# Indexing wages to inflation in the EU: fiscal drag and benefit erosion effects

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# Outline

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2. Methodology
    1. EUROMOD workflow
    2. Simulated scenarios
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# Motivation and objectives of the analysis

- Inflationary shocks can translate into **wage increases** if wages rise to **compensate for inflation**
- The increase in inflation calls for measures to protect the purchasing power of households
    - Price caps
    - Price subsidies
    - Wage indexation
- Our exercise can be thought of as investigating the impact of indexing wages without an indexation mechanism of tax-benefit parameters

# Motivation and objectives of the analysis

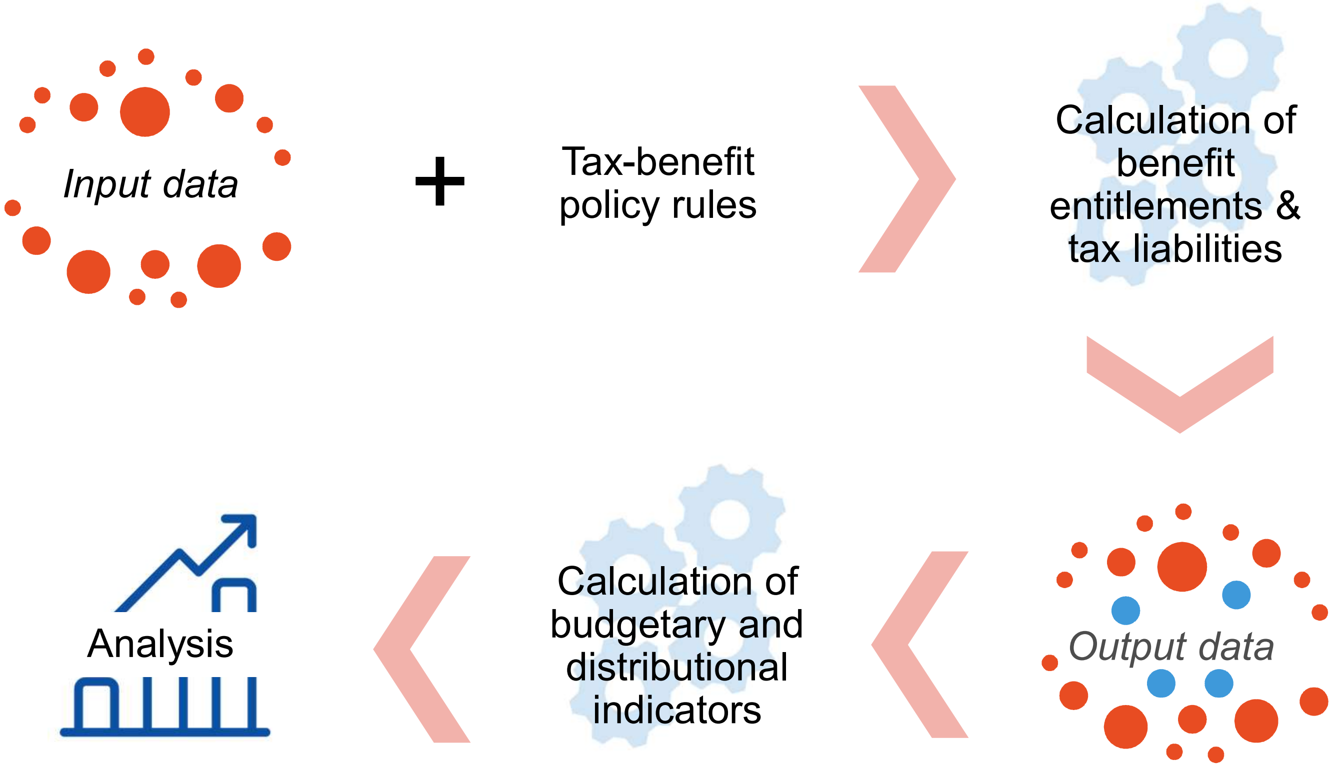
- **Fiscal drag** (also known as '*bracket creep*') occurs when an increase in taxpayers' incomes pushes them into higher tax brackets, leading to higher tax burden
  - *Main reason*: progressivity of the tax system
- **Benefit erosion** occurs when wage increases (to compensate for inflation) lead to reductions in the value of means-tested benefits
  - *Main reason*: lack of (swift) benefit indexation rules
- **Aim of this work**: analyse the **budgetary** and **distributional impact** of fiscal drag and benefit erosion, caused by inflationary shocks which translate into wage increases
  - Looking at all EU countries, using a uniform methodology

