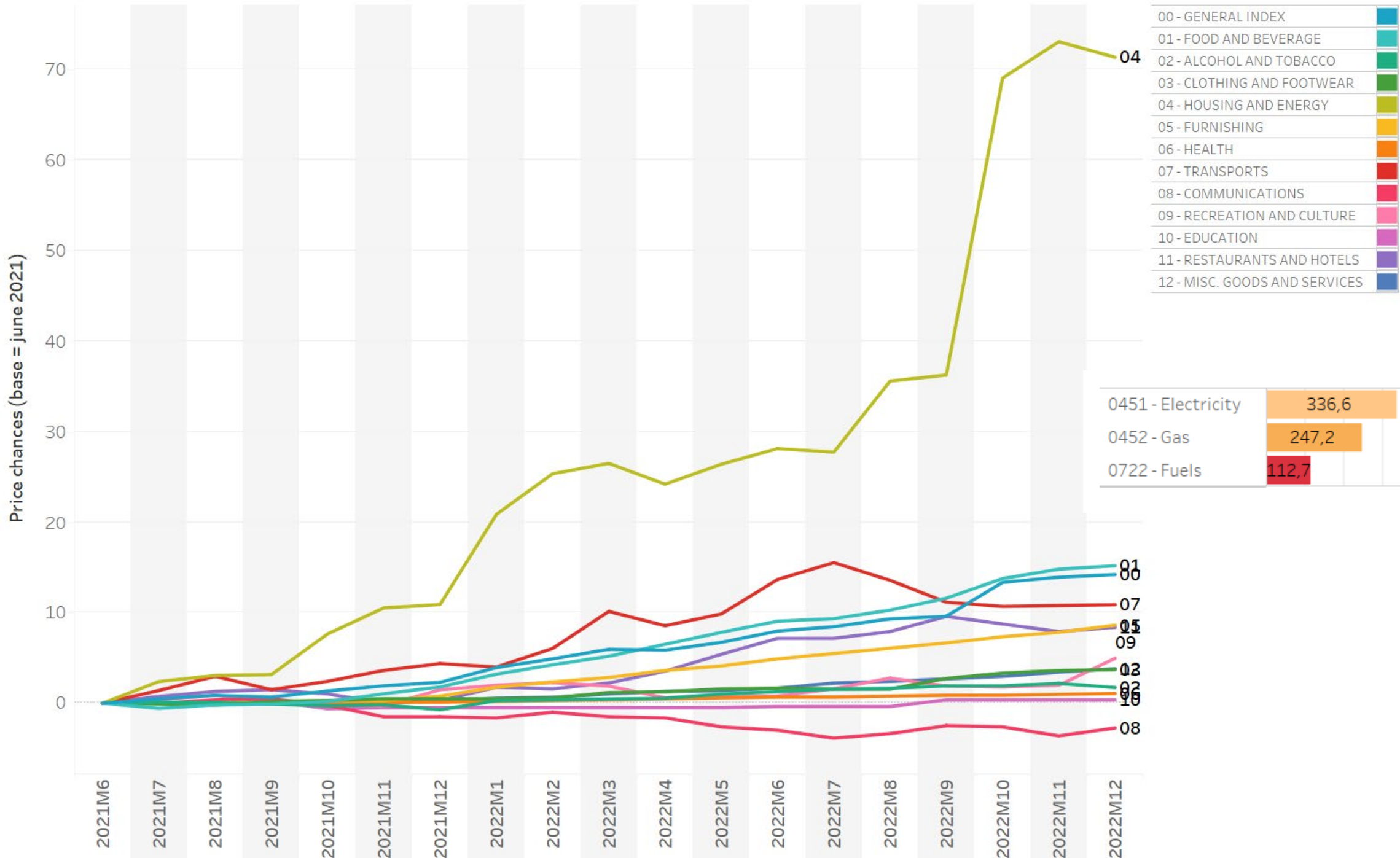


*Distributional effects of the increase in
energy prices on households spending and
energy poverty*

*Bardazzi, R., Gastaldi, F., Iafrate, F., Pansini, R.V., Paziienza, M.G., **Pollastri, C.***

