



# Households' income and the cushioning effect of fiscal policy measures in the aftermath of the COVID-19 crisis

*EUROMOD Workshop 2020*

*Tax-benefit policies in times of COVID-19*

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# Outline

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# 1. Introduction

- Impact of the COVID-19 pandemic on households exceptionally high (OECD, 2020).
- Policies to protect most directly hit households could partly reduce the toll on household income and consumption. (see, e.g., Aspachs et al., 2020)
- First evidence of Covid-19 crisis suggests that poverty and wage inequality will increase in most European countries. E.g. Palomino et al. (2020): Gini coefficient to increase by 2.2% in all Europe.

# 1. Introduction

## What we do:

- Assessment of the potential impact of COVID-19 policy measures on household income, poverty and inequality in the EU in 2020.
- We use EC Spring Forecast 2020 to construct two scenarios: A COVID scenario with and without policy interventions, and compare the effects with a scenario without COVID.
- We combine EUROMOD, the tax-benefit model of the European Union, with a reweighting approach to construct those scenarios.

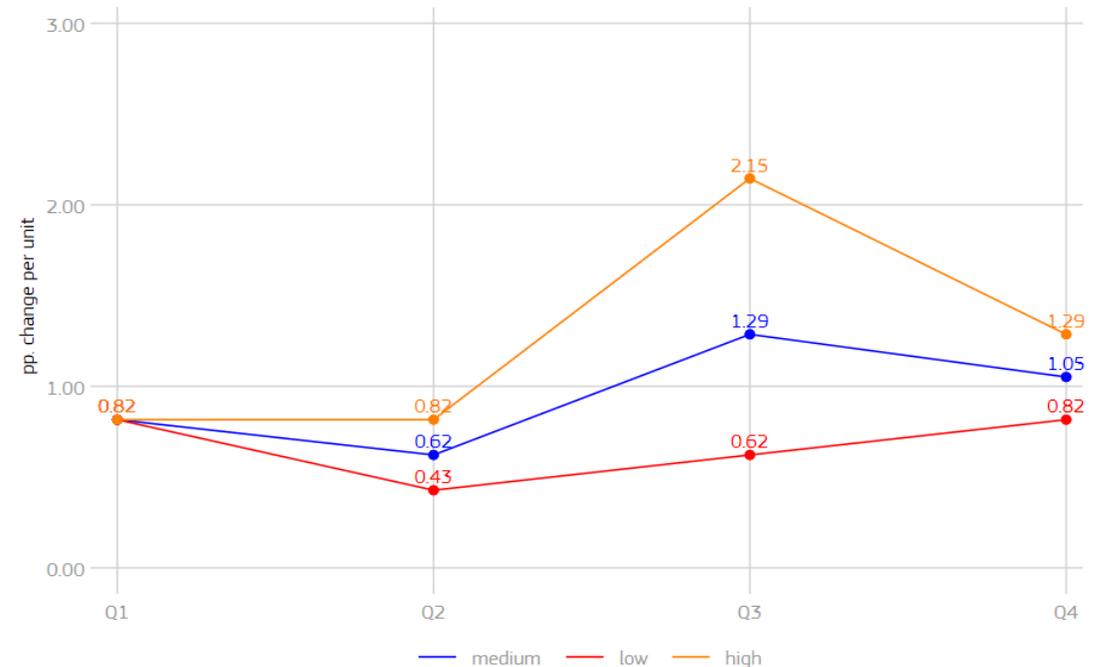
## 2. Methodology – Macro Scenarios

1. Comparison of the EC 2020 Spring forecasts and the 2019 Autumn Forecast for 2020 to estimate the impact of the COVID-19 crisis.
2. A counterfactual scenario “COVID without discretionary fiscal policy measures” to estimate the effect of policy measures taken by EU countries.