# Methodology

Tax-benefit microsimulation:

- Commonly used to illustrate fiscal drag and benefit erosion dynamics (e.g. Paulus et al., 2019; Sutherland et al., 2008; Immervoll et al., 2006)
- Modelling tool used in this analysis: **EUROMOD**
  - Static, non-behavioural tax-benefit microsimulation model for the 27 EU MSs
  - Simulates direct taxes, social insurance contributions and cash benefits for individuals/households
  - Input data based on EU-SILC (but other data sources can also be used as input)
    - This analysis: based on EU-SILC 2019 and EUROMOD version V4.0+
  - Time coverage: 2005-2022, policy rules timely updated
    - Latest EUROMOD public release: 01/2023 (V5.0+)
  - Open source, free, transparent and flexible
  - Fully maintained and updated by the JRC since 2021

# EUROMOD workflow



# Simulated scenarios

**Baseline**: 2021 tax-benefit system

**Scenario 1**: assumes that employment incomes increase by 5% in all EU countries (ceteris paribus)

**Scenario 2**: assumes that employment incomes increase by the 2022 Autumn EC forecasted GDP-based inflation (ceteris paribus)

**Scenario 3**: scenario 2 plus an ‘inflation benefit’ to all existing benefit/pension recipients

All scenarios can be intuitively interpreted as depicting a situation in which wages are indexed to inflation

This methodology enables us to **isolate** the impact of fiscal drag/benefit erosion caused by the 2021 tax-benefit policies in each of the EU countries

# Results: Scenario 1 and Scenario 3

- **Budgetary impact**
  - Definition of budget: sum of direct taxes and social insurance contribution (SIC) minus pensions, means-tested benefits and non means-tested benefits.
  - Definition of budgetary impact: difference in the budget between each scenario and the baseline, as a percentage of each country's GDP
- Impact on direct tax revenues, employers and employees SIC revenues (overall population)
- Impact on inequality and poverty
  - Gini coefficient
  - At-risk-of-poverty (AROP) rates, using the 60% poverty line



