

Modelling the Distributional Effects of the Cost-of-Living Crisis in Turkey and the South Caucasus: A Microsimulation Analysis

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Cost-of-Living Crisis

▪ Reasons

- The pandemic and the war in Ukraine
- Regional interactions
- Domestic policy practices of countries

▪ Results

- A sharp increase in prices throughout the world
- A concentration in price growth of necessities

▪ Distribution of household budgets

- Different welfare regimes and patterns of price changes
- Closely related the **inflation**

Why Turkey and South Caucasus

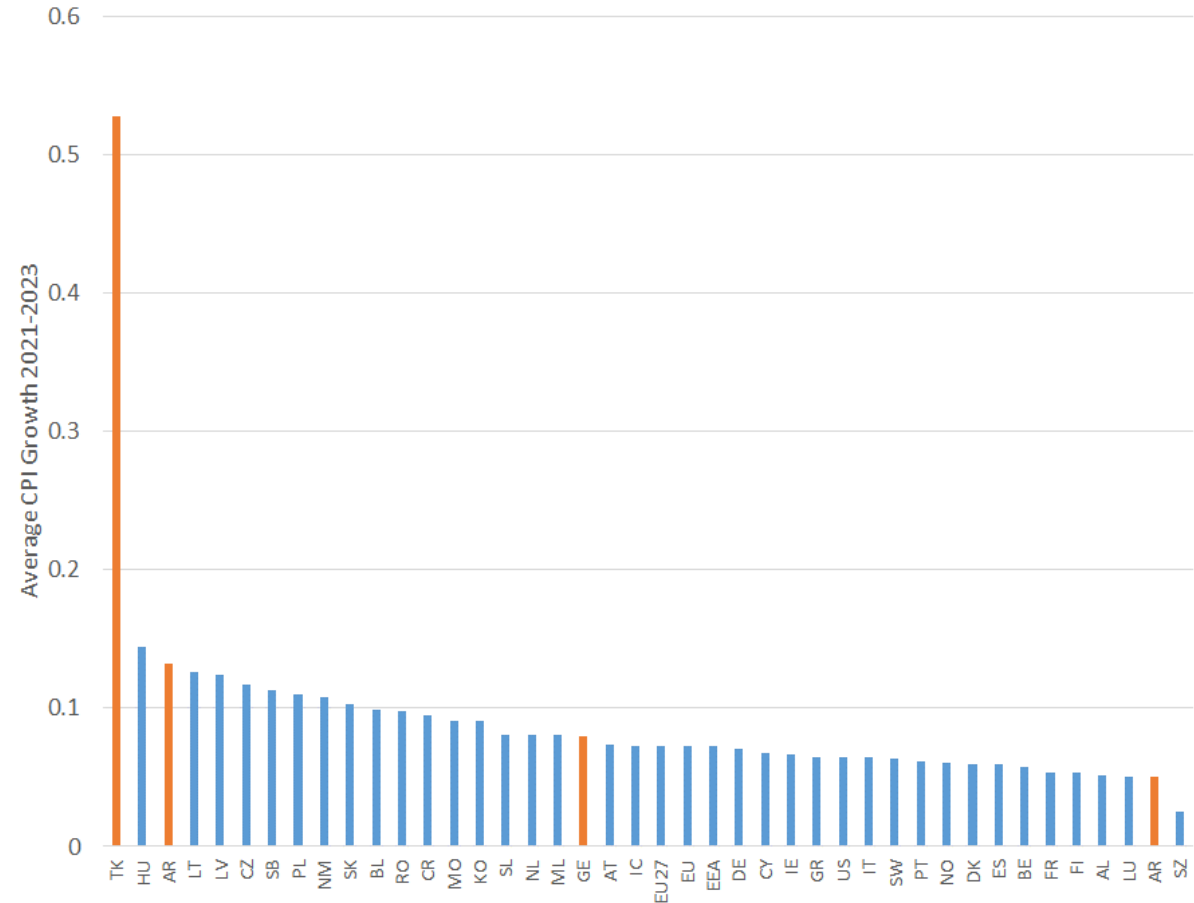
■ Turkey

- Exceptional **surge** in price growth
- Repeatedly faced **high inflation** rates and **cost-of-living crises**

■ Neighboring countries Armenia, Georgia, and Azerbaijan

- Annual inflation rates of 13.2%, 7.9%, and 5%, respectively

Figure 1. Annualised price inflation



Motivation

▪ Turkey

- Experienced the **largest increase** in prices

▪ South Caucasus

- Neighbouring of Turkey, but lower inflation rates

▪ In order to **gauge** the scale of the net differential impact of price changes in Turkey

- **Comparing** neighbouring...