## 2. Methodology – No policy-change scenario

1. Estimates for the budgetary impact of fiscal policy measures + estimates on spending and revenue multipliers taken from the literature.
2. We estimate the expected impact on GDP growth

Figure 1: Budget balance multipliers used for 2020 no policy-change scenarios

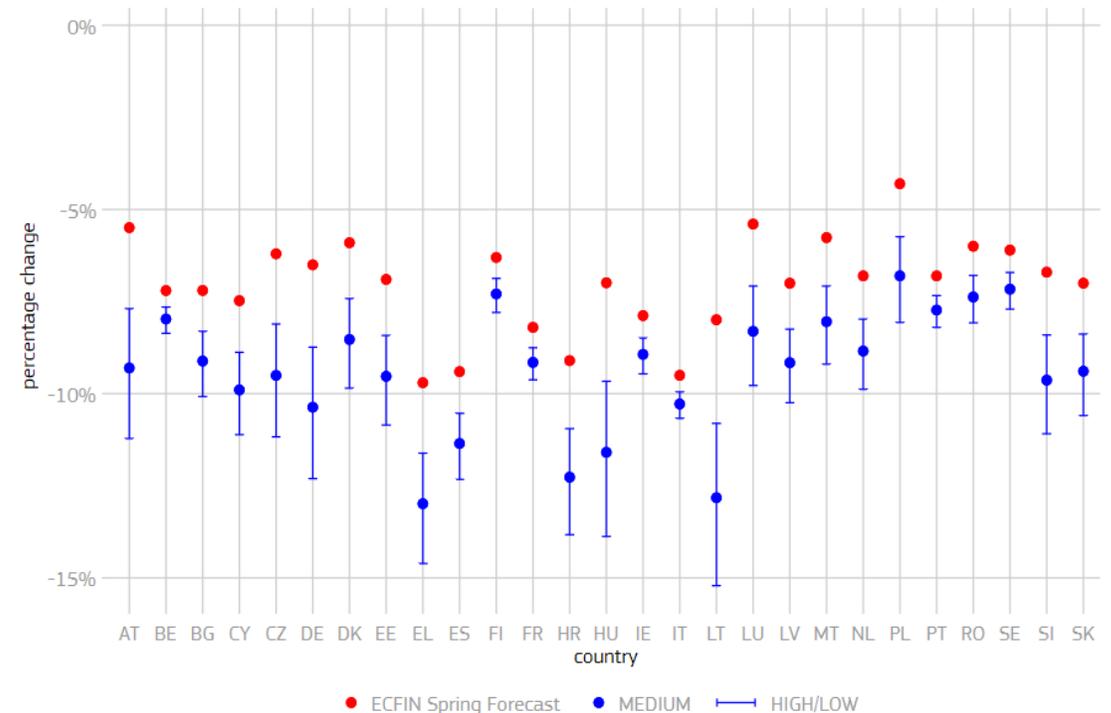


## 2. Methodology – No policy-change scenario

3. Translate GDP growth rates in employment shock (Trade-SCAN model, see Román et al., 2019)
4. Trade-SCAN: sector structure that allows to account for sector differences of the shock, e.g. tourism.

➔ no policy-change scenario

Figure 2: 2020 GDP growth - Commission 2020 Spring Forecast vs. No Policy-change Scenarios