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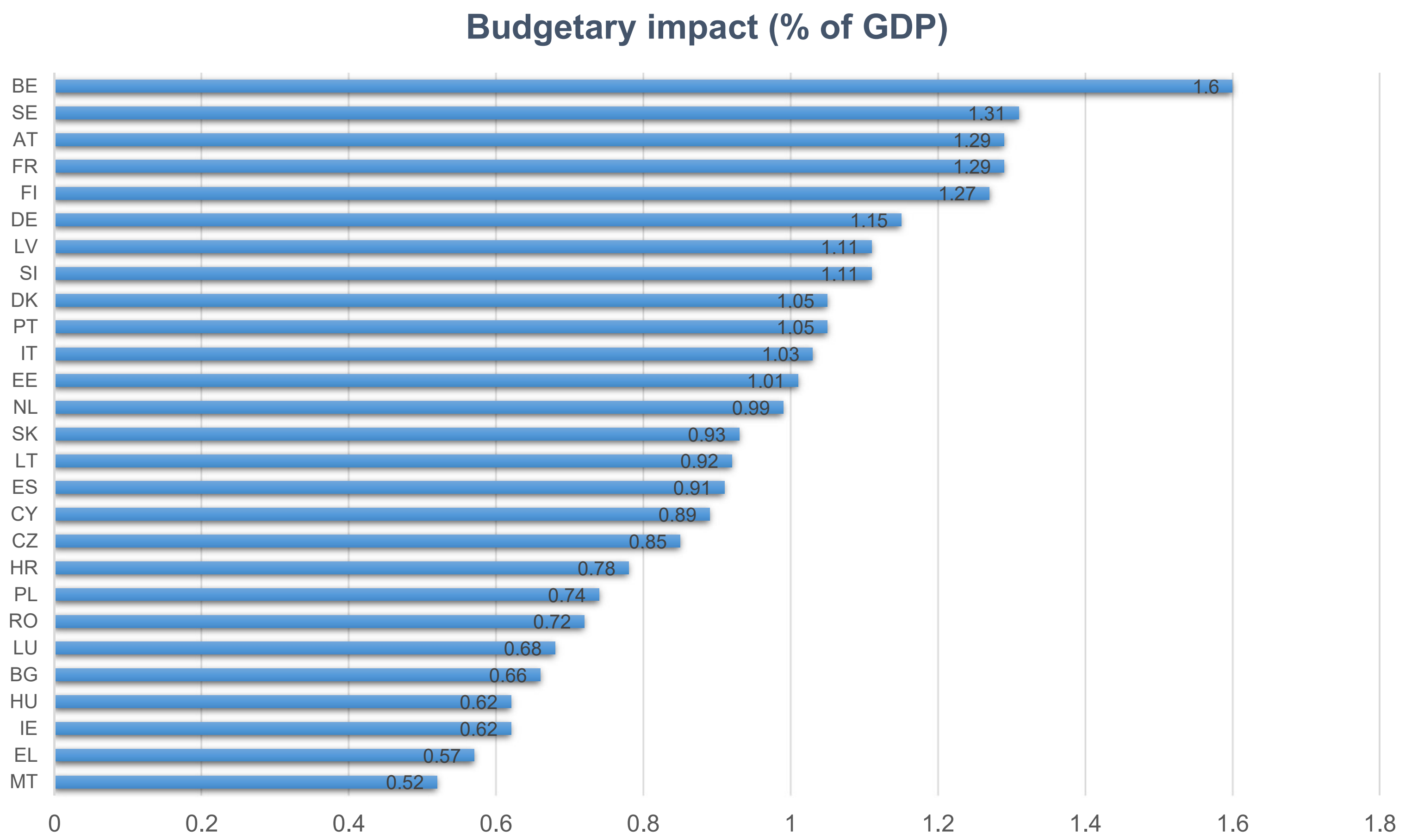
# Budgetary impact



