

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

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Outline

1. Motivation and objectives of the analysis
2. Methodology
 1. EUROMOD model
 2. Simulated scenarios
3. Results: budgetary and distributional effect for the whole population
4. Results: effects on wage workers
5. Conclusions

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 when wages are indexed to inflation and tax-benefit parameters are not timely updated

Methodology

- Tax-benefit microsimulation is commonly used to illustrate fiscal drag and benefit erosion dynamics (e.g. Paulus et al., 2019; Sutherland et al., 2008; Immervoll et al., 2006);
- This analysis is based on **EU-SILC 2019** and **EUROMOD version V4.0+**;
- In practice:
 - We increased uprating factors of wages for 2021 by a factor equal to the hypothetical wage indexation for each different alternative scenario;
 - Baseline: 2021 uprating factors as they are in EUROMOD.

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: same employment income increase as scenario 2, with all benefits and pensions increased by the forecasted CPI-based inflation for 2022.

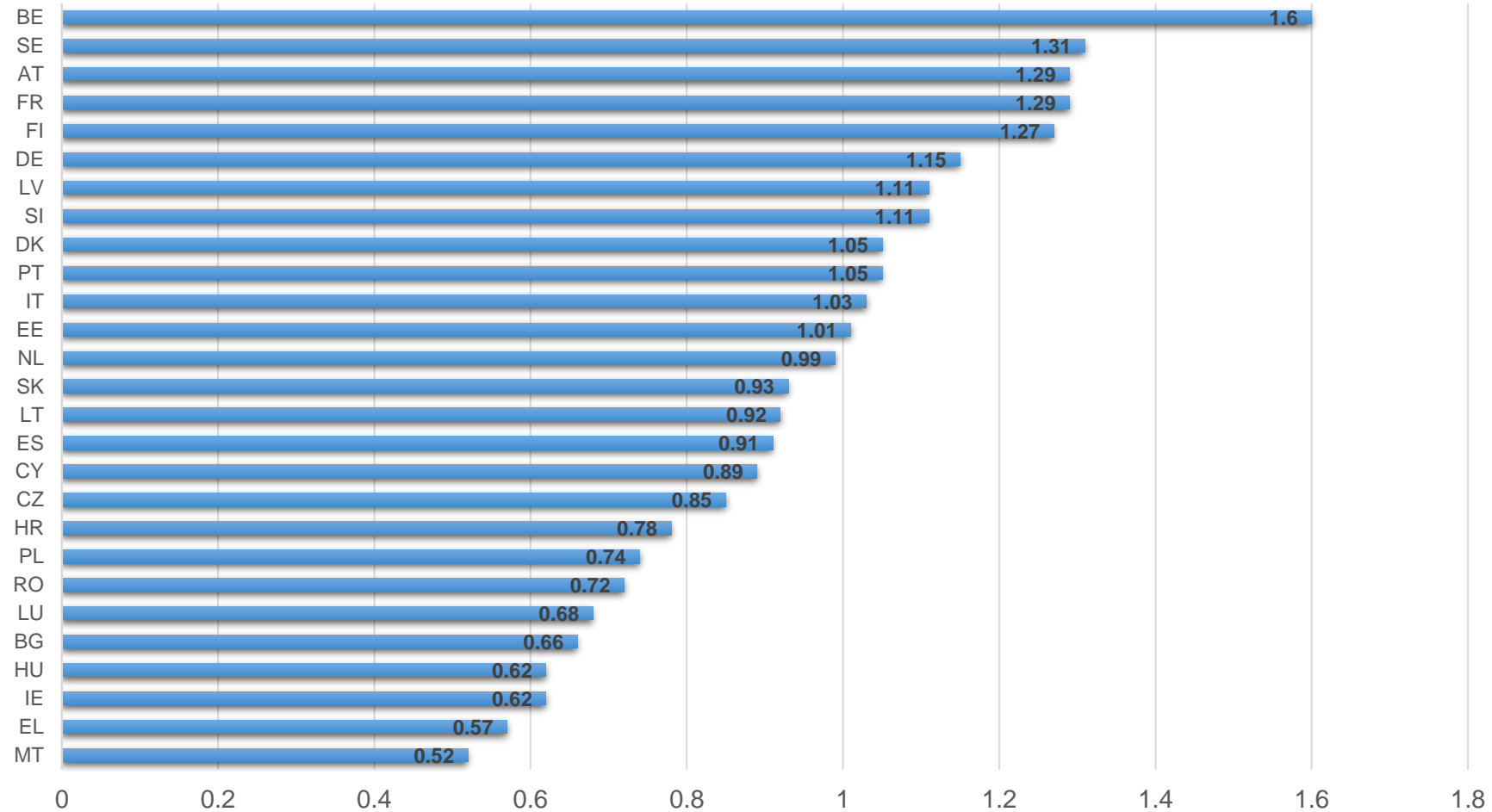
The methodology enables us to **isolate** the impact of fiscal drag/benefit erosion caused by the 2021 tax-benefit policies in each country.

