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The impact of unexpected inflationary shock in 2022 and 2023 on the welfare of families: The case of Slovakia

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Introduction

- **Council for Budget Responsibility** (CBR) is an independent authority for monitoring and evaluation of Slovak public finance, established in 2012
- One of CBR's tasks is the assessment of legislative proposals
- Modelling tools were developed for the assessment of distributive effects and are used to quantify the impacts
- For this analysis we use the static part of our modelling tool
    - SIMTASK - a microsimulation model of tax & transfer system
    - indirect tax tool
- In 2022 we assessed the anti-inflationary measures adopted by the government
- In this paper we took the challenge to incorporate the effect of inflation into our modelling approach
- Our aim is **to assess the distributive effects** of inflationary shock on Slovak families

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What we do

- We use our modelling tool, which **combines the HBS data and tax-benefit microsimulation model SIMTASK**
- The exogenous inflationary shock is embedded into the microsimulation model via an increase in families' expenditures.
- Results presented in the paper represent direct or "day after" effects of increased prices on purchasing power. It is assumed there is no behavioural reaction of economic agents.
- We assess **the net impact on purchasing power**, after the cushioning effect of government measures and after the economic adjustments (through wage and valorisation channel)
- We assess impact in both 2022 and 2023 and impact at the two-year horizon