➤ **We undertake a comparative analysis with each other**

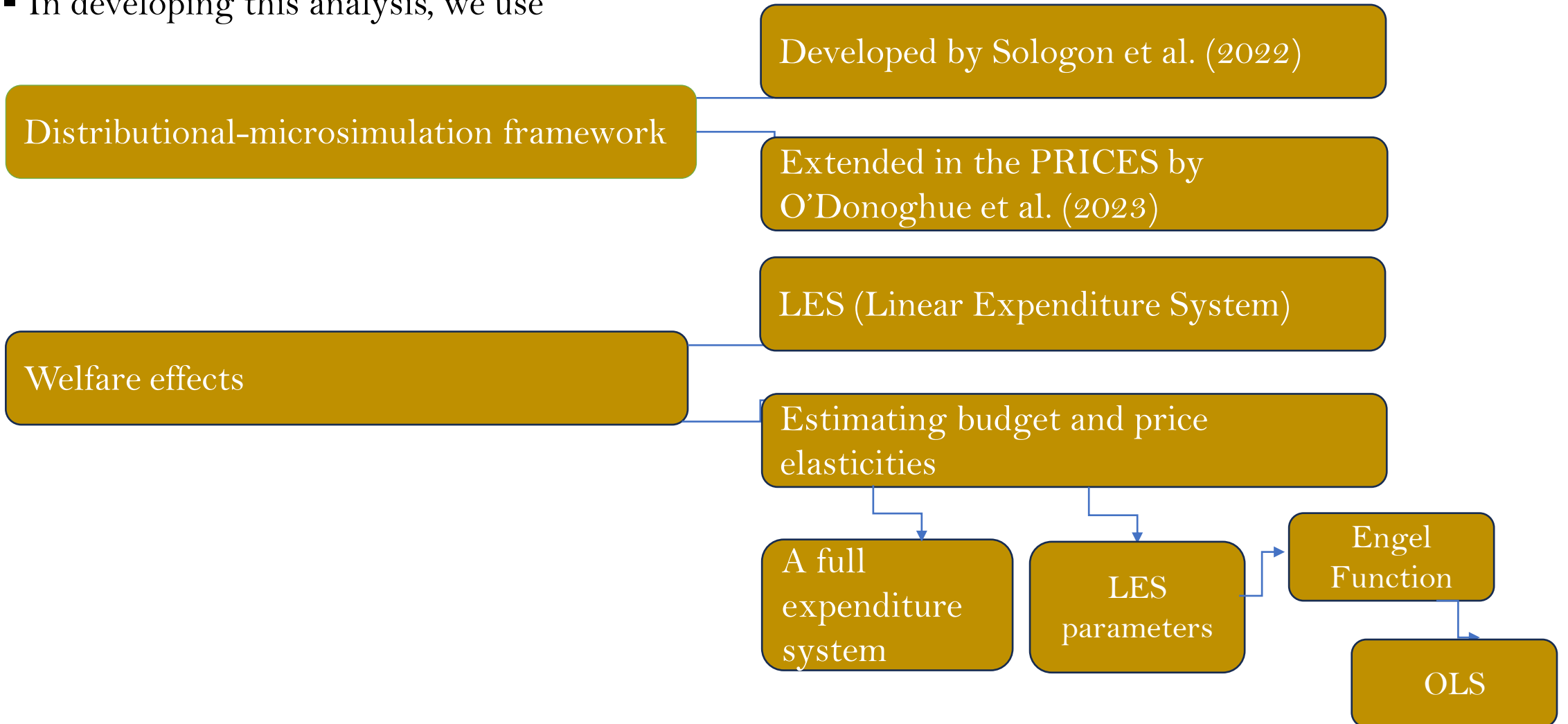
○ Builds upon the seminal work of Sologon et al. (2022)