Results: Scenario 1 and Scenario 3

- **Budgetary impact:**
 - Definition of budget: sum of direct taxes and 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 and SIC revenues (overall population)
- Impact on inequality and poverty:
 - Gini coefficient
 - At-risk-of-poverty (AROP) rates, using the 60% poverty line
- Focus on wage workers

S1: budgetary impact

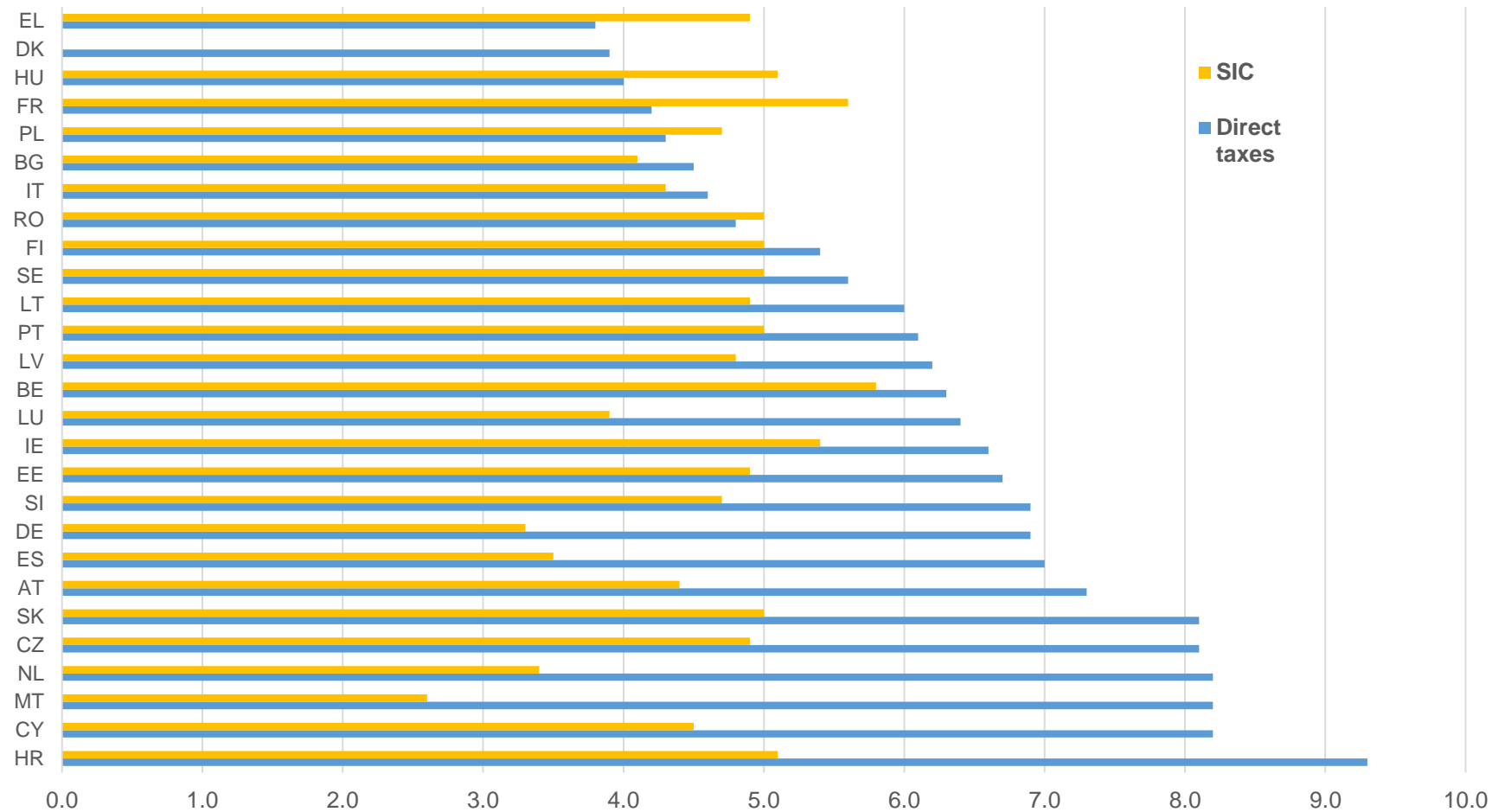
Budgetary impact (% of GDP)