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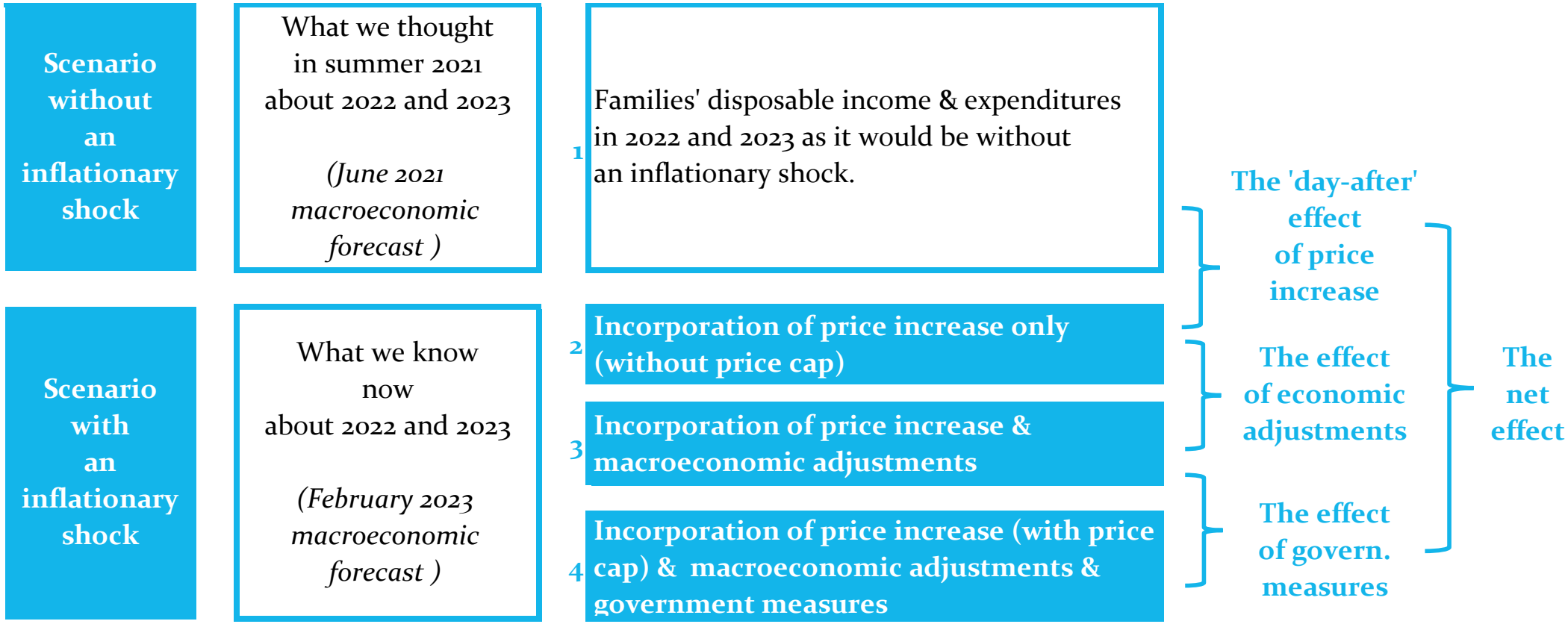
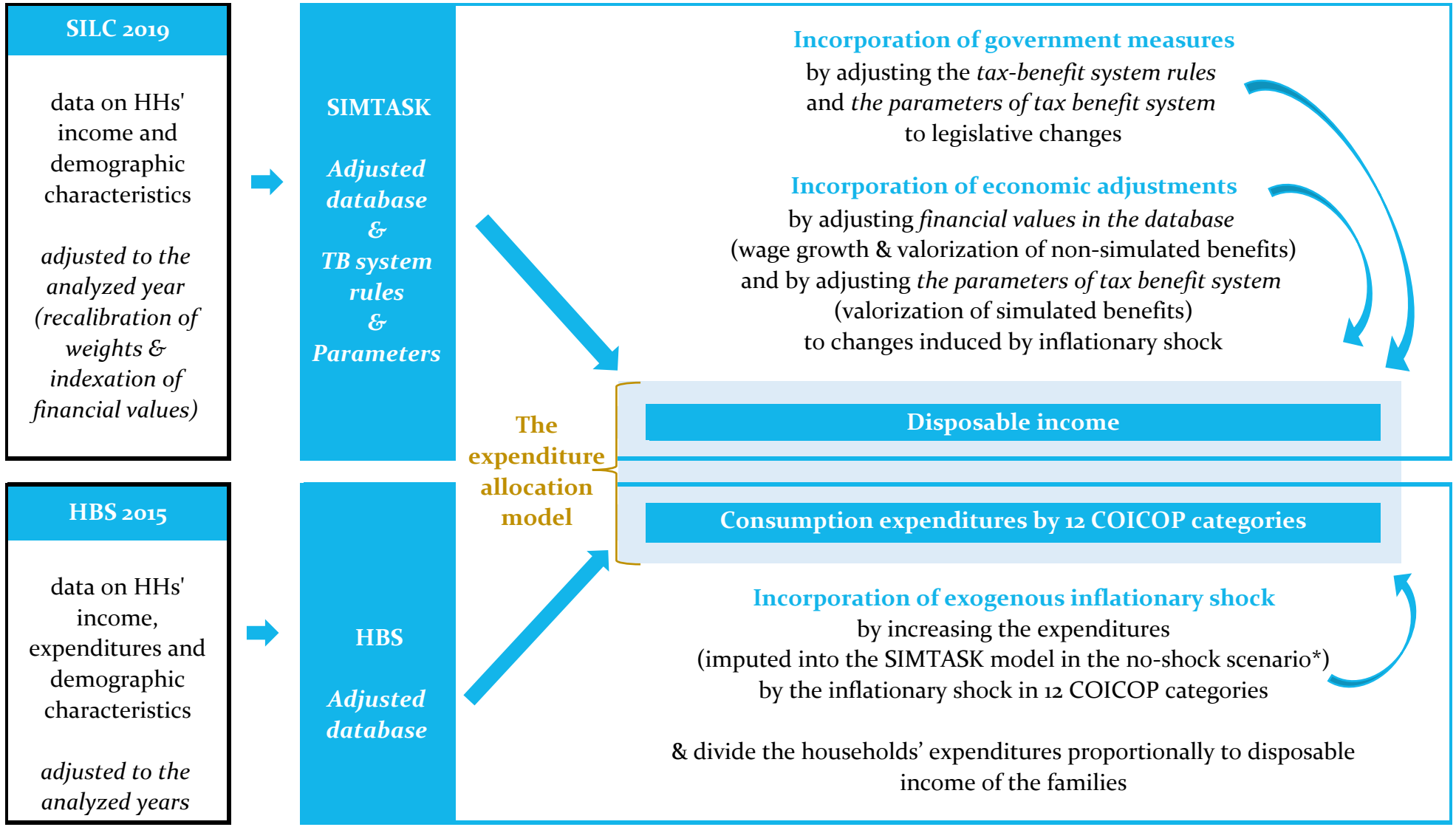
Overview of modelling approach



Note: The order of scenarios matters. First macroeconomic adjustments and then government measures, as the eligibility for child credit depends on wages.
In 2023, in scenario 2 we model total price increase, in scenario 4 we model price increase after the price cap.