## 2. Methodology – Reweighting

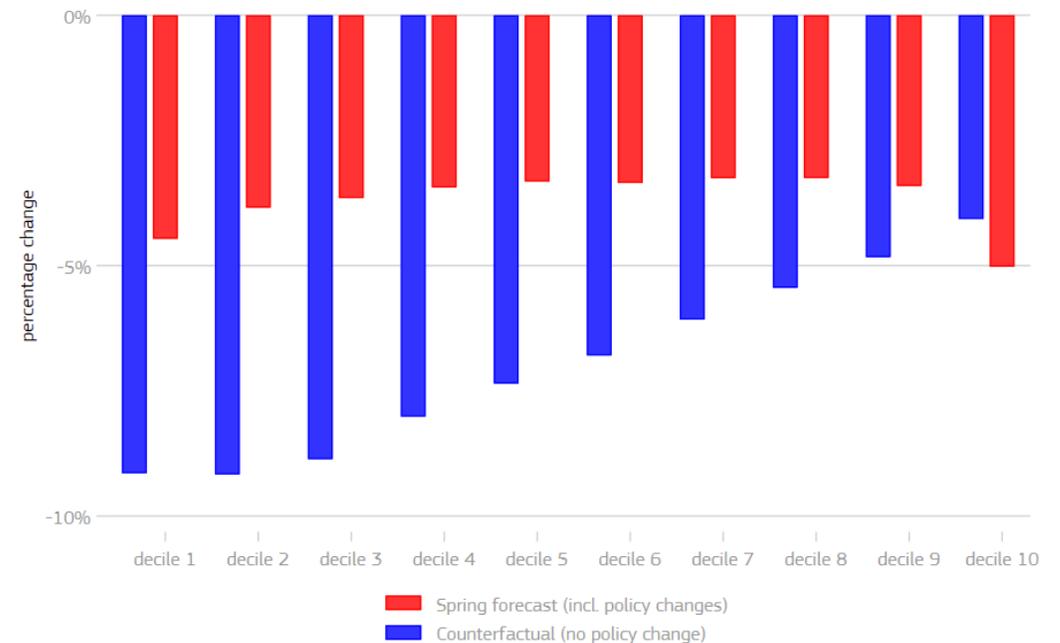
- Aggregate variables present of the macroeconomic scenarios are translated at the microeconomic level.
- Reweighting takes place on household level (similar to the Now-Casting approach of ESTAT).
- Three step procedure:
  1. Modifying employees and unemployed, as well as the wage compensation of employees and self-employed to match the macro-numbers.
  2. The number of unemployment benefit receivers to include non-coverage.
  3. The population structure by age groups and gender is fixed.

# 3. Results – EU level

## Equivalized disposable hh income

- Decrease of -5.9%, but policy intervention reduce this impact to -3.6%.
- In absence of fiscal policy responses strongly regressive.
- HH ranking is not fixed!