➤ By extending the analysis to **developing countries**

○ Empirical evidence is comparatively **limited**

The Methodology

- In developing this analysis, we use

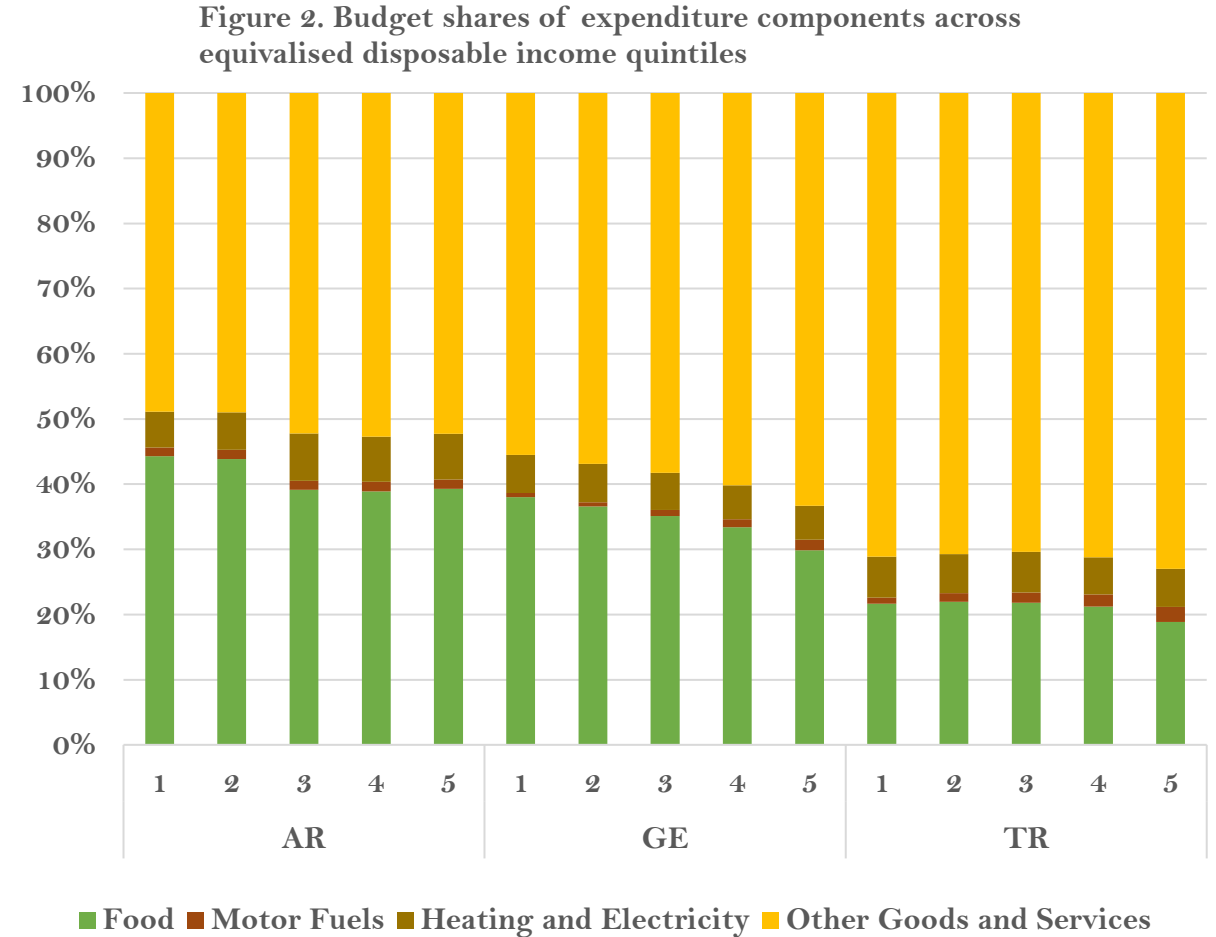


The Data

- Expenditure information on Household Budget Survey (**HBS**)
- **CPI** changes (Eurostat, Armenia, Azerbaijan and Georgia Statistical Offices)
- Price changes relative to a base level (ref. prices = 2020 December)
- Microdata for Azerbaijan is **not available** for research purposes.
 - However, there is detailed distributional data available for budget shares, but detailed by **decile of consumption** rather than **decile of income**.
- To **update** the cost of living for each household,
 - We rely on Harmonized Consumer Price Index (**HCPI**) data obtained from Eurostat for **Turkey** and from the national statistical offices for **Armenia and Georgia**.