Source: Own
elaboration using
EUROMOD v. 14.0+

S1: impact on direct taxes and SIC revenues

Percentage change in direct taxes and SIC (%)

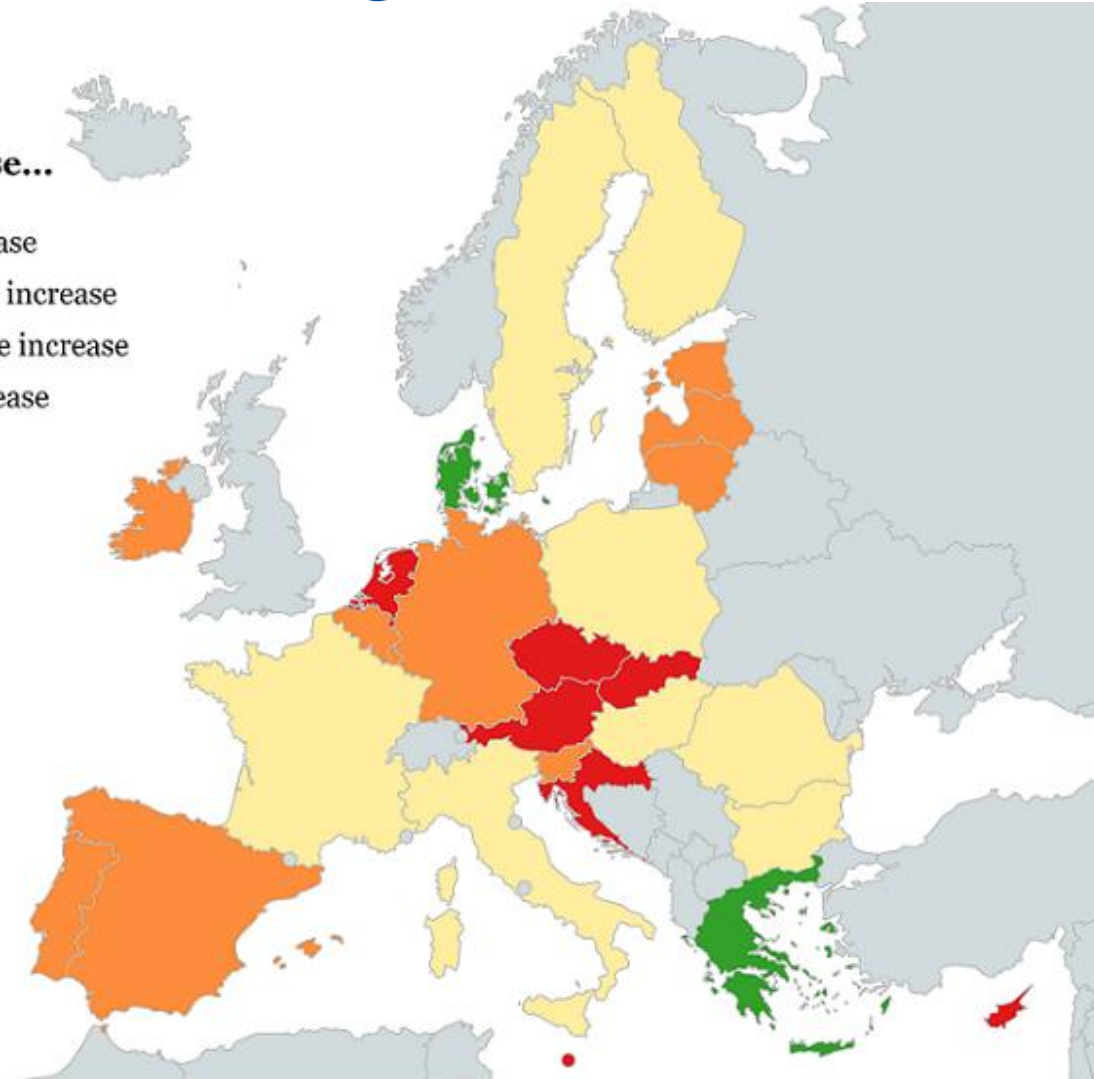


Source: Own elaboration using EUROMOD v. 14.0+

S1: relative magnitude of fiscal drag

Direct taxes increase...