Analytical approach combining the HBS data and microsimulation model SIMTASK



*We assume there is no behavioural reaction of economic agents.

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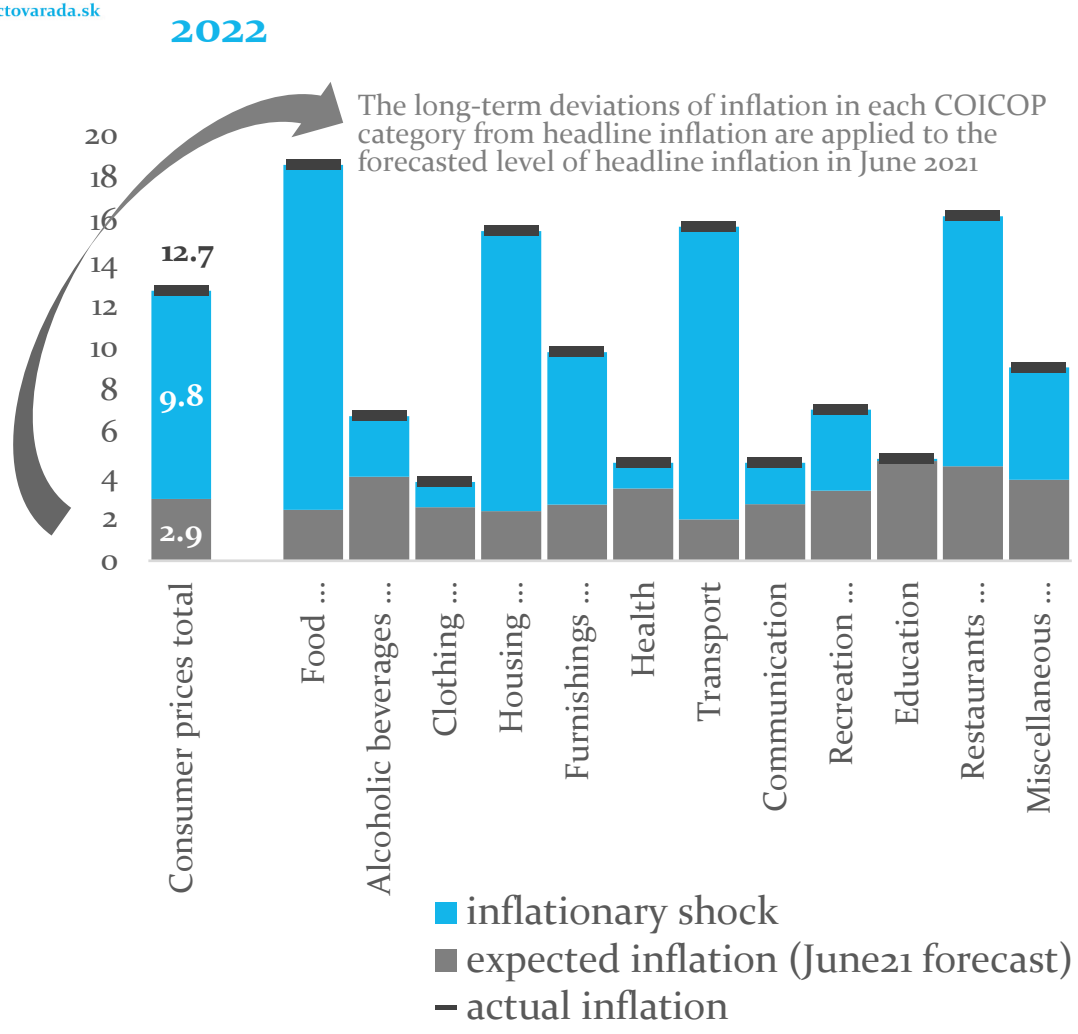
Incorporation of inflationary shock into the model – headline

