiary education
JPN	Annual household income	Quintiles
MEX	Quarterly total household income	Deciles
GBR	Equivalentized household disposable income	Deciles
USA	Income before taxes, defined as the combined income of all consumer unit members (14 years of age or over) during the 12 months preceding the interview	Quintiles

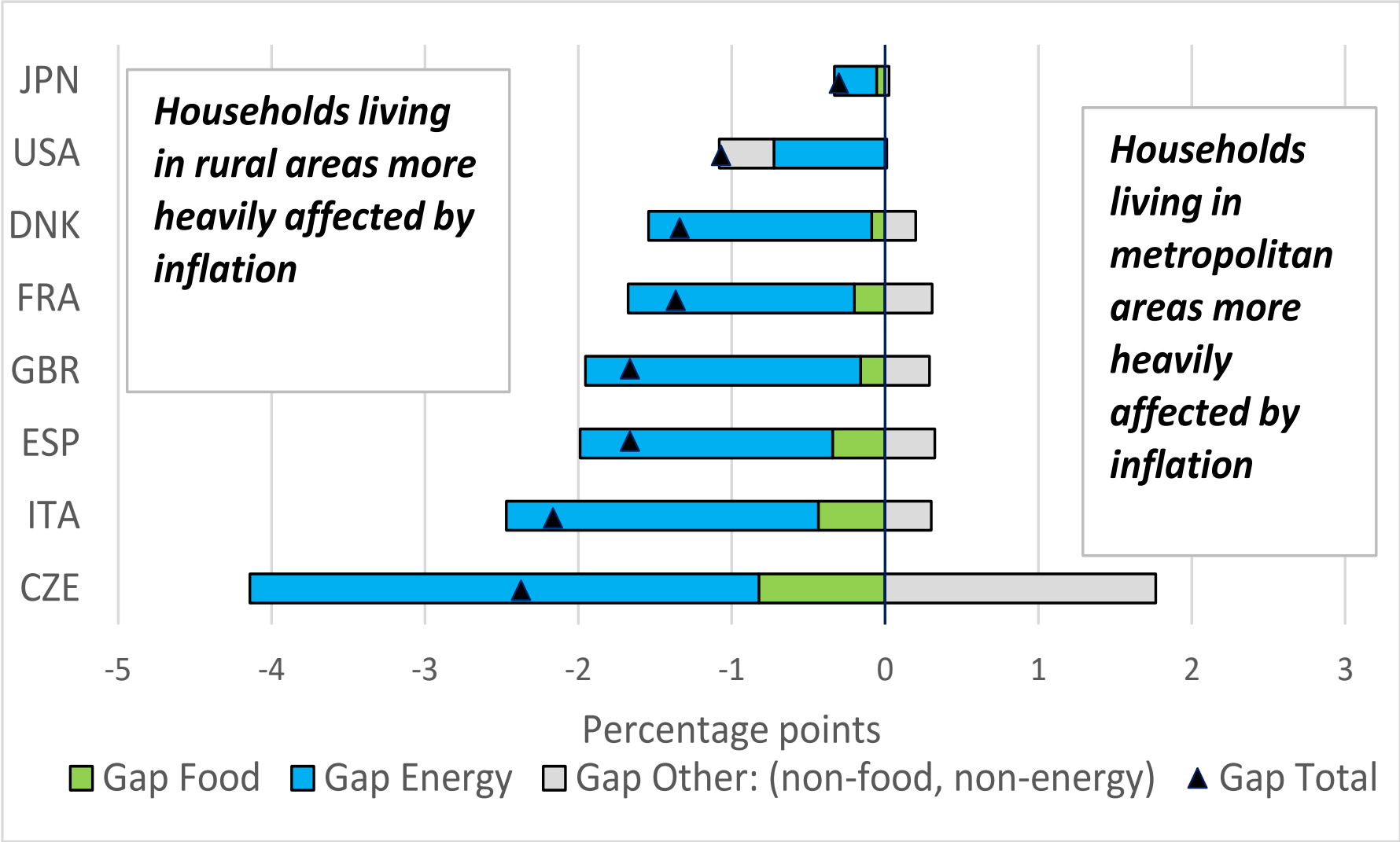


What is energy?

Country	HBS year	HBS Data sources	Energy consumption categories (COICOP codes)
CZE	2020	Czech Statistical Office - Household Budget Survey	04.5 + 07.2.2
DEU	2020	Destatis - Laufende Wirtschaftsrechnungen Einkommen Einnahmen und Ausgaben privater Haushalte	Housing energy ("Energie") + 07.2.2
DNK	2020	Statistics Denmark - Household Budget Survey	04.5 + 07.2 (data for 07.2.2 not available)
ESP	2020	National Institute of Statistics - Household Budget Survey	04.5 + 07.2 (data for 07.2.2 not available)
FRA	2017	National Institute of Statistics and Economic Studies - Enquete Budget de Famille	04.5 + 07.2.2
ITA	2020	National Institute of Statistics - Indagine sulle spese delle famiglie	04.5 + 07.2.2
JPN	2020	Statistics Bureau of Japan - Family Income and Expenditure Survey	Housing energy ("Fuel, light & water charges" excluding "Water and sewerage charges")
MEX	2020	INEGI - Encuesta Nacional de Ingresos y Gastos de los Hogares	Housing energy ("Electricidad y combustibles") and Transports energy ("Refacciones, partes, accesorios, mantenimiento, combustibles y servicio para vehículos")
GBR	2020	Office for National Statistics - Living Cost and Food Survey	Housing energy ("Electricity, gas and other fuels") and transport energy ("Petrol, diesel and other motor oil")
USA	2020	Bureau of Labour Statistics - Consumer Expenditure Survey	Housing energy ("Utilities, fuels, and public services" excluding "Telephone services" and "Water and other public services") and Transport energy ("Gasoline, other fuels, and motor oil")



Beyond averages: Differences across areas of residence (pp)



Note: How to read: in the United Kingdom, the decline in purchasing power following changes in consumer prices between August 2021 and August 2022 was 3.1 percentage points (pp) higher for low relative to high-income households (a negative 3.1 pp gap). This total gap is driven by three effects: the effect of changes in energy prices (a negative 2.9 pp gap), the effect of changes in food prices (a negative 1 pp gap) and the effect of changes in non-energy non-food consumer prices (a positive 0.8 gap).

Source: National HBS and CPI.



Beyond the average: Differences across age groups (pp)