- <80% of wage increase
- 80% - 120% of wage increase
- 120% - 140% of wage increase
- >140% of wage increase



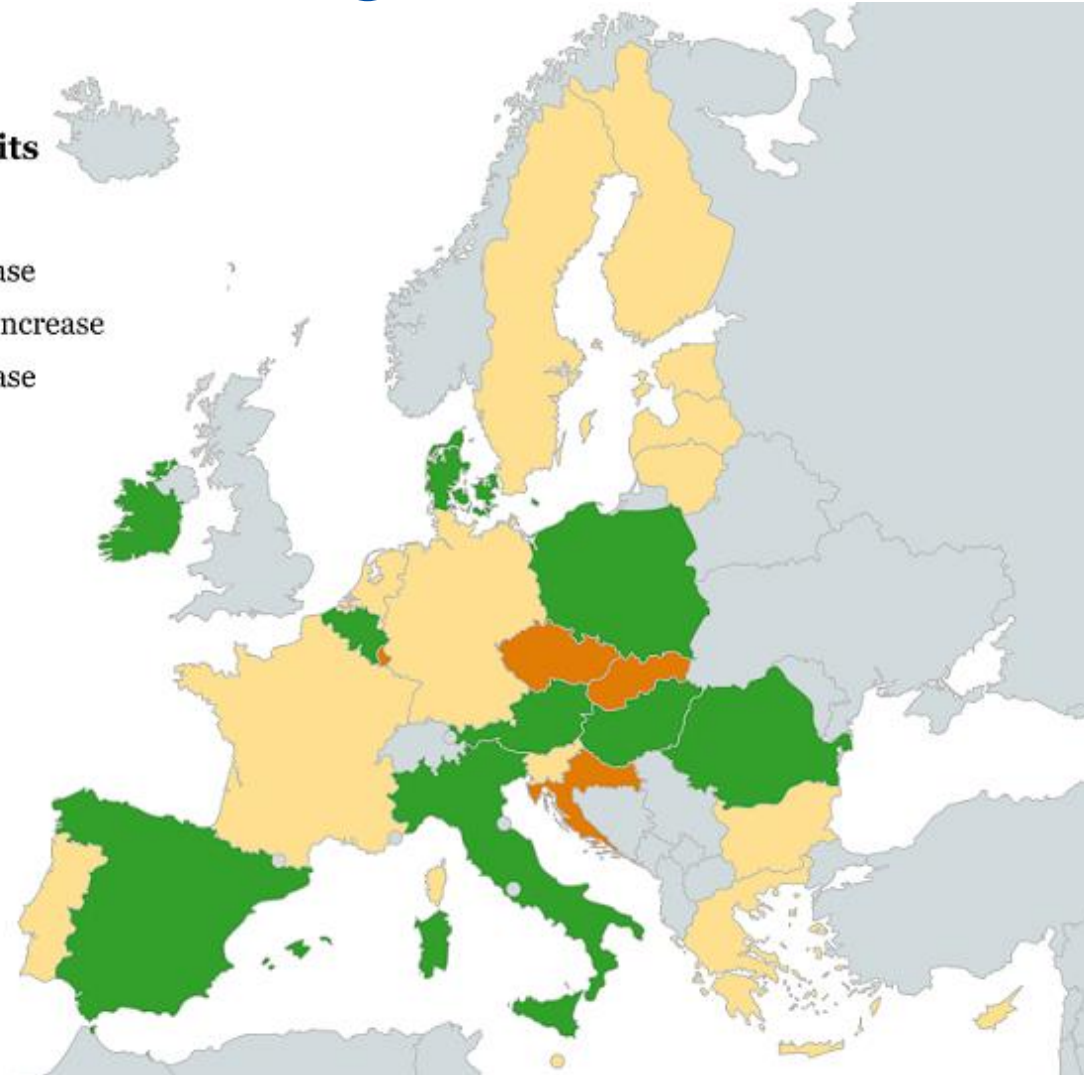
Created with mapchart.net

Source: Own
elaboration using
