The cushioning effect of fiscal policy in the EU during the COVID-19 pandemic

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Outline

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Motivation

- The COVID-19 pandemic hit Europe severely in 2020
  - Households faced an increased risk of unemployment and income reduction
  - **Automatic stabilisers** insure households against the risk of income loss, BUT strong variation of automatic stabilisation across EU Member States
  - EU member states implemented several additional (discretionary) policy measures

- Rapidly increasing literature on the impact of COVID-19 on household income
  - Using **up-to-date survey data** (Clark et al. (2020); Menta (2021))
  - **Reweighting** the underlying survey data (Almeida et al. (2021))
  - **Nowcasting** microdata to the new labour market characteristics using different modelling approaches (Brewer and Tasseva (2020); Bruckmeier et al. (2020); Figari and Fiorio (2020); Canto-Sanchez et al. (2021) etc.)

Research questions and contribution

- **Research questions:**

  1. To what extent have the tax-benefit systems of the EU Member States protected household incomes during the pandemic?
  2. Which policies stabilised household incomes? What was the role of monetary compensation schemes such as short time work (STW) schemes?

- **Our contribution:**

  1. First assessment of the impact of COVID-19 on household income for all EU Member States in a comparable manner (by modelling labour market transitions)
  2. Detailed estimation of the cushioning effects of taxes and social transfers during the COVID-19 pandemic for all EU Member States

Methodology and data I

What we do:

- Use of EUROMOD, with data from the 2018 EU-SILC (2017 incomes). Simulation of **2020 tax-benefit rules**
- Adjusted microdata to labour market conditions in 2020 due to COVID-19
- **Detailed statistics** (administrative country-level data or Eurostat data):
  - transitions to unemployment or monetary compensation schemes
  - **duration** in unemployment or monetary compensation
  - **hour reduction** in monetary compensation
- Various levels of disaggregation (gender, sector, self-employed/ employees)
- Within each degree of disaggregation, workers were randomly assigned into new labour market status

Methodology and data II

- Comparison of two alternative scenarios for 2020:
  - **No COVID-19 labour market shock**: no transition are simulated
  - **COVID-19 labour market shock**: transitions to unemployment and monetary compensation schemes are simulated

- Holding policies constant, this comparison allows to focus on the extent to which 2020 policies cushioned:
  - the **incomes of households** that underwent these labour market changes
  - potential **inequality** and/or **poverty** increases

Methodology and data III

- We follow the approach of Dolls et al. (2012), who define the income stabilising coefficient (ISC) as:

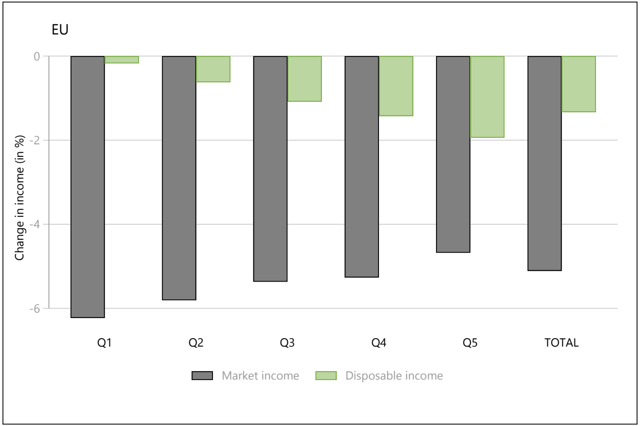
$$ISC = 1 - \frac{\sum_i \Delta Y_i^D}{\sum_i \Delta Y_i^M} = \frac{\sum_i \Delta Y_i^M - \sum_i \Delta Y_i^D}{\sum_i \Delta Y_i^M}$$

  where ΔY_i^D is the change in disposable income and ΔY_i^M is the change in market income for an individual i