Figure 3: Impact of COVID-19 on household disposable income in the EU

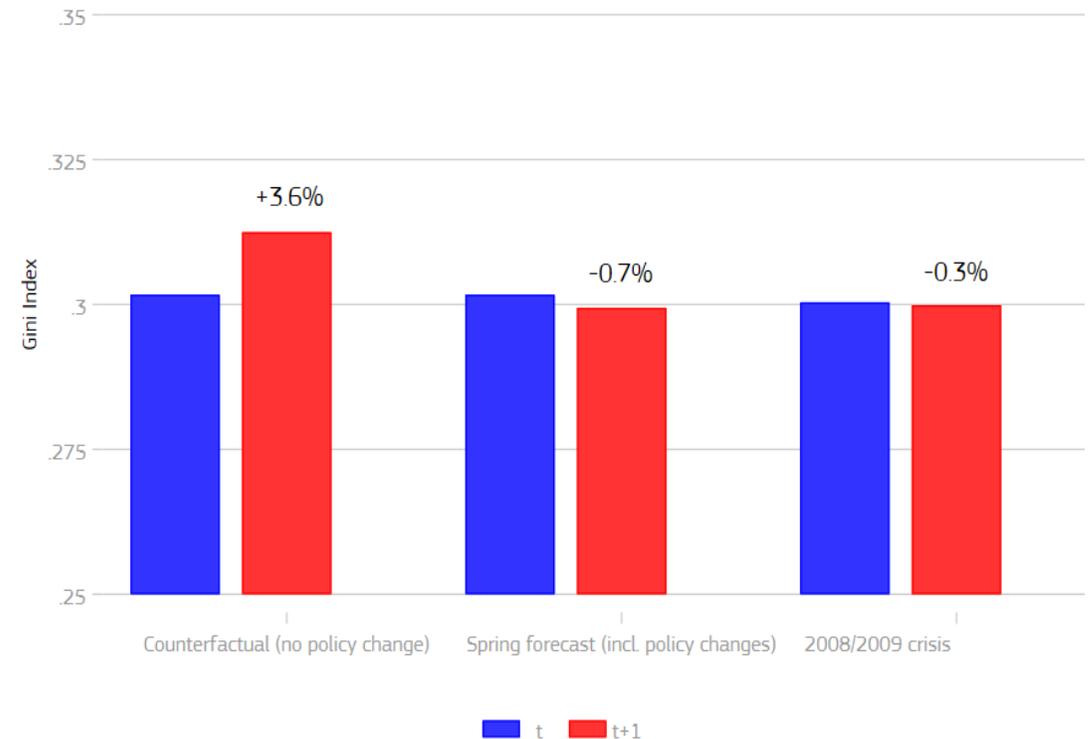


# 3. Results – EU level

## Inequality (Gini Index)

- Substantial increase in inequality without policy response.
- Policy measures are able to counteract the inequality increasing effect.
- 2008/2009 crisis led to a small decrease in income inequality for the EU.

Figure 4: Impact of COVID-19 on income inequality in the EU

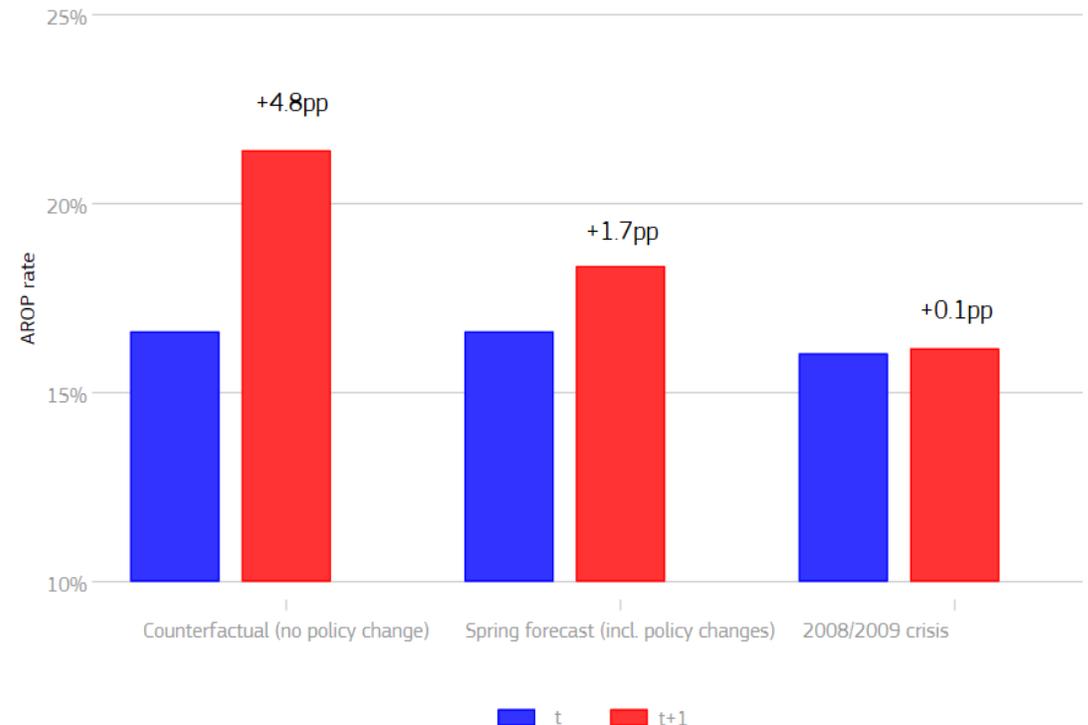


# 3. Results – EU level

## AROP rate (anchored)

- AROP rate increases significantly (+4.8pp).
- Policy measures could reduce this effect (+1.7pp).
- The 2008/2009 crisis implied much lower increases in the AROP rate, (+0.1pp, (not-anchored)).