EUROMOD v. 14.0+
and mapchart.net

S1: relative magnitude of benefit erosion

**Means-tested benefits
decrease...**

- <30% of wage increase
- 30% - 60% of wage increase
- >60% of wage increase

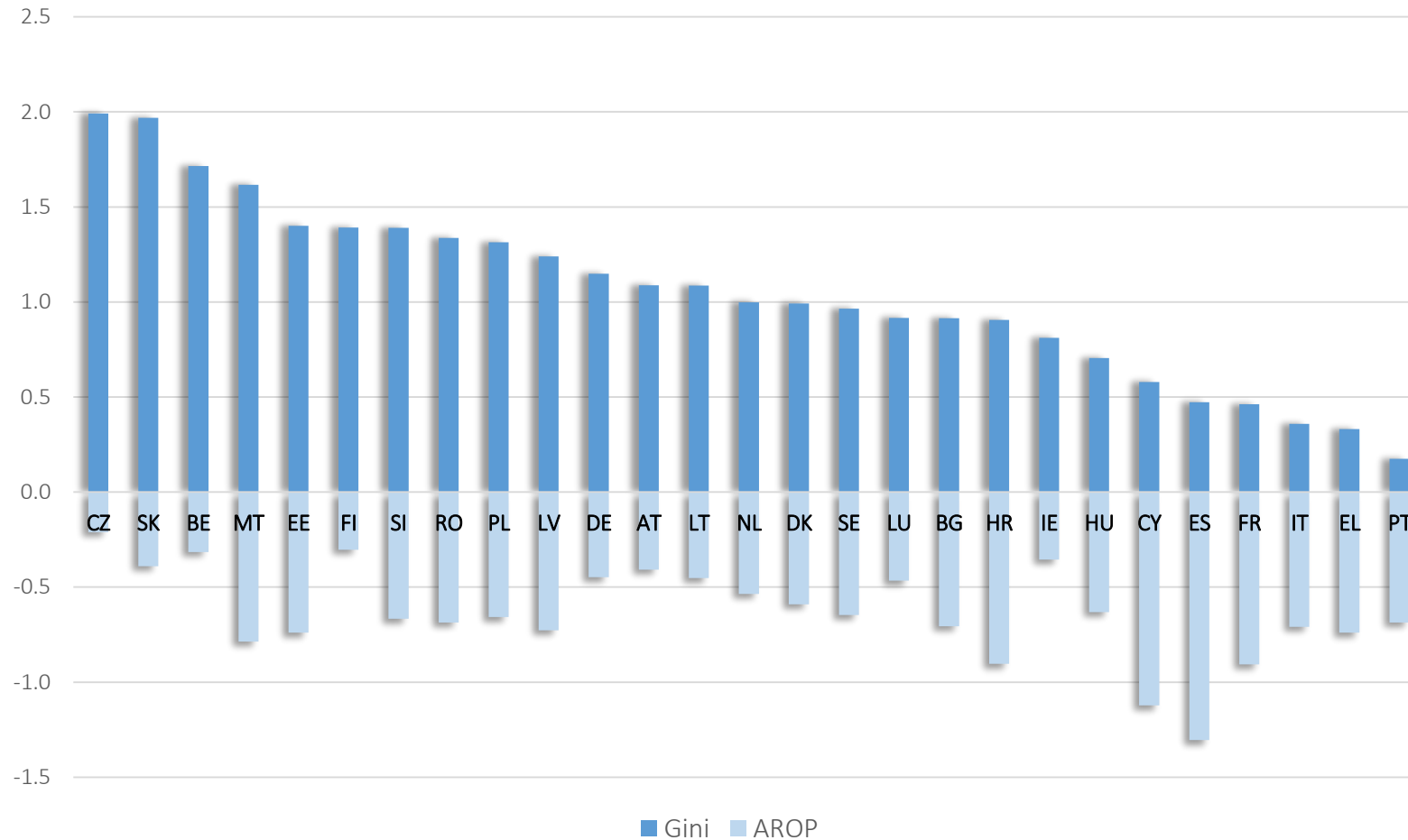