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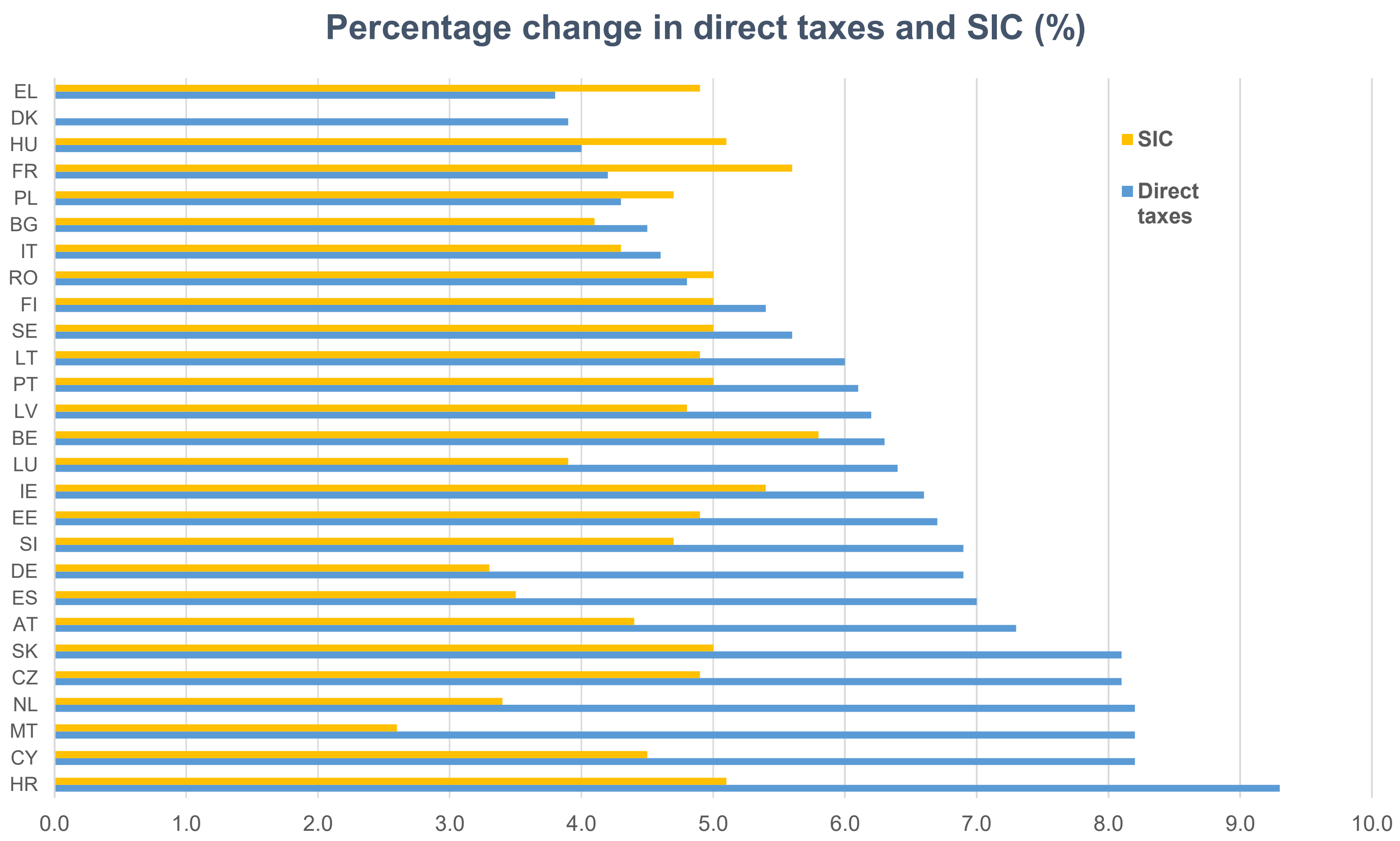
# Impact on direct taxes and SIC revenues



# S1: magnitude of fiscal drag

| | Direct taxes | SIC |
|---|---|---|
| Countries where revenue increase is: | | |
| …**less than 80%** of employment income increase | **EL, DK** | **DK, MT, DE, NL, ES, LU** |
| …**80% - 120%** of employment income increase | **HU, FR, PL, BG, IT, RO, FI, SE** | **BG, IT, AT, CY, PL, SI, LV, EE, LT, CZ, EL, FI, SE, RO, SK, PT, HU, HR, IE, FR, BE** |
| …**more than 120%** of employment income increase | **LT, PT, LV, BE, LU, IE, EE, DE, SI, ES, AT, CZ, SK, NL, MT, CY, HR** | **-** |