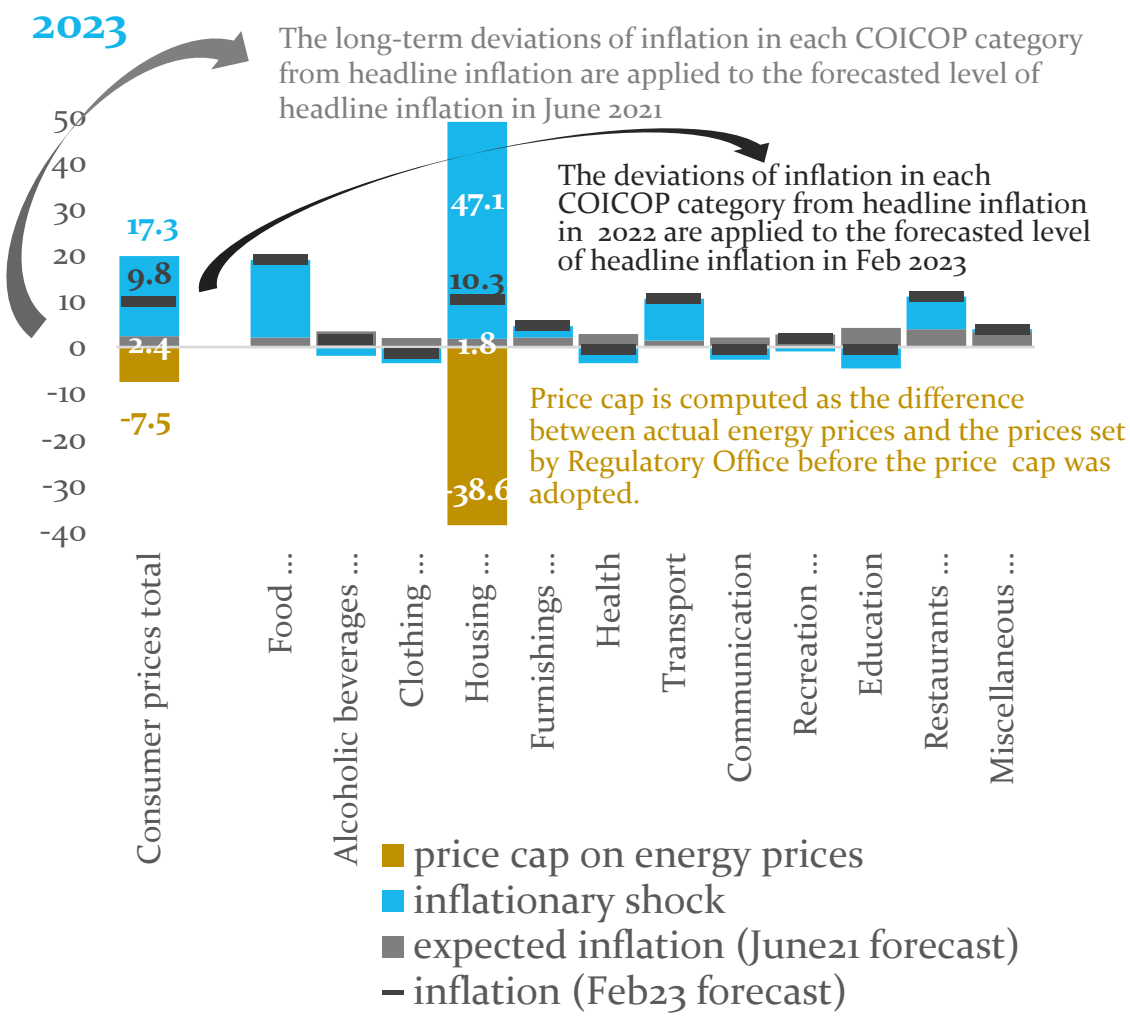
- By inflationary shock we mean the difference between the situation with high growth of prices (without price cap in 2023) and the hypothetical situation without an inflationary shock (or in other words, what we thought about inflation in summer 2021)