Created with mapchart.net

Source: Own
elaboration using
EUROMOD v. 14.0+
and mapchart.net

S1: Distributional impact

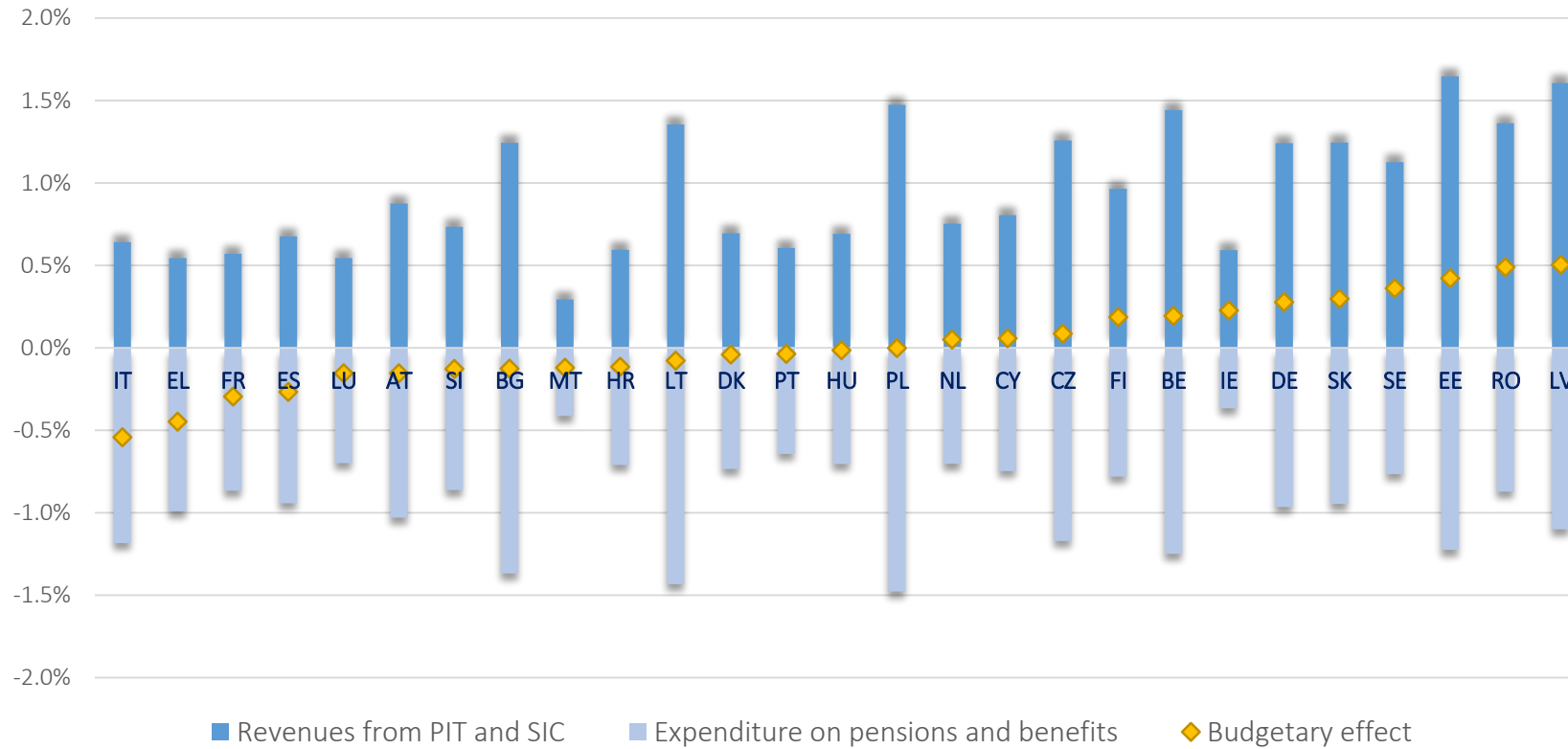
Changes in Gini (%) and AROP (p.p.)