- Motivation:
 - Since II semester 2021, remarkable increase in price indices
 - Price rise differentiated by groups of consumption goods
 - Heterogeneous Increase of household expenditure
 - Higher energy prices can increase the area of energy vulnerability and poverty
- Policy interventions to mitigate the effect of total and energy price rise
- Methodology - UPB microsimulation framework
- Main results: distributional impact of rise in energy prices and mitigation policies; effects on energy poverty and vulnerability

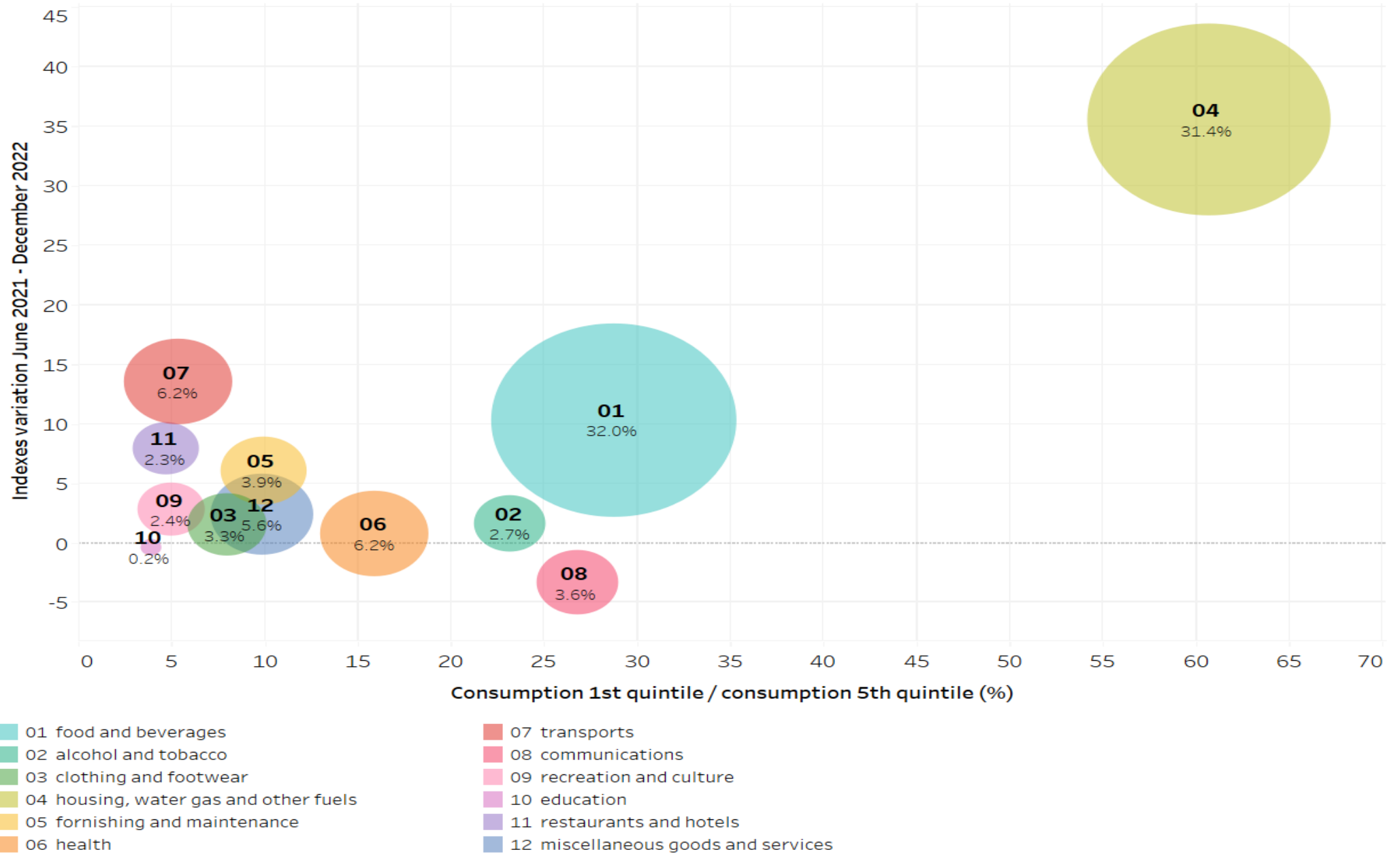
Price indexes in Italy by COICOP (2-dgt) 2021M6 – 2022M12