Spending Patterns across the Income Distribution

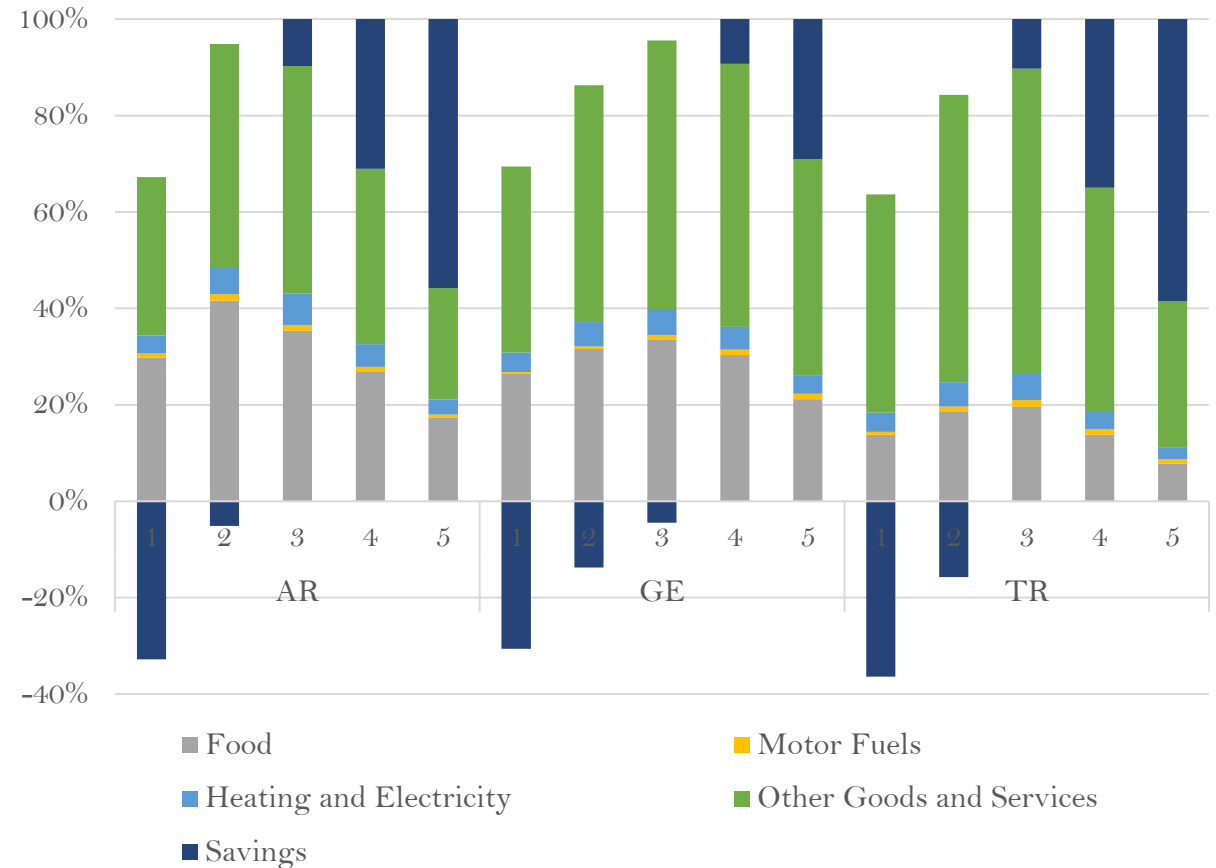
- We note a steady decline in the food budget share, **consistent with Engle's law** and the differences in GDP per capita.
 - In Georgia and Turkey, **rising** fuel prices have a **greater impact** on higher-income households.
 - For household **heating and electricity** costs,
 - The share is **higher** for poor households in Turkey and Georgia, but in Armenia the **opposite holds**.