Forecast of headline inflation		2022	2023	
Jun-21	(inflation rate without the shock)	2.9	2.4	
Feb-23	(inflation rate with the shock)	12.8	19.7	(9.8 with price cap)
Inflationary shock		**9.9**	**17.3**	**(7,4 with price cap)**

- In order to capture the variability in the impact of inflation across families, we compute the inflationary shock for every COICOP category

Incorporation of inflationary shock into the model – COICOP categories





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Economic adjustments: Inflation-induced wage growth

- The increased price level has been partially transmitted to the wage level throughout 2022, although wages did not grow as fast as prices
- We assume that the difference in the wage growth between the values expected in the macroeconomic forecast in June 2021 and the value in February 2023 is an inflation-induced wage growth

Forecast		2022	2023
Jun-21	(wage growth without shock)	4.1	4.9
Feb-23	(wage growth with shock)	8.1	10.5
Inflation-induced wage growth		**4.0**	**5.6**

- We assume non-uniform wage increase across the income distribution (estimated using individual data on income)

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Economic adjustments: Extra valorization of social benefits

- An extra valorization of social benefits due to high inflation in 2023
- No extra valorization effect in 2022 due to the delay in valorization mechanism
- Extra valorization for pensioners higher than extra valorization for other social transfers recipients

Forecast of pensioners' inflation		2022	2023
Jun-21	(without the shock)	1,3 *	3,0
Feb-23	(with the shock)	1,3	11,8
Extra valorization of pensions		**0,0**	**8,8**

Forecast of minimum subsistence growth		2022	2023
Jun-21	(without the shock)	1,5 *	2,9
Feb-23	(with the shock)	1,5	7,5
Extra valorization of social transfers		**0,0**	**4,6**

** Value in 2021 is fixed the same for both forecasts*

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Government measures: in the year 2022

Two anti-inflationary packages

- one-off benefits paid to vulnerable households (100-euro support)

One-off income support targeted at pensioners

- the so-called 14th pension benefit
- a COVID vaccination incentive bonus

Income support measures targeted at families with children (initially a political target, later interpreted by the government as an income support to families to cope with high inflation)

- a permanent increase of the child tax credit
- a permanent increase of child benefit

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Government measures: in the year 2023