Figure 5: Impact of COVID-19 on AROP rate in the EU (anchored poverty line)

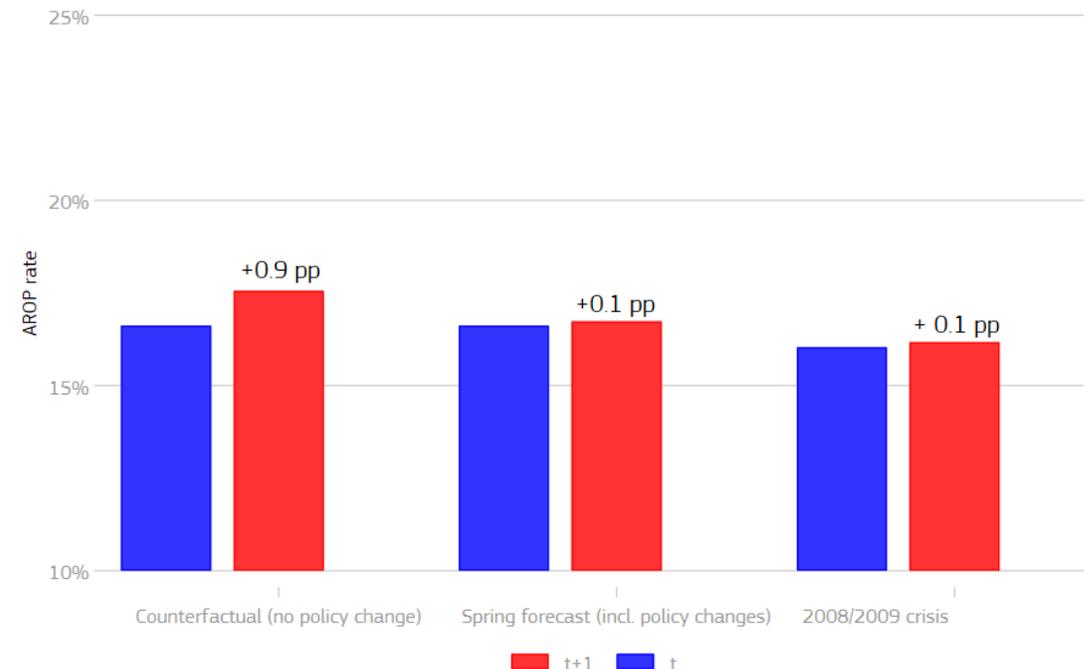


# 3. Results – EU level

## AROP rate (not-anchored)

- Poverty line drops substantially (income shock of COVID crisis).
- AROP rate would increase significantly due to the COVID pandemic (+0.9pp).
- Policy measures almost offset this increase (+0.1pp).
- Similar to the 2008/2009 crisis (+0.1 pp).

Figure 6: Impact of COVID-19 on AROP rate in the EU (non-anchored poverty line)