Composition of Expenditure across the Income Distribution

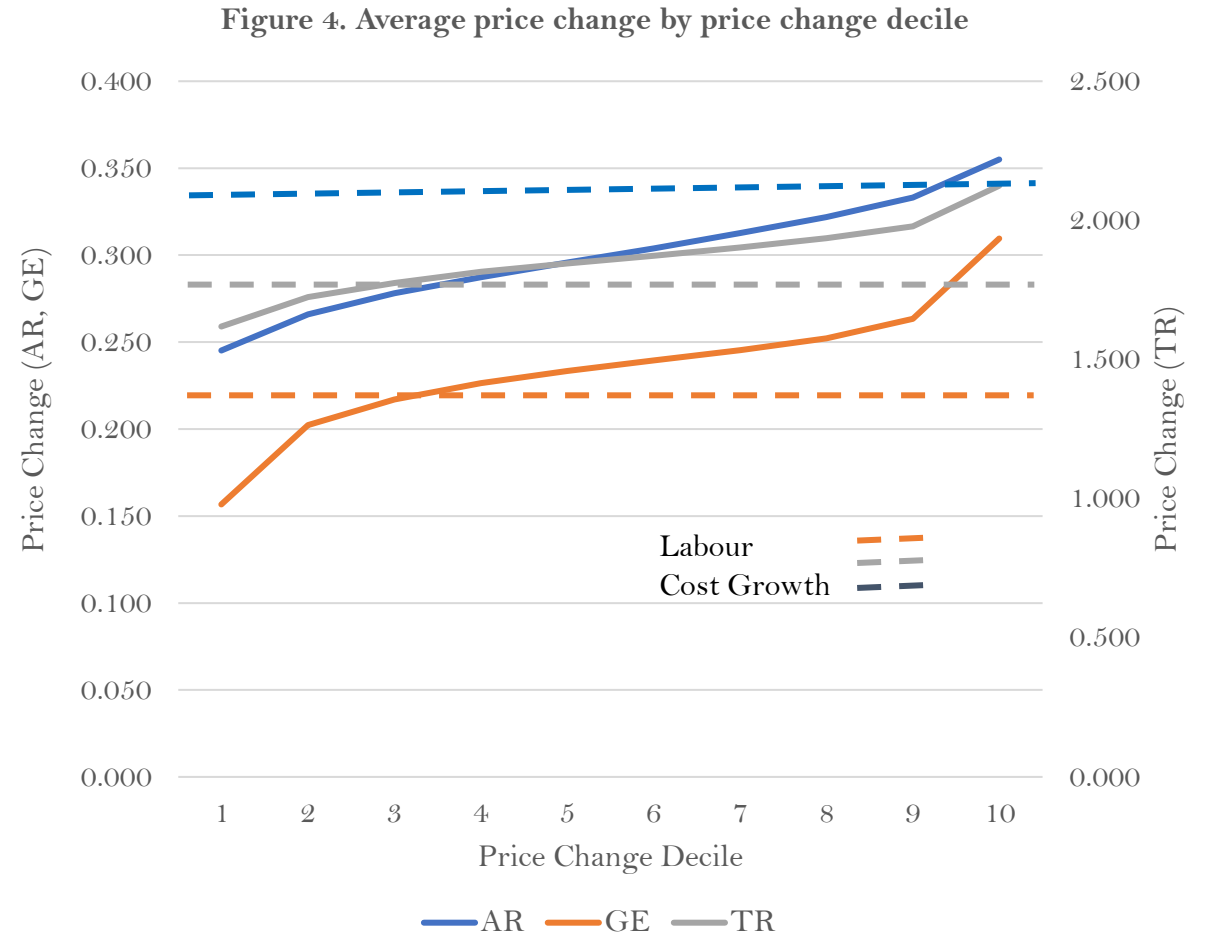
- In all three countries,
 - Savings rates are negative for the lowest quintile of the income distribution.
 - Gradually increase as we move up the income ladder.
 - Turkey has the biggest differential savings rate, with the most negative at the bottom and the most positive at the top, followed by Armenia and Georgia.

Figure 3. Budget and saving shares of expenditure components across equivalised disposable income quintiles



Results

- December 2022 compared with December 2020,
 - The **Turkish** average price growth is the **highest**,
 - In Armenia and Turkey,
 - The **growth in labour costs** was **lower** than even the **lowest decile of price growth rates**.
 - In Georgia,
 - Approximately **50% of the population** have price growth **above the increase** in labour costs, while the **remaining** sees **50% decrease**.
- Consequently, leading to a **decrease** in **purchasing power across** various income levels.



Impact of Inflation on Household Disposable Income

- This figure allows us to see which component drove the overall regressive/progressive impact.
 - In Turkey, the progressive effect for motor fuel and other goods.
 - In Georgia, the regressive effect was predominantly driven by essential goods.
 - In Armenia, the regressive impact was primarily driven by food inflation, food inflation exhibits a more regressive trend in Turkey.