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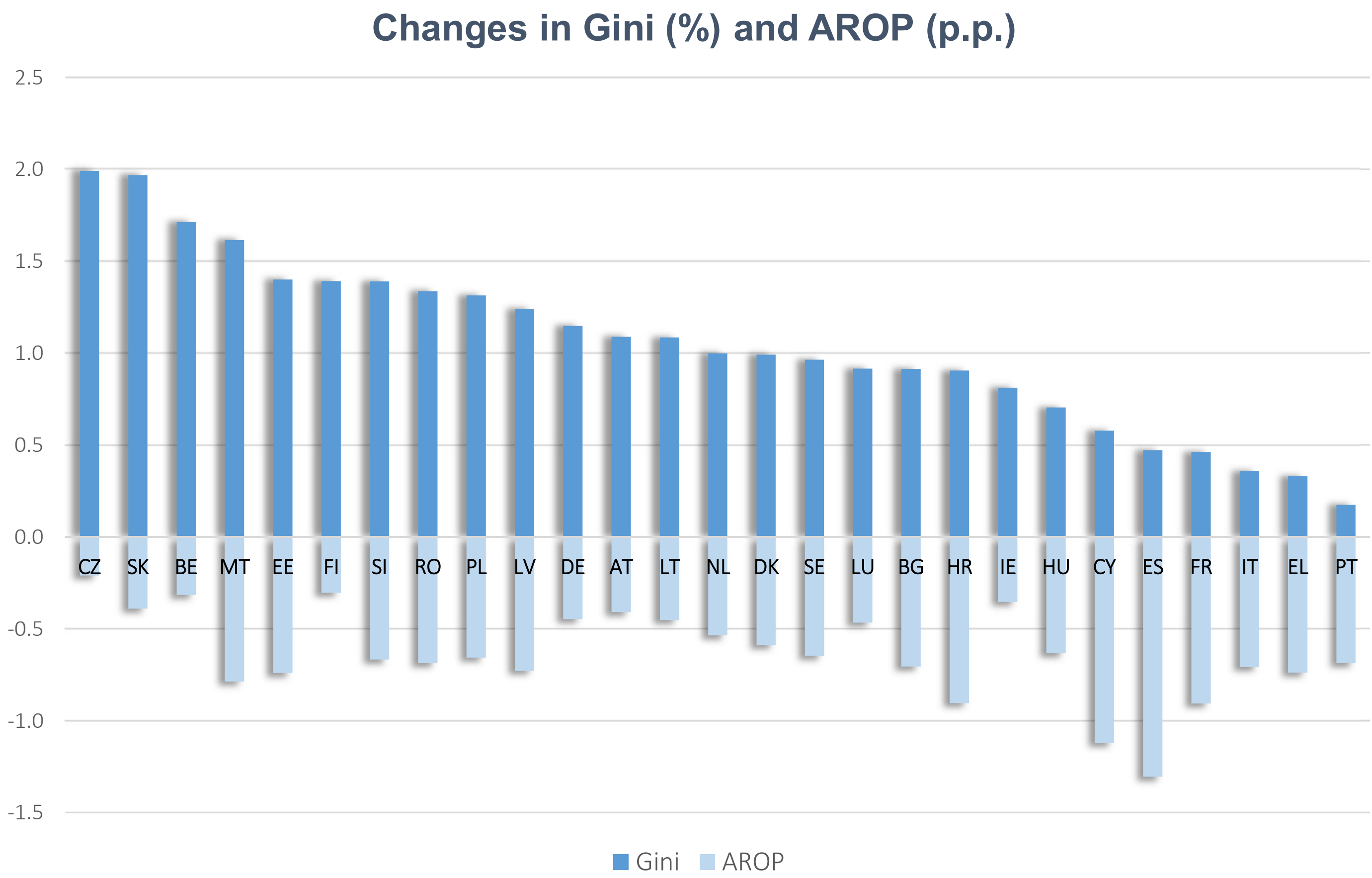
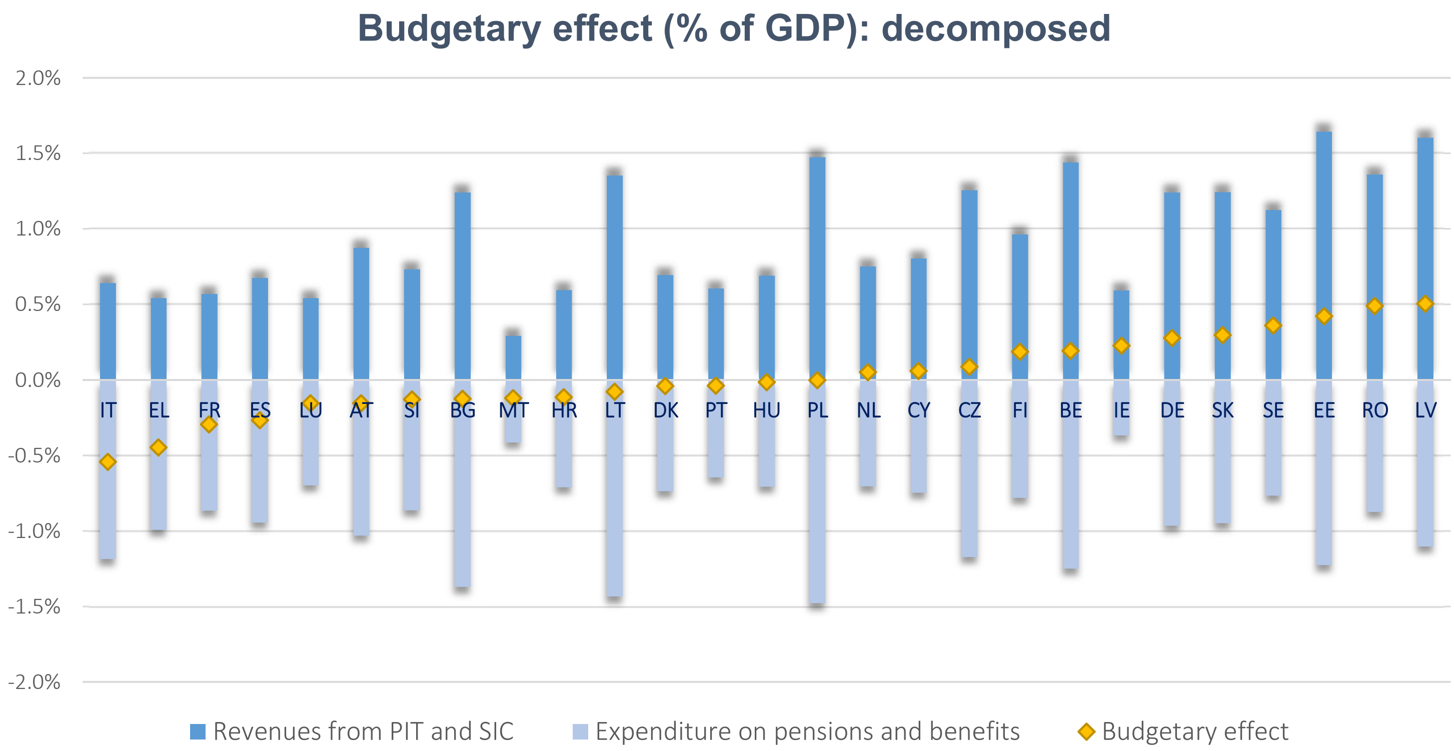