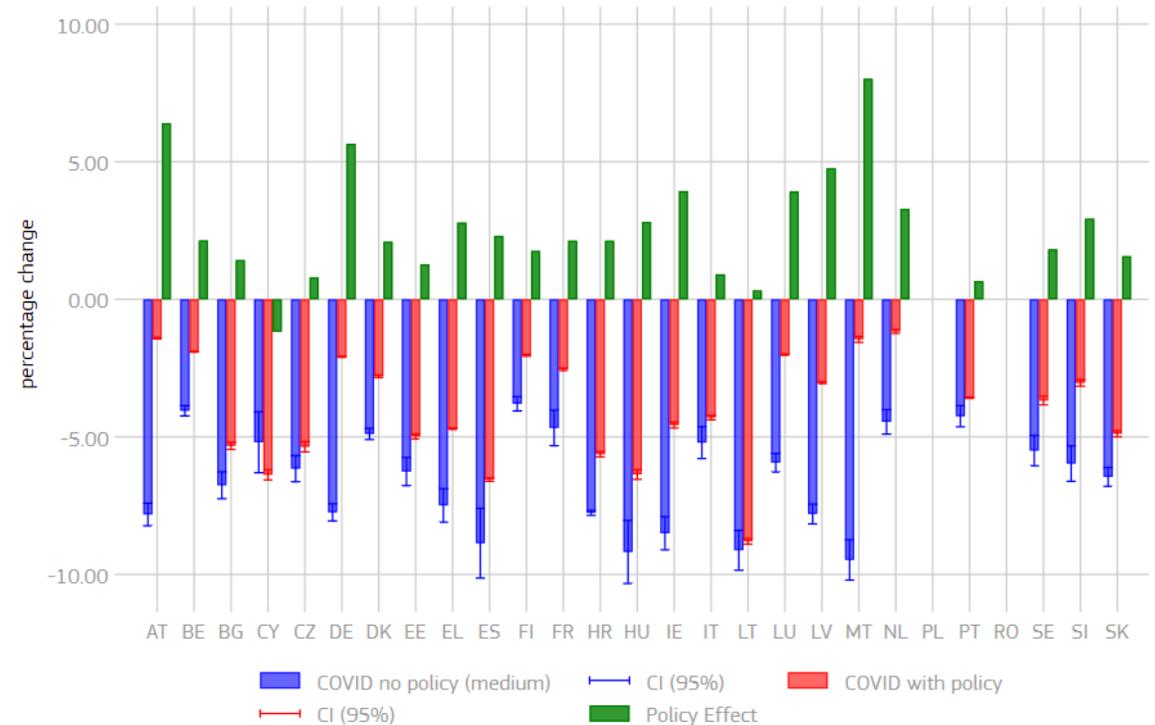


# 4. Results – EU member states

## Equivalized disposable hh income

- Income loss especially high in AT, DE, DK, ES, HU, IE, LT and MT.
- Policy measures can offset income loss, especially in AT, DE, DK, MT and the NL.
- Biggest impact of the COVID pandemic in BG, ES, EE, HR, HU and LT.

Figure 7: Impact of the COVID-19 crisis on equivalised disposable household income in EU