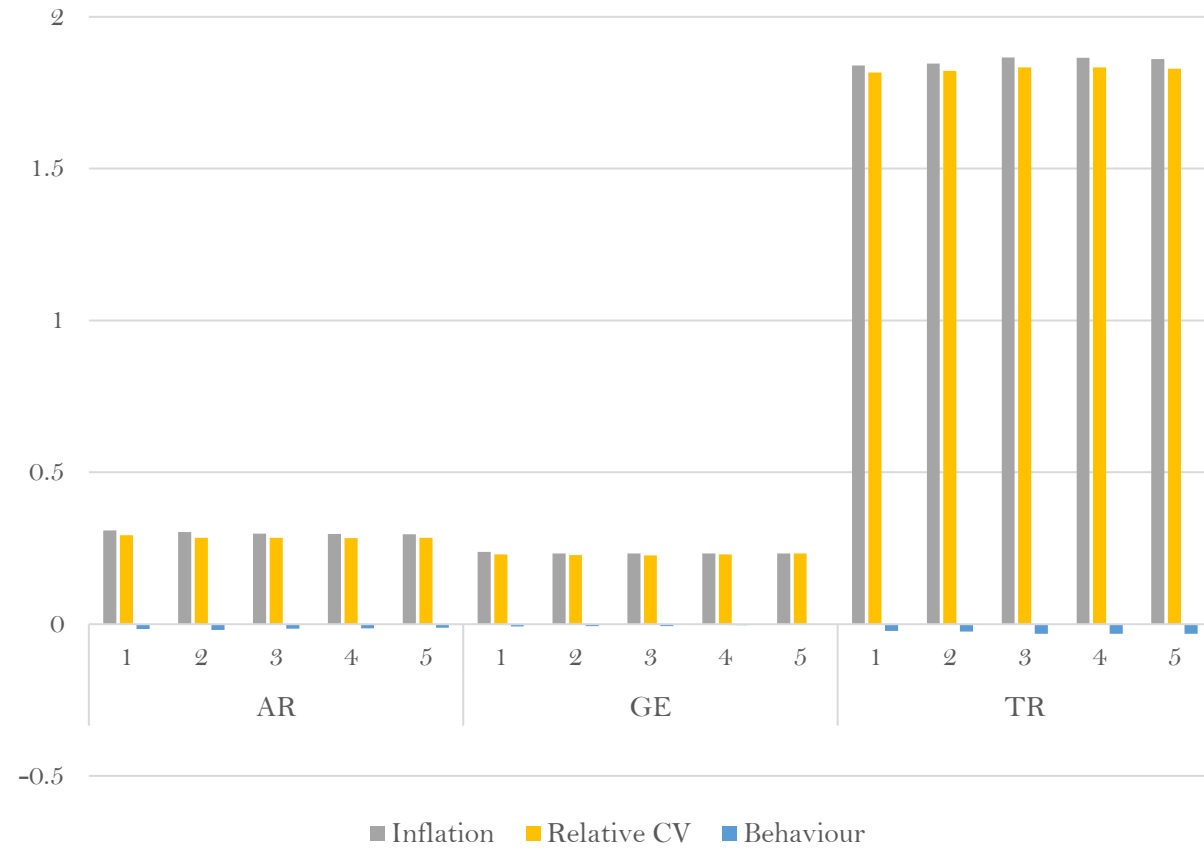
Figure 5. Direct redistributive effect of each commodity group



Welfare Losses Decomposition

- The behavioural response factor is found to **exert a very limited** influence on welfare in all countries.
- This result is not **surprising** in important categories such as energy and food,
 - which offer households **limited** flexibility in adjusting their consumption behaviour.

Figure 6. Welfare losses decomposition into price and behavioural adjustment



Conclusion

- In Turkey,
 - The **progressive effect** was **driven** primarily by motor fuel inflation following other goods and services inflation.
 - Food, heating, and electricity exerted a **regressive** effect.
- In Georgia,
 - Motor fuel and other goods have **progressive effect**.
 - The **regressive effect** was predominantly driven by essential goods (food, heating and electricity) with a combined contribution.
- In Armenia,
 - The **progressive effect** was **driven** motor fuel, heating electricity and other goods.
 - The **regressive impact** was primarily driven by food inflation.

Conclusion

- **Food inflation** exhibits a more **regressive** trend in Turkey **than** in Georgia and Armenia.
- It is **worth noting**, however, that Turkey is **a special case**
 - It has the **highest inflation** rate in the world, a distinction that can be attributed to idiosyncratic factors such as ...
 - **Expansionary Economic Policies (Negative real interest rates, Subventions etc.)**
 - ✓ Distorts income and wealth distribution by inflating **asset prices** and **triggers** inflation
 - ✓ By causing upward **exchange rate developments**
 - **Geopolitical effects**
- These **unique circumstances** set Turkey **apart from** the usual inflation trends in other countries.

Thank you to my co-authors and audience...

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