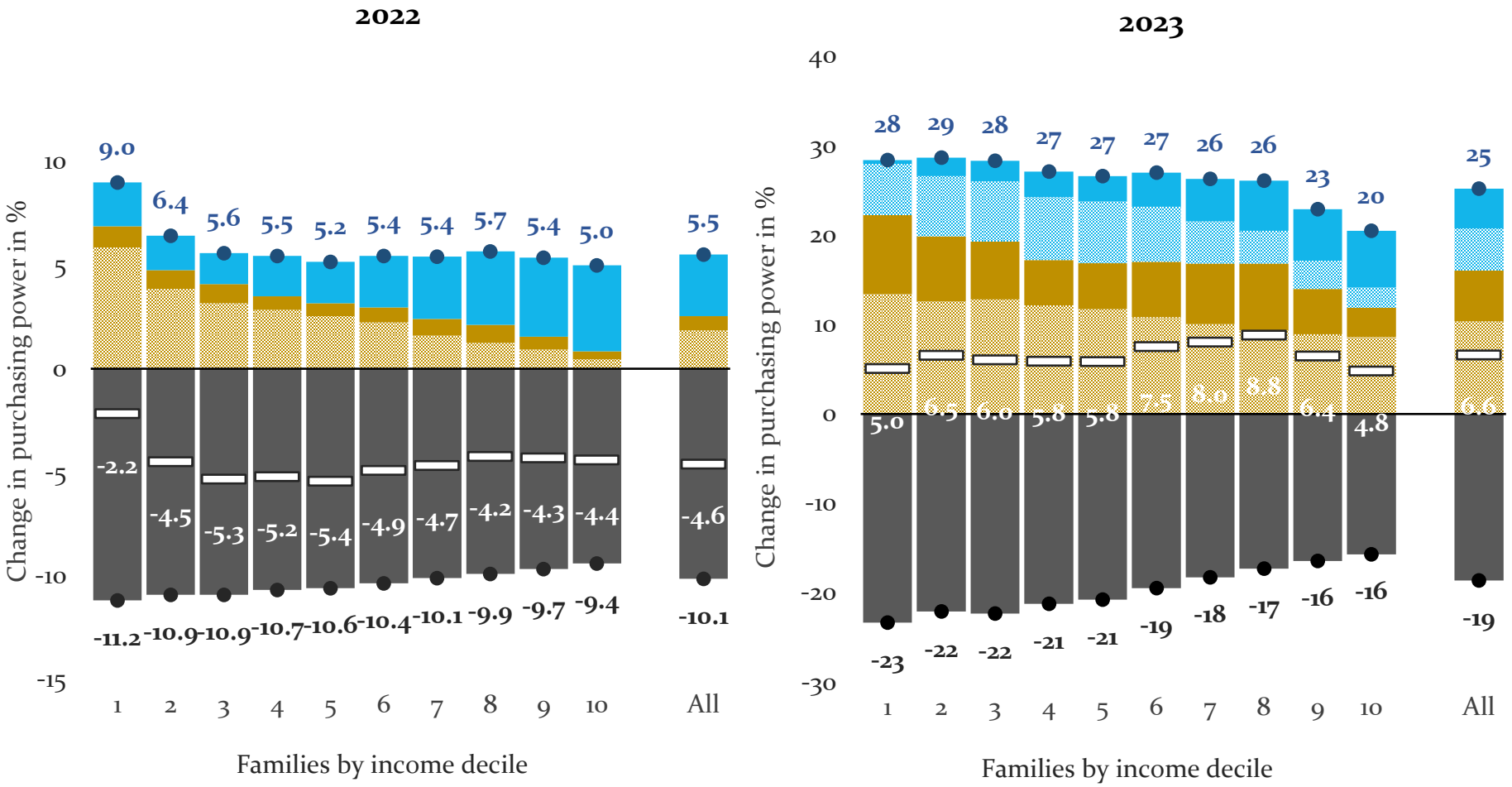
Price cap on energy prices for households

- the government caps energy prices for households in 2023 at a cost of almost 2.64 billion euros, via subsidies and a contract with the main electricity supplier
- the measure holds electricity prices for households flat, while natural gas and heating prices will rise by 15 %