- We decompose the overall effect into the following components: (a) taxes and social insurance contributions (SICs); (b) unemployment benefits; (c) monetary compensation schemes; (d) other benefits and pensions

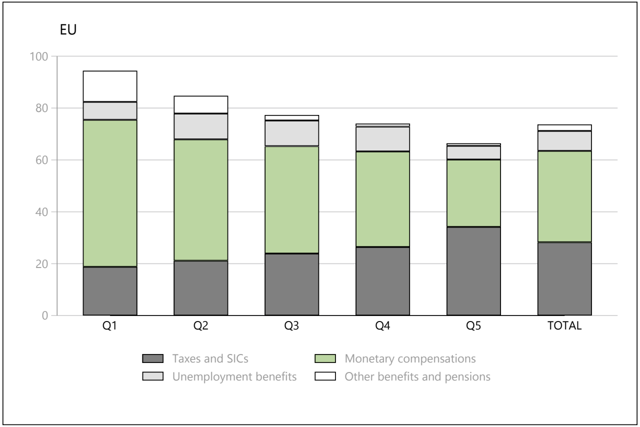
Results I

Change in market and disposable incomes (%) – EU



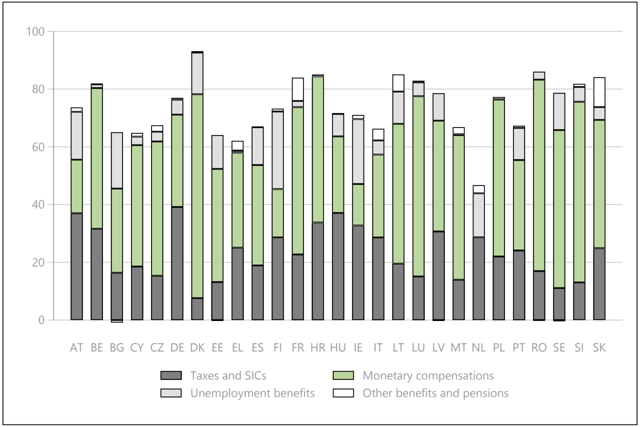
Results II

Income stabilisation coefficient - EU



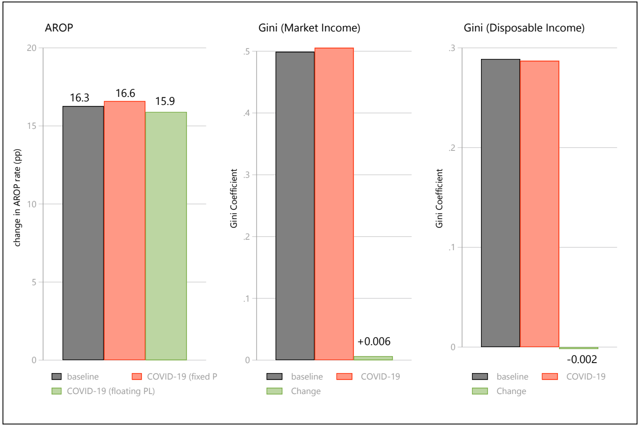
Results III

Income stabilisation coefficient - Member States



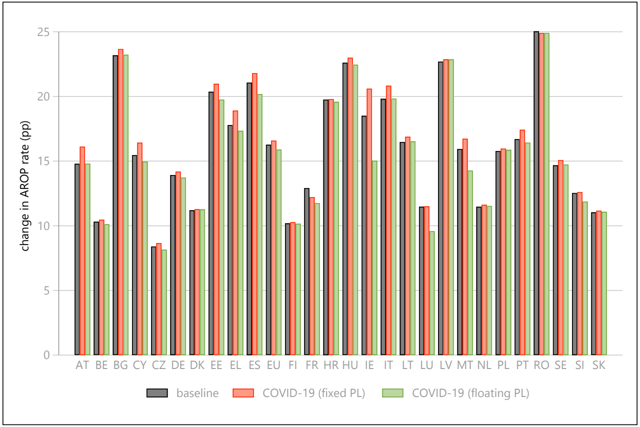
Results IV

AROP rate and income inequality - EU



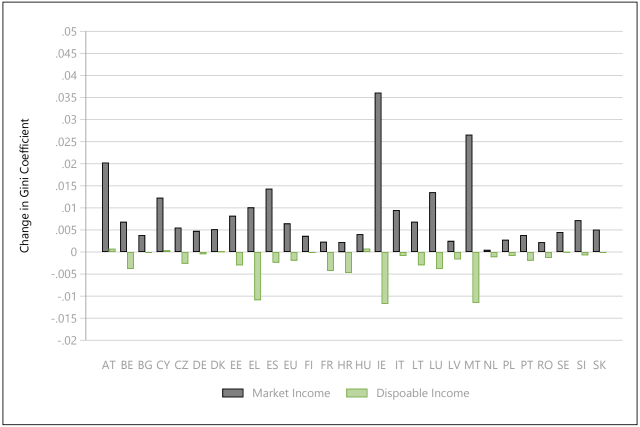
Results V

AROP rates - Member States



Results VI

Gini Coefficient - Member States



Conclusion I

- First attempt to **evaluate the effectiveness of 2020 tax-benefit policies** in cushioning the impact of COVID-related labour transitions in all EU countries
- Most EU countries experienced **large drops in market incomes**
  - Poorer households hit hardest
- Tax-benefit systems **absorbed a significant share of the COVID-19 shock** and were able to **offset** – in most countries – **the regressive nature** of the shock on market incomes

Conclusion II

- **Monetary compensation** schemes played a **major role in cushioning** the effect of adverse labour market transitions
  - although in aggregate terms they represent a minor component of household disposable income
- **AROP rates:** increases if measured using a fixed poverty line / stable or slightly declining if measured using a floating poverty line
- Evidence of stable or **slightly declining inequality** across EU Member States

Future steps

- Update/improve statistics used to model labour market transitions