The mix of mitigation measures

Interventions		2021								2022								2023								Total										
		June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May		June	July	Aug	Sept	Oct	Nov	Dec			
TARIFFS POLICIES (Households and firms)	Electricity		1.2 DL 73/21																															0.5 DDLB 2023	1.7	
						2.0 DL 130/21			1.8 LB 2022		1.8 DL 17/22			0.7 DL 50/22		0.5 DL 115/22					1.0 DDLB 2023													7.8		
	Gas					0.5 DL 130/21			0.5 LB 2022		0.3 DL 17/22			0.5 DL 50/22		2.2 DL 115/22 DL 179/22					4.0 DDLB 2023													8.0		
						0.6 DL 130/21			0.6 LB 2022		0.6 DL 17/22			0.5 DL 50/22		0.8 DL 115/22						0.8 DDLB 2023													3.9	
	Oil														9.1 Various DDLL e DM																				-0.6 DDLB 2023	8.5
	Total (households and firms)																																			29.9
TRANSFERS AND COMPENSATIONS (Households)	Social Bonus					0.5 DL 130/21			0.9 LB 2022		0.4 DL 17/2022			DL 50/22		1.7 DL 115/22 DL 176/22					2.4 DDLB 2023														5.9	
														0.2 DL 21/22 e DL 50/22													0.1 DDLB 2023								0.3	
	Lump sum Bonuses (euro 200 e 150)													6.8 DL 50		0.2 DL 115		2.9 DL 144																		9.9
	Contribution relief														2.7 LB 2022 e DL 115/22													4.2 DDLB 2023								6.9
	Pensions rivalutation and increase of minimum pensions																	1.0 DL 115/22										0.2 DDLB 2023								1.2
	Total households																																			24.2
Total																																			54.1	

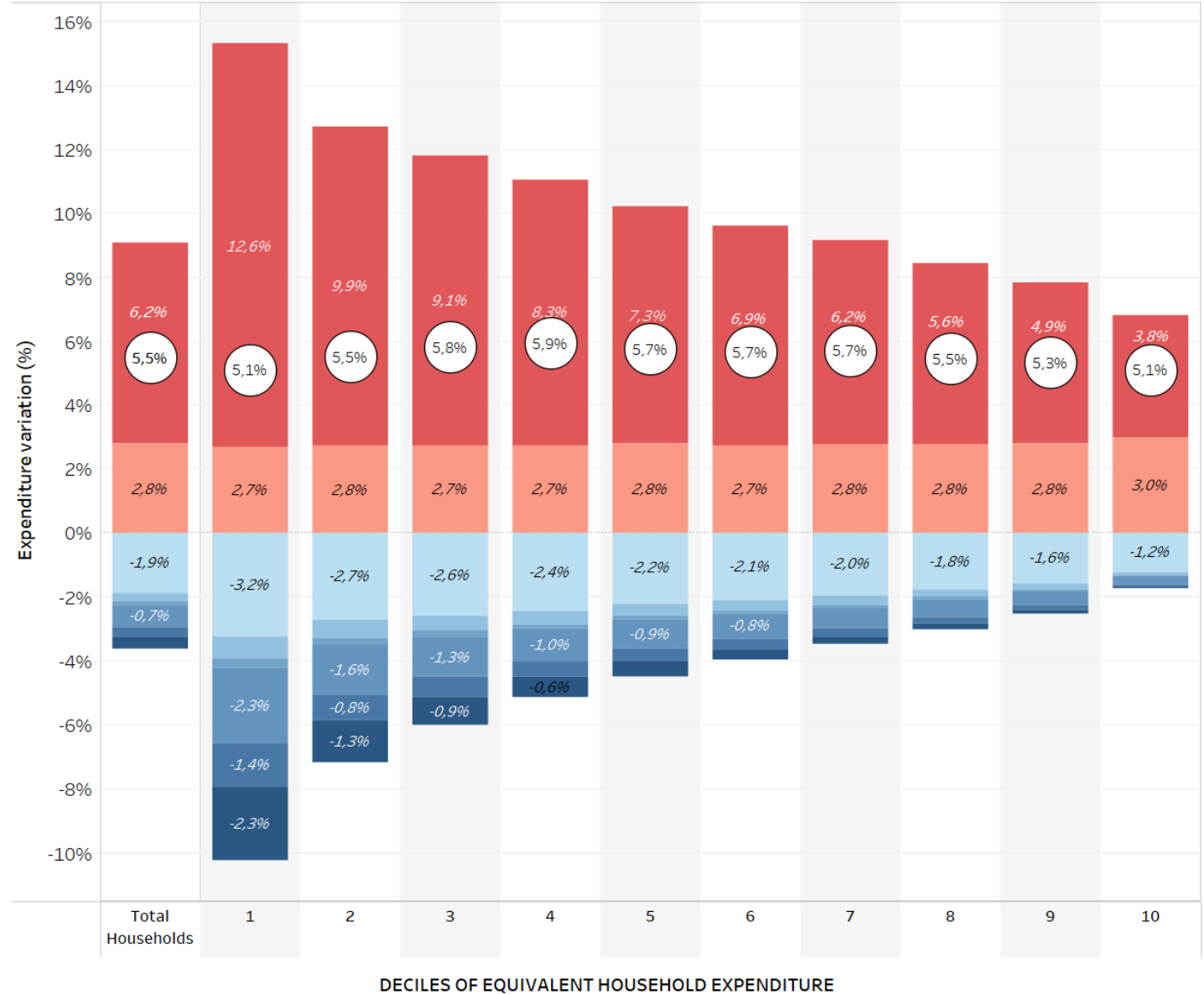
Heterogeneity of inflation and spending behaviour among rich and poor household