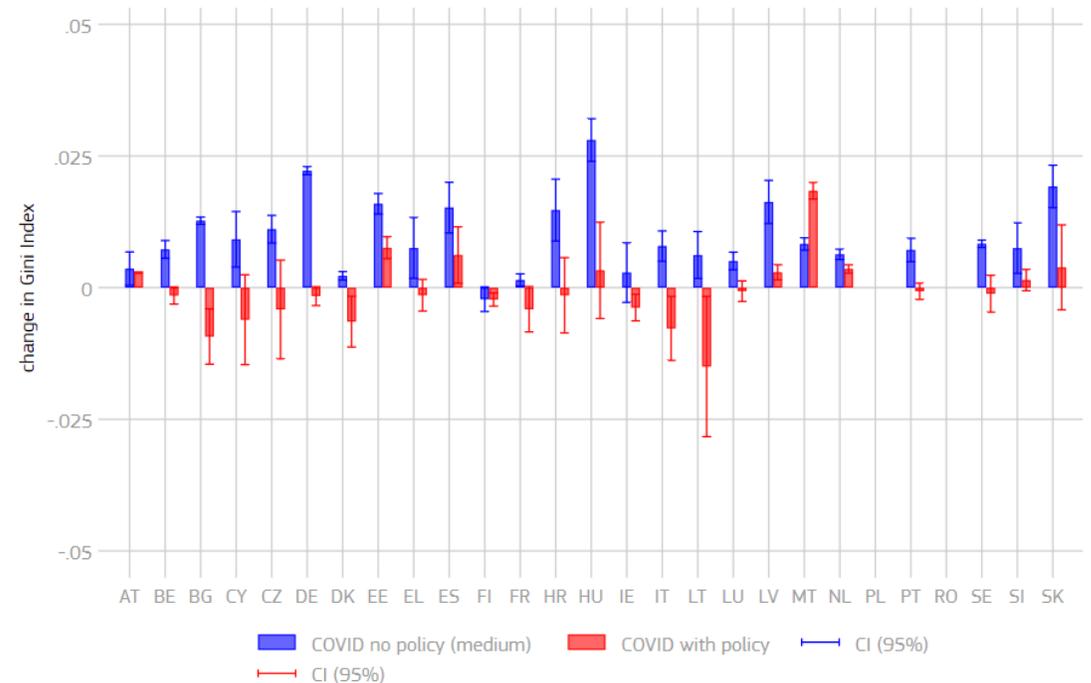


# 4. Results – EU member states

## Inequality (Gini Index)

- Policy measures are able to offset the inequality-increasing pattern in most countries.
- In AT, EE, ES, MT or NL policy measures only partially offset the increase in the Gini index.
- Note that in some countries, the confidence intervals are quite large.

Figure 8: Impact of the COVID-19 crisis on inequality (Gini index) in EU countries

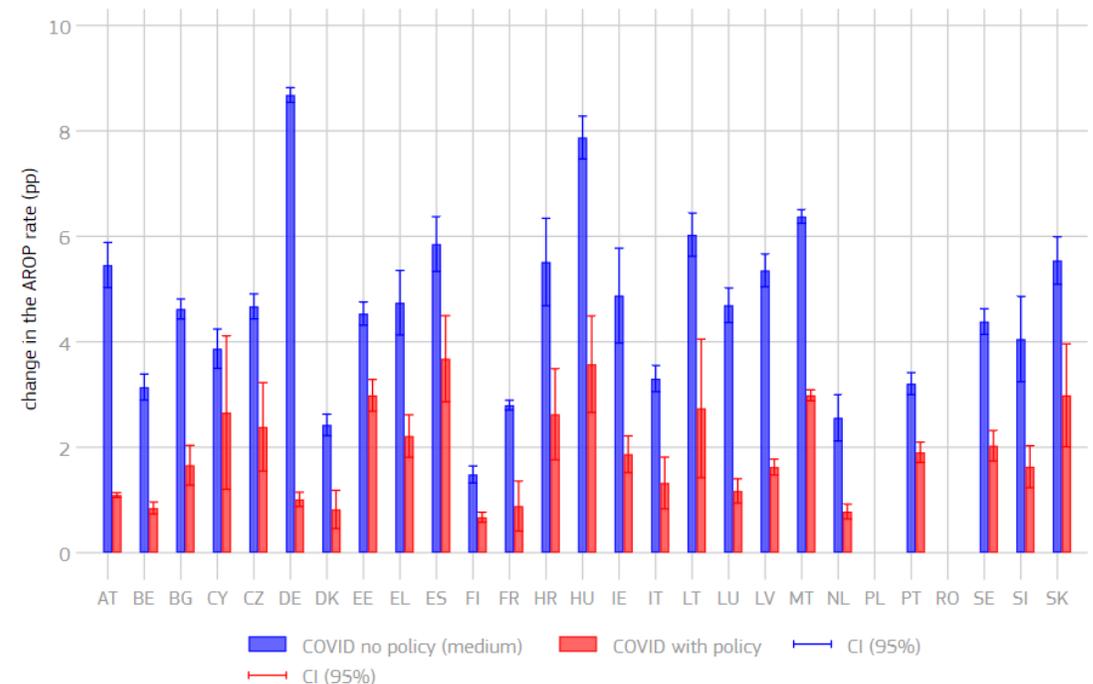


## 4. Results – EU member states

### AROP rate (anchored)

- +5pp in many member states in absence of policy interventions, e.g. in AT, DE, ES, HU and others.
- Strong increases in the AROP rate in all countries.
- Policy measures reduce the poverty-increasing effect of COVID-19 substantially in many countries.