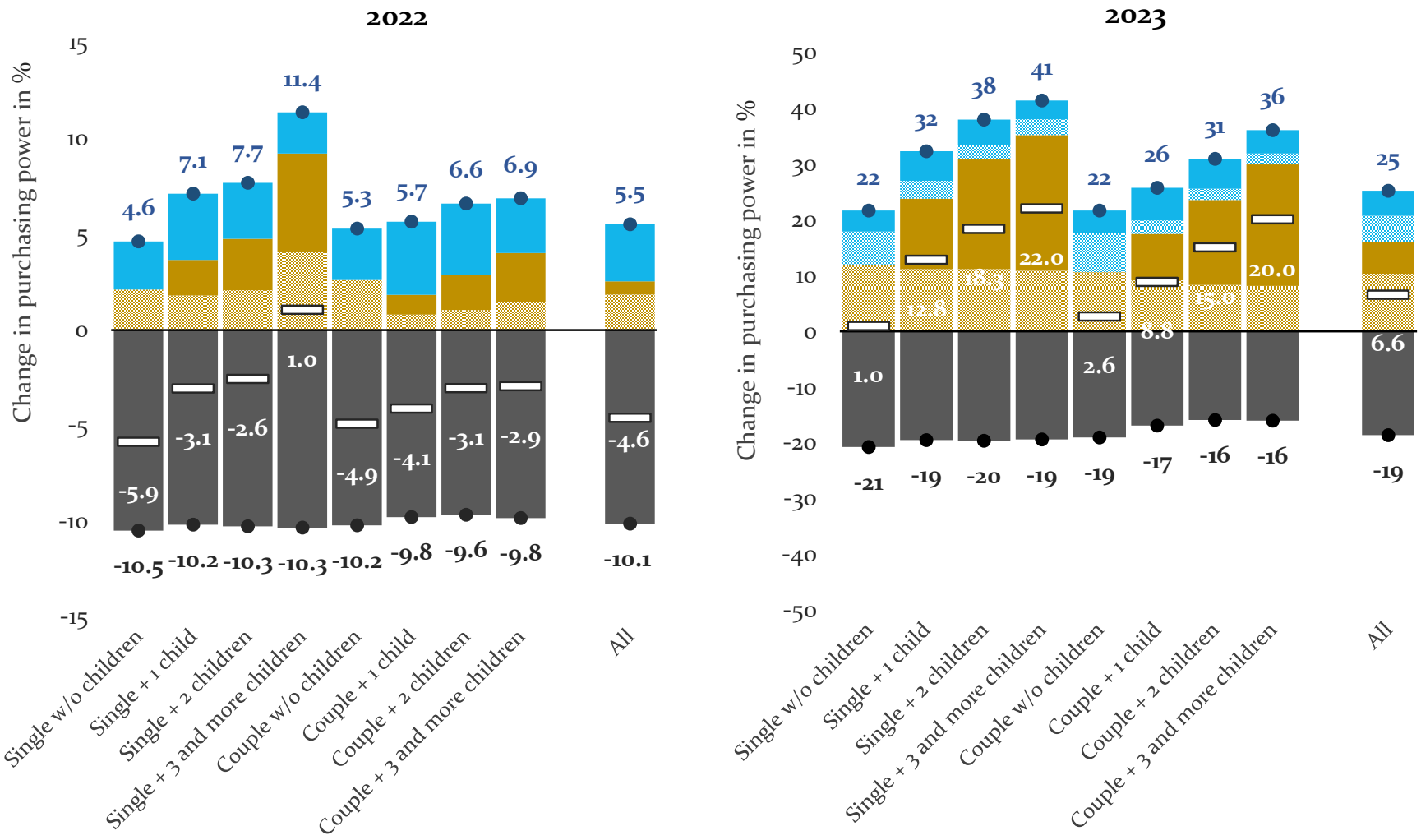
Pro family measure

- additional permanent increase of the child tax credit and child benefit

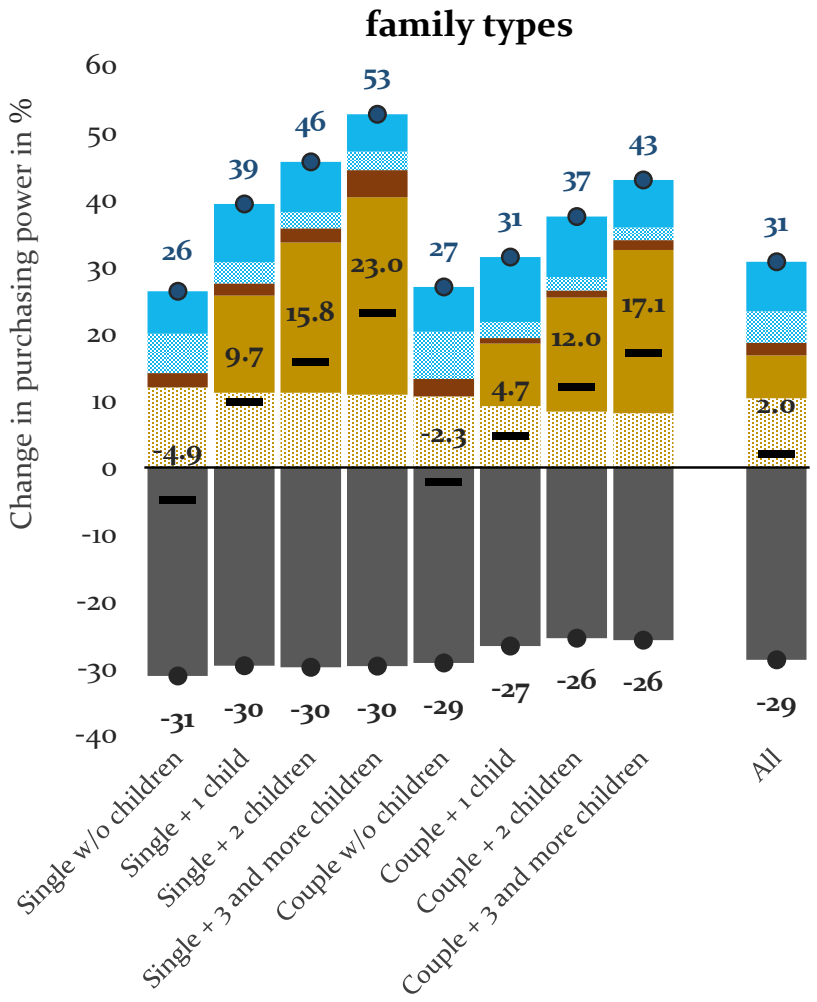
The effect of an inflationary shock: deciles