- Micro-estimation of the expenditure increase of Italian households over a period of 14 months, respect to a reference scenario of zero inflation, using UPB microsimulation tool
 - Representative sample of Italian household, whose consumption is surveyed by Istat (HBS survey) and administrative incomes (from fiscal and social security registers) are exactly matched by UPB.
- High detail of household consumption basket (~120 COICOP categories)
- Price variation is taken from NIC index prices (Istat) at the same level of detail
- Only for energy items, direct estimation of household spending applying tariffs components to an estimation of quantities of electricity, gas and fuels (kWh, Sm³, lt)
- At this stage of analysis quantities are assumed constant over the period
- Estimation of household spending also in absence of policy interventions on energy prices
- Estimation of the means tested transfers, energy social bonus and 150/200€ bonus and social contribution relief

Distributive impact of inflation and mitigation policies by expenditure deciles (Dec 2022)

- The impact of energy price increase is greater for poorer households, while the impact of other goods inflation is more homogeneous
- The effect of mitigation policies is also higher in lower deciles
- More progressive effects of transfers respect to price discounts and, among transfers, of lump sum bonuses more than social bonus
- From June 2021 to December 2022 compensate more households in the first decile but their net expenditure increase equals that for the 10th decile



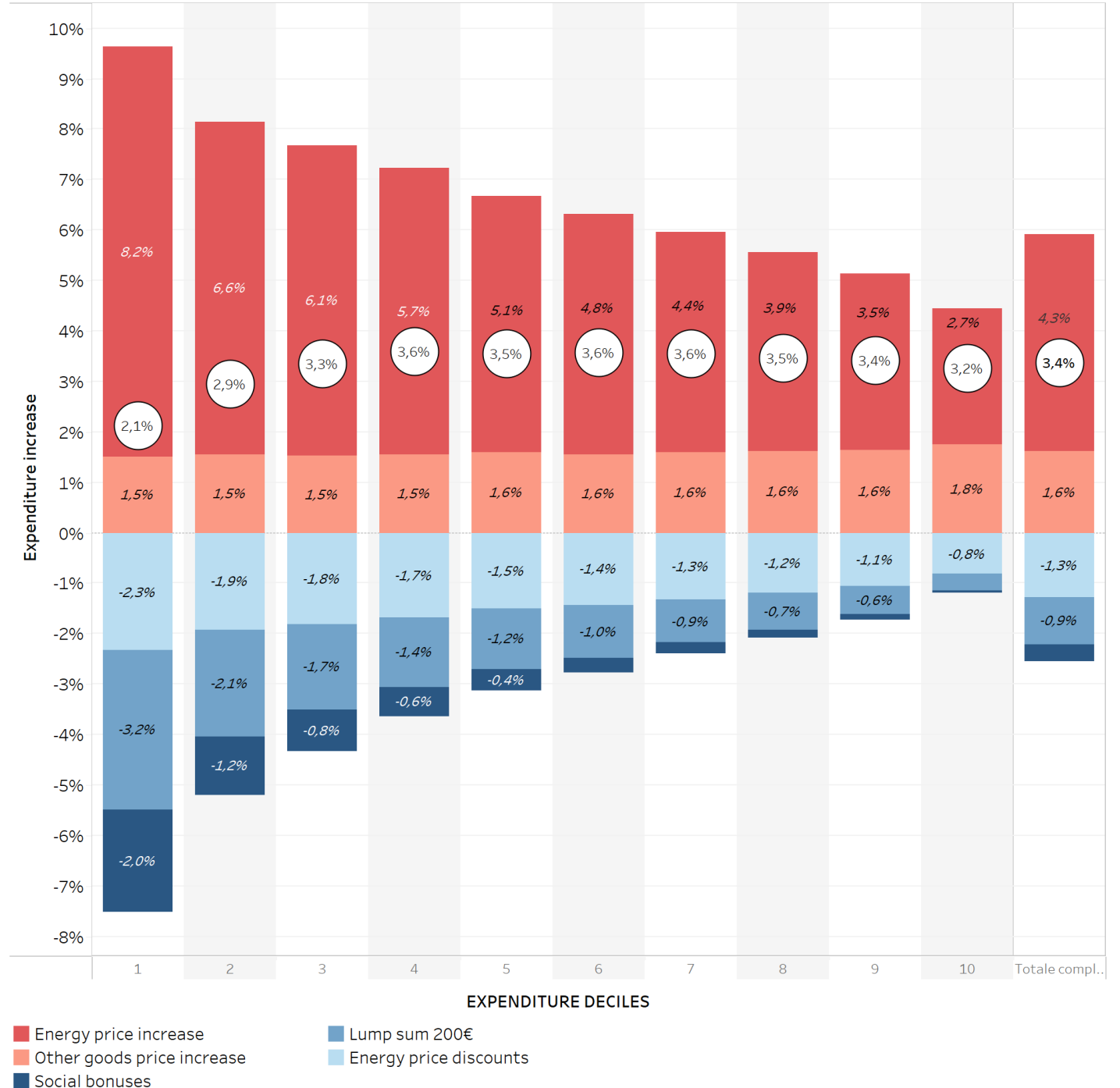
○ Variazione percentuale rispetto a giugno 2021

Contributions to variation

- Energy price increase
- Non-energy price increase
- Social bonuses
- Lump sum bonus (150 euro)
- Lump sum bonus (200 euro)
- Pensions revaluation
- Social contribution relief
- energy tariffs' discounts

Distributive impact of inflation and mitigation policies by expenditure deciles (Oct 2022)