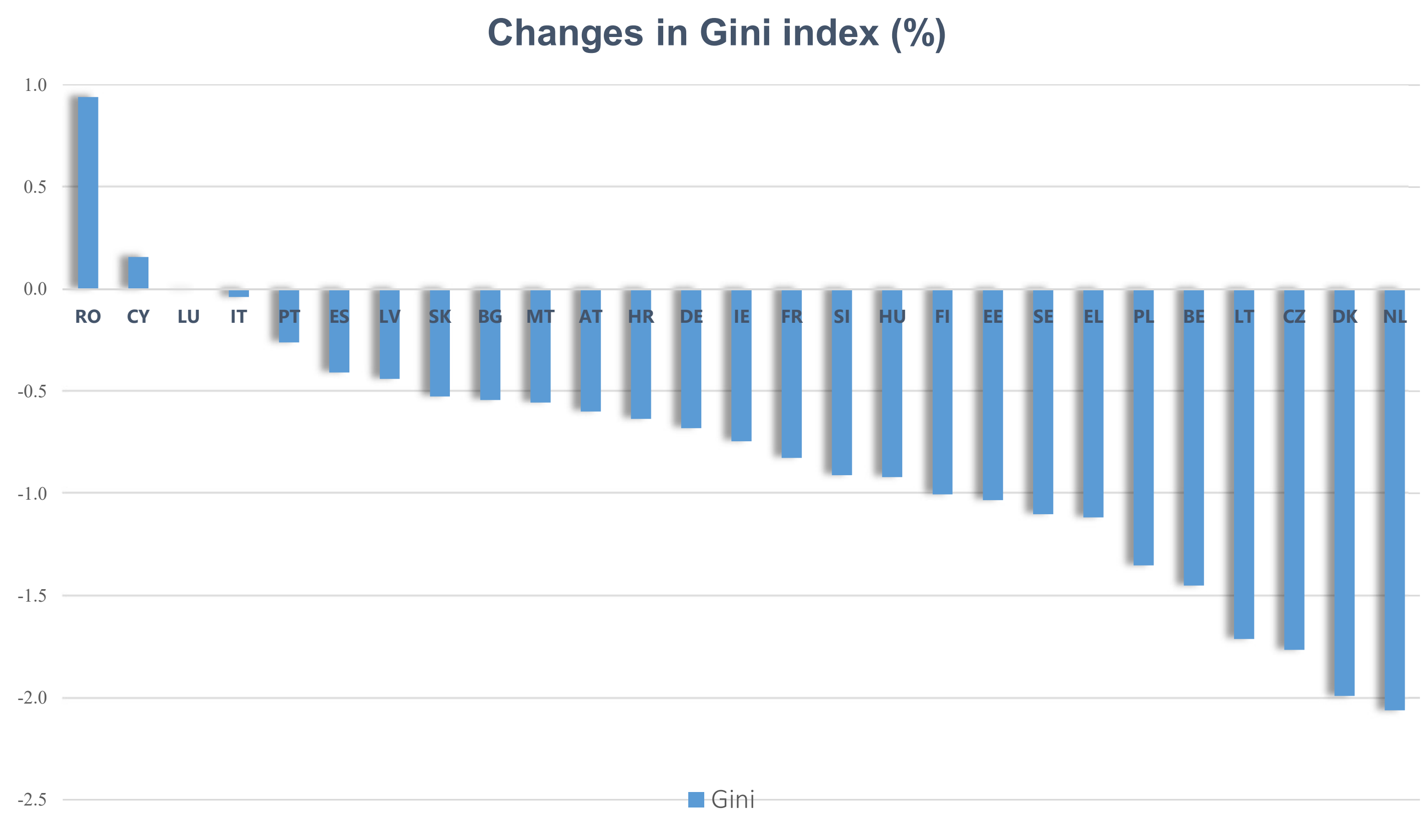
# S1: Distributional impact