  - Capture whole year 2020
  - Further **homogenise sources** of information and levels of disaggregation
- Redo the **analysis for 2021**
  - Adding transitions from unemployment (or monetary compensation) to employment
- Look at effect of the COVID-19 measures on **aggregate demand**

References

V. Almeida, S. Barrios, M. Christl, S. De Poli, A. Tumino, and W. van der Wielen. The impact of covid-19 on households´ income in the eu. *The Journal of Economic Inequality*, pages 1–19, 2021.

M. Brewer and I. Tasseva. Did the uk policy response to Covid-19 protect household incomes? *EUROMOD Working Paper, No. EM12/20*, 2020.

K. Bruckmeier, A. Peichl, M. Popp, J. Wiemers, and T. Wollmershäuser. Distributional effects of macroeconomic shocks in real-time: A novel method applied to the covid-19 crisis in germany. *CESifo Working Paper*, 2020.

O. Canto-Sanchez, F. Figari, C. Fiorio, S. Kuypers, S. Marchal, M. R. de la Cruz, I. V. Tasseva, G. Verbist, et al. Welfare resilience at the onset of the covid-19 pandemic in a selection of european countries: Impact on public finance and household incomes. *EUROMOD Working Paper*, 2021.

A. E. Clark, C. D'Ambrosio, and A. Lepinteur. The fall in income inequality during covid-19 in five european countries. Technical report, 2020.

M. Dolls, C. Fuest, and A. Peichl. Automatic stabilizers and economic crisis: Us vs. europe. *Journal of Public Economics*, 96(3-4):279–294, 2012.

F. Figari and C. V. Fiorio. Welfare resilience in the immediate aftermath of the covid-19 outbreak in italy. *EUROMOD Working Paper*, 2020.

G. Menta. Poverty in the COVID-19 era: Real time data analysis on five european countries. Technical report, 2021.

Thank you