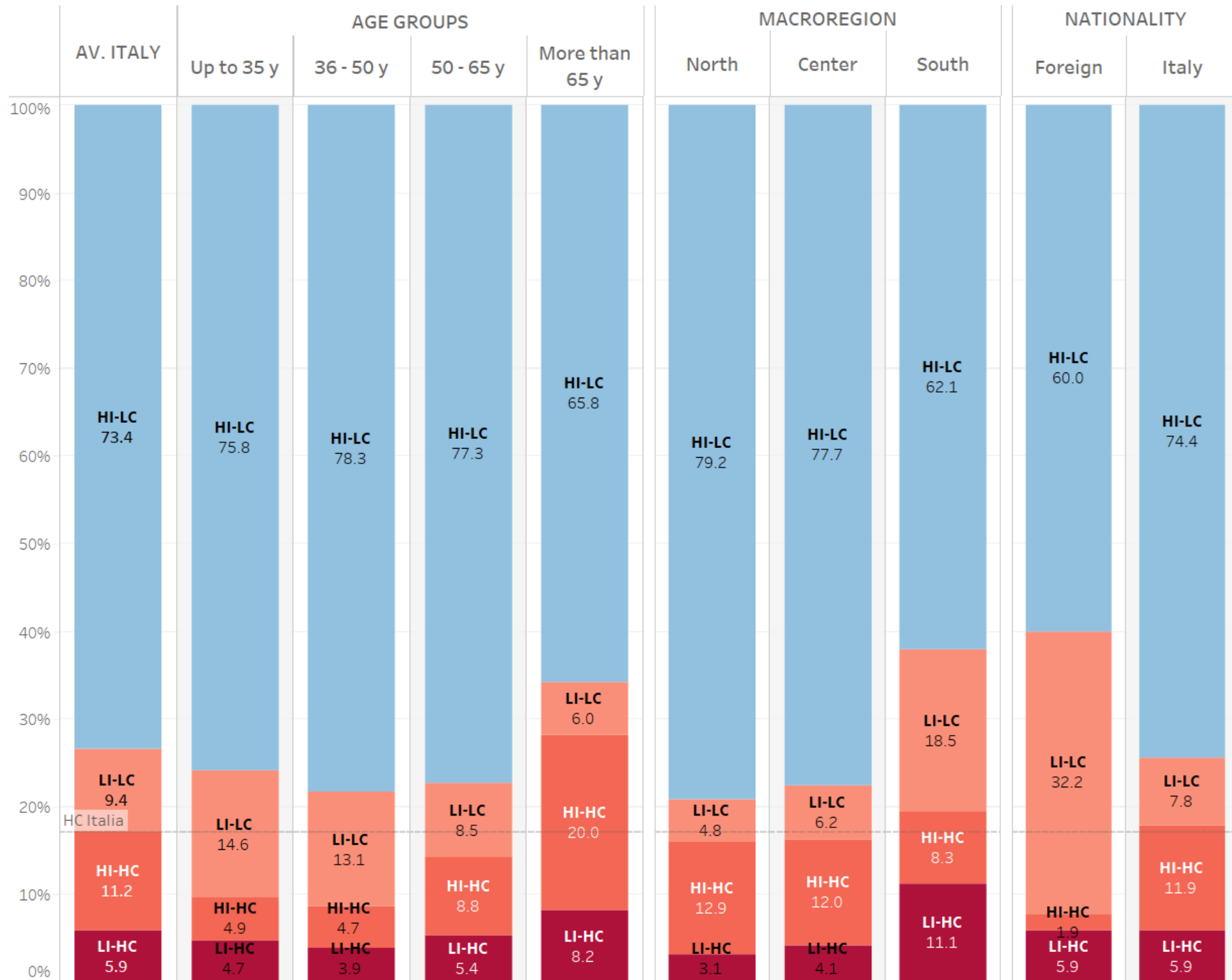
- The impact of energy price increase is greater for poorer households, while the impact of other goods inflation is more homogeneous
- The effect of mitigation policies is also higher in lower deciles
- More progressive effects of transfers respect to price discounts and, among transfers, of energy social bonus respect to 200€ bonus
- Policy interventions makes net expenditure increase lower for the first deciles, despite the effect of market prices



	LIHC ITA	POV (LI)	2M (HC)	1st COMP	ZERO RISC.	UNDER P50	2nd COMP
Base scenario	8.23	15.31	17.14	5.89	3.81	50.0	2.64
Counterfactual	15.89	18.10	44.16	14.20	3.81	50.0	2.64
With tariff policies	14.11	17.36	37.74	12.33	3.81	50.0	2.64
With tariff policies and trasnfers	9.84	16.13	27.36	7.62	3.81	50.0	2.64

- The increase in energy prices increased energy poverty and energy vulnerability
- L-LIHC index based on household expenditure with no behavioural response to capture the short-term effects of energy inflation keeping consumption constant
- Simulation results on a almost double percentage of households in energy poverty (8.2% to 15.9%)
- Income and tariff mitigation policies result in an increase of the energy poverty index of ‘only’ 1.6% in 2022 with respect to June 2021
- Distributional impacts of mitigation policies on energy poverty and vulnerability area for different types of households

1st component of the M-LIHC index (June 2021)



1st component of the M-LHC index (December 2022)