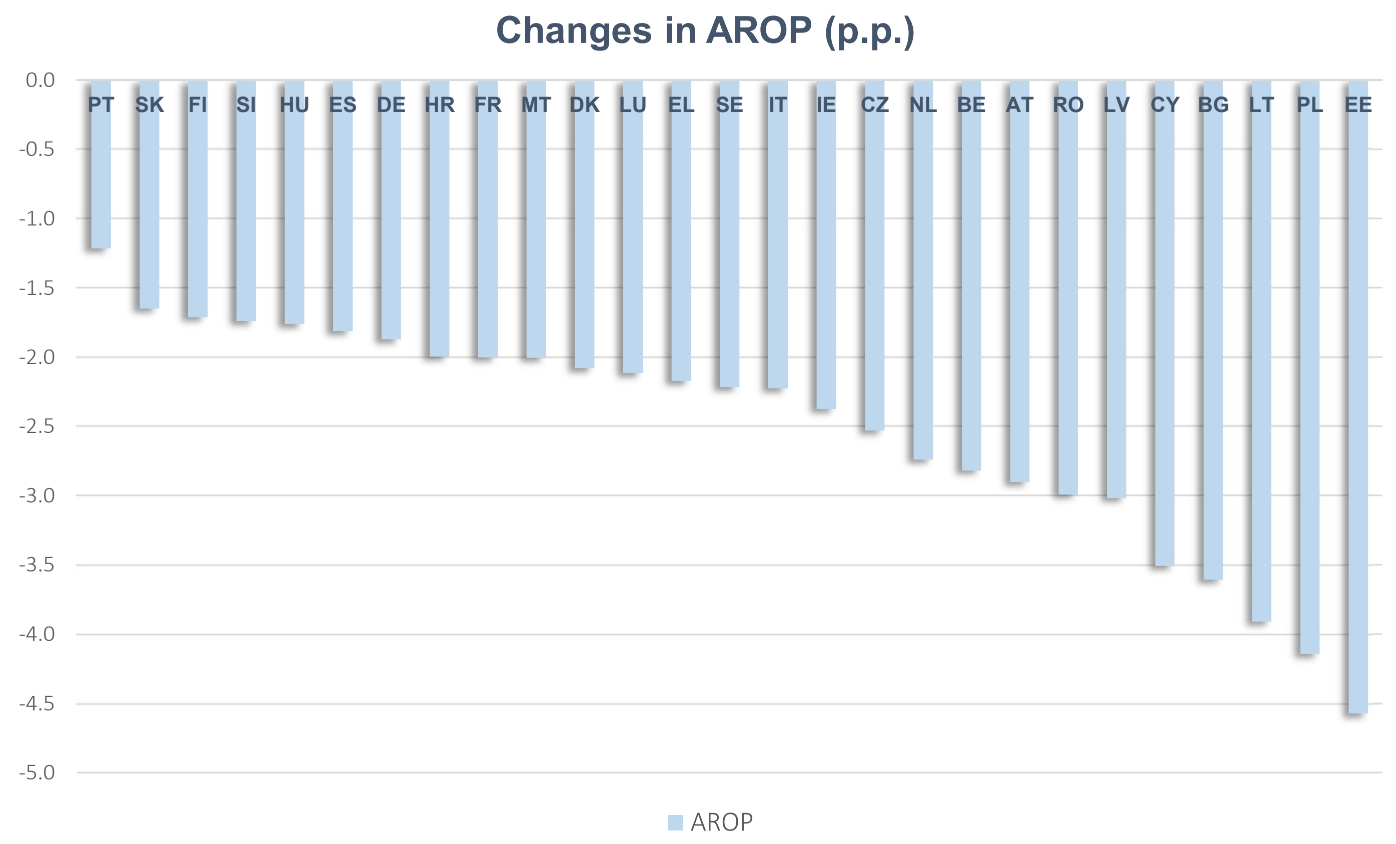
# S3: Budgetary impact



# S3: Distributional impact



# S3: Distributional impact



# Concluding remarks

- This analysis looks at the budgetary and distributional impact of fiscal drag caused by the 2021 tax-benefit systems of EU countries under various ‘wage indexation’ scenarios
  - It does not account for policy changes that are driven either by existing indexation rules, or other ad hoc policy adjustments
- The countries in which the magnitude of fiscal drag/benefit erosion is estimated to be the highest are those in which the existence of appropriate and well-defined indexation rules would be mostly needed
  - If not already there

# Concluding remarks

- Caution when interpreting the results:
  - We do not account for any second order effects of changes in employment incomes;
  - As policies are kept constant, we do not account for any existing indexation rules of the tax-benefit system:
    - Some countries have systematic indexation rules (BE, NL, FI),
    - Others adapt their fiscal policies each year in an ad-hoc way



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# Thank you





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