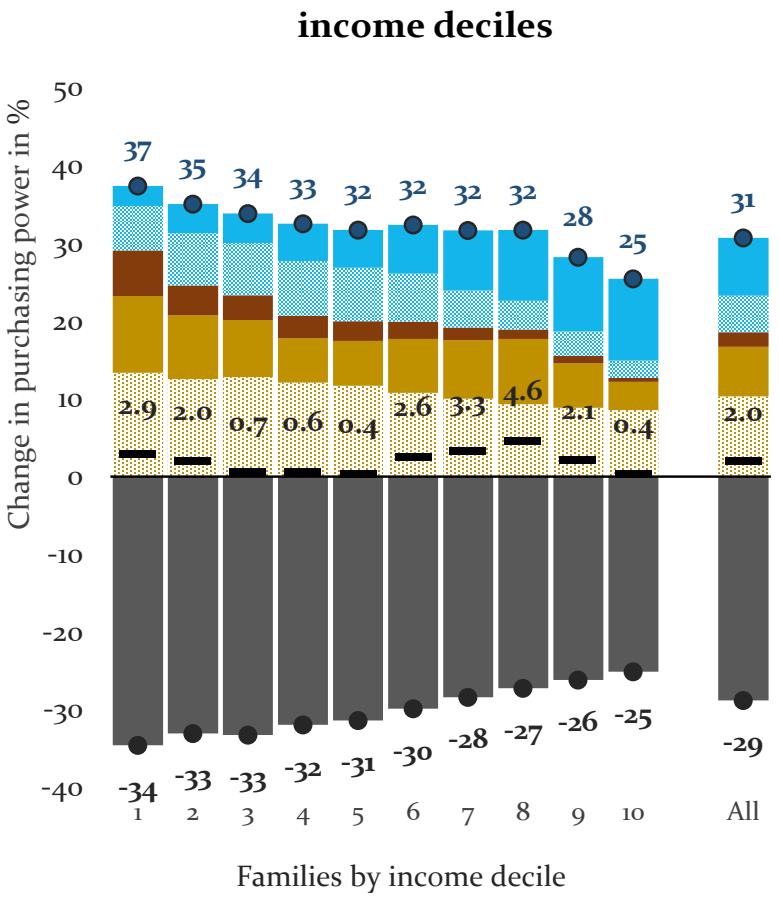


The effect of an inflationary shock: families



The effect of an inflationary shock: 2-years





- The effect of uncompensated inflationary shock
- Compensation through valorization channel
- Compensation by family income support
- Net effect of inflationary shock
- Effect of gov. measures & macro adjustments
- Compensation through wage channel
- Compensation by one-offs
- Price cap
- Increase in expenditures

Concluding remarks

Interpretation of the results

- The results represent net effect of inflationary shock on purchasing power
- An “upper bound” effect due to the assumption of no behavioral change
- Dependency on considered set of anti-inflationary policies

Work in progress

- Beyond the effect of inflationary shock, we analyze YoY changes in purchasing power
- Distinguish 2 sets of measures
  - Adopted as anti-inflationary
  - Other measures with impact on disposable income of families

Thank you for your attention!

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