Figure 9: Impact of the COVID-19 crisis on poverty (AROP rate, not anchored) in EU countries

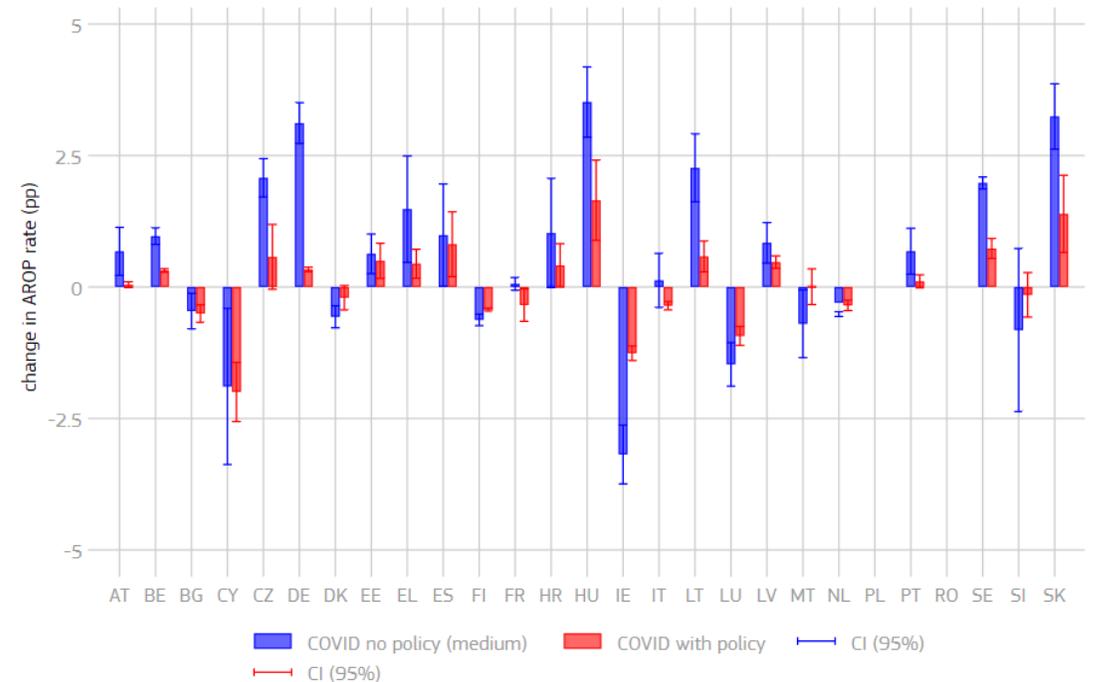


# 4. Results – EU member states

## AROP rate (not anchored)

- Poverty line drops substantially (income shock of COVID crisis).
- AROP rate increase significantly in many countries.
- Policy measures can almost offset this increase in the AROP rate.

Figure 10: Impact of the COVID-19 crisis on poverty (AROP rate, anchored) in EU countries



# 5. Robustness and Limitations

- 1. Randomness:** our approach randomly reduces wages, although the COVID-shock might hit specific groups of worker (high-skilled vs low-skilled, male vs. female, young vs. old), and sectors differently.
  - **Sector-specific impact:** We consider the impact on the wage loss only in those sectors that are mostly affected by the COVID-19 pandemic.
- 2. Macro-Scenarios:** Variation of the underlying (no policy-change) scenario. We conclude that depending on the assumptions used, the country-specific impact can differ substantially.
- 3. Forecasts:** We face additional uncertainty that is linked to the accuracy of the forecasts.

## 6. Conclusion

- The impact of the **COVID-19 crisis is likely to be highly regressive**. However, discretionary policy measures are expected to contain the regressive effects of the recession.
- **Policy interventions are instrumental to cushion** against the impact of the crisis on inequality and poverty.
- While the COVID crisis is expected to hit member states to quite different extent, **member states' policy measures prove their worth in limiting income loss, poverty and inequality** at the country level.
- Keep in mind that there still is a lot of **uncertainty** in the results!!!

# Thank you



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