Source: Own elaboration using EUROMOD v. 14.0+

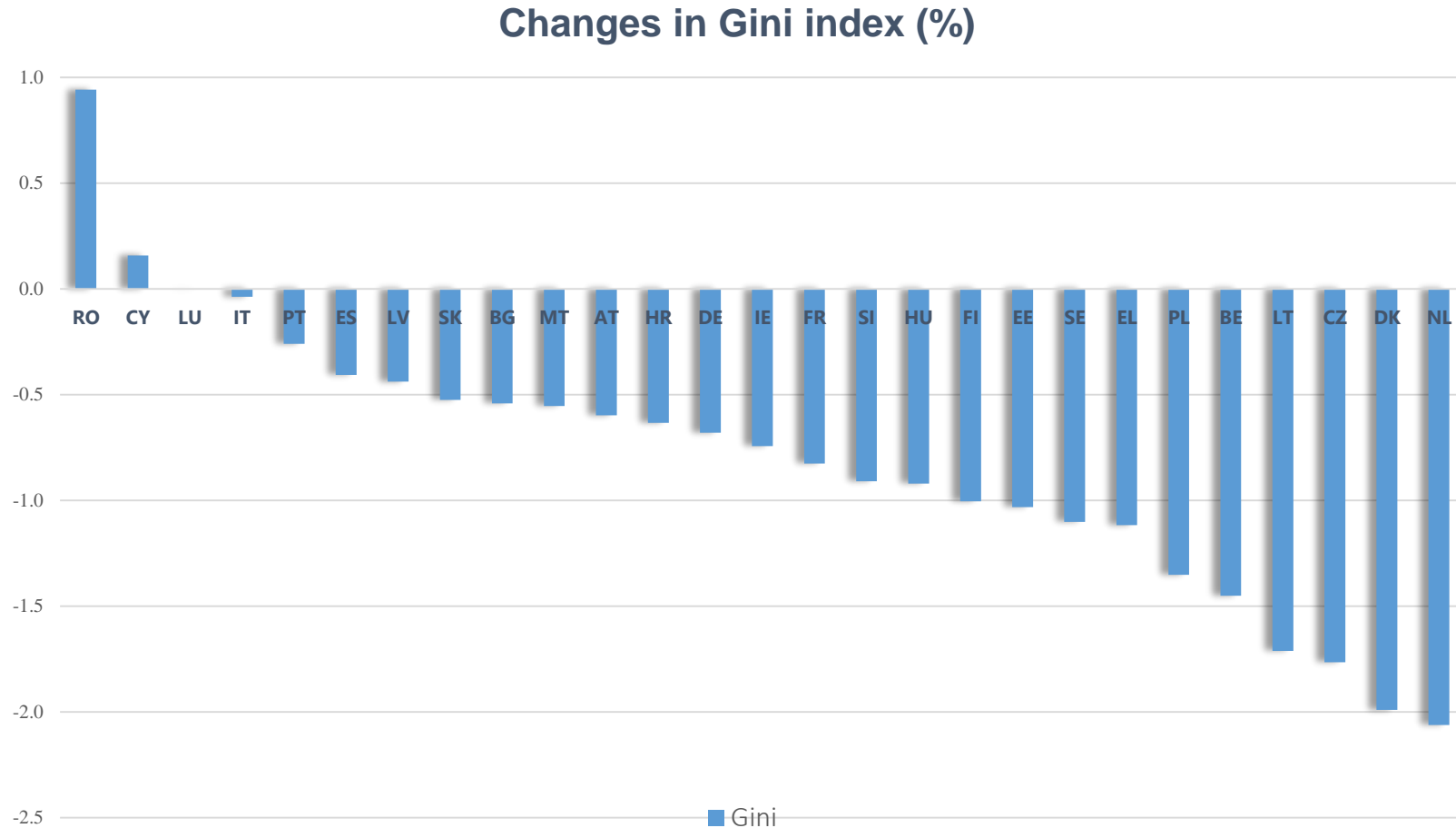
S3: Budgetary impact

Budgetary effect (% of GDP): decomposed



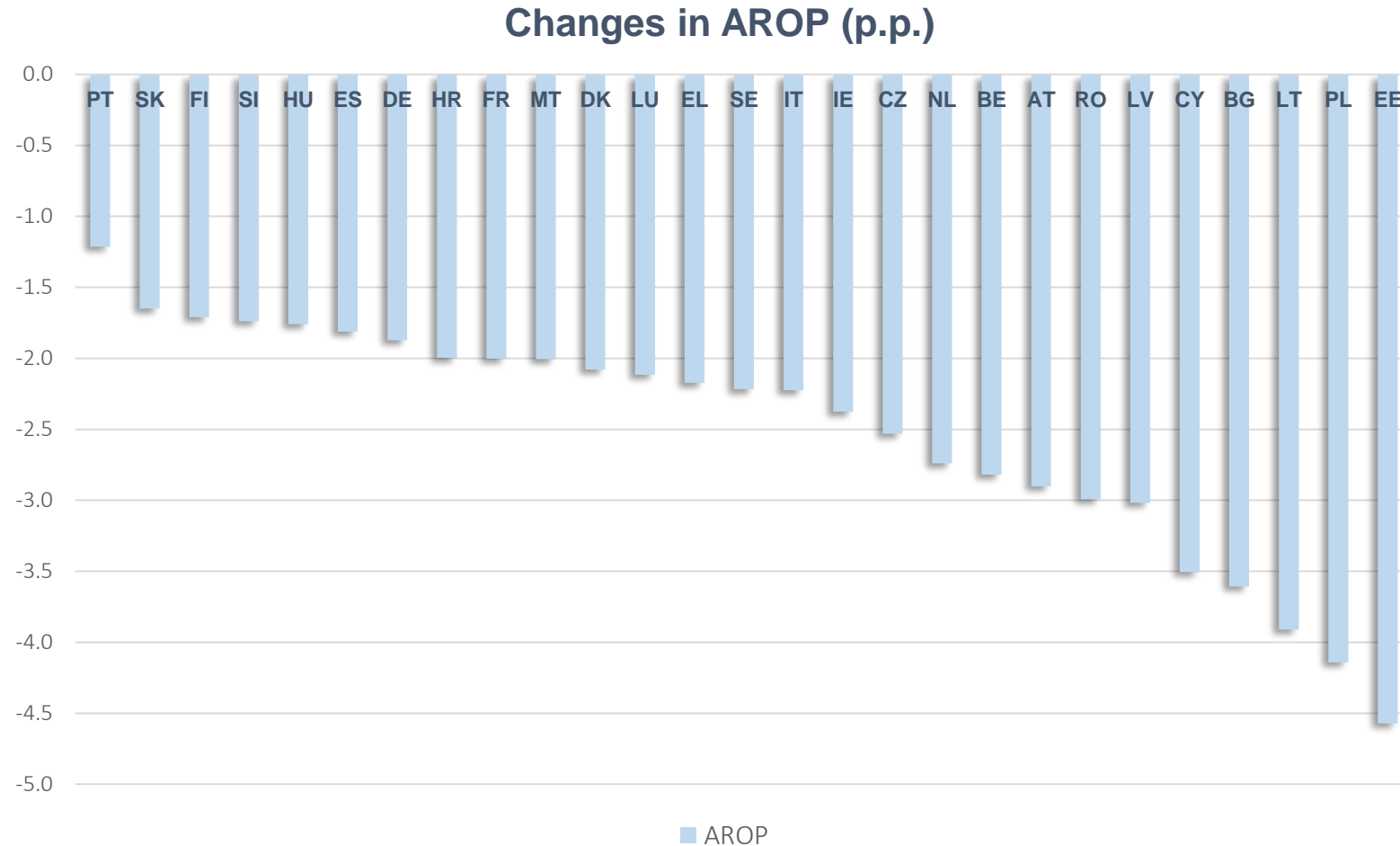
Source: Own elaboration using EUROMOD v. 14.0+

S3: Distributional impact



Source: Own elaboration using EUROMOD v. 14.0+

S3: Distributional impact



Source: Own elaboration using EUROMOD v. 14.0+

Impact of fiscal drag on wage workers

- We only consider Scenario 1 (5% increase in wages);
- An employee disposable income is composed by two thirds of employment income;
- We divided the sample in quintiles of employment income and looked at two main figures:
 - Change in the amount of personal income tax paid by each quintile,
 - Change in the share of total amount of personal income tax contributed by each quintile.



S1: impact for wage earners (Czechia)

	BASELINE	SCENARIO 1	DIFFERENCE
	Total taxes paid (EUR/year)	Total taxes paid (EUR/year)	% w.r.t. Baseline
Quintile 1	69,685,473	90,077,875	29.3
Quintile 2	498,606,956	568,642,321	14.1
Quintile 3	695,634,292	769,738,645	10.6
Quintile 4	1,110,311,576	1,220,104,066	9.9
Quintile 5	2,290,929,488	2,476,655,501	8.1
All	4,665,167,548	5,125,218,350	9.9
	% tax paid in each quintile	% tax paid in quintile	P.p. w.r.t. Baseline
Quintile 1	1.5	1.8	0.3
Quintile 2	10.7	11.1	0.4
Quintile 3	14.9	15.0	0.1
Quintile 4	23.8	23.8	0.0
Quintile 5	49.1	48.3	-0.8
All	100.00	100.00	0.00

Amount of income tax paid by each wage quintile in Czechia Source: Own elaboration using EUROMOD v. I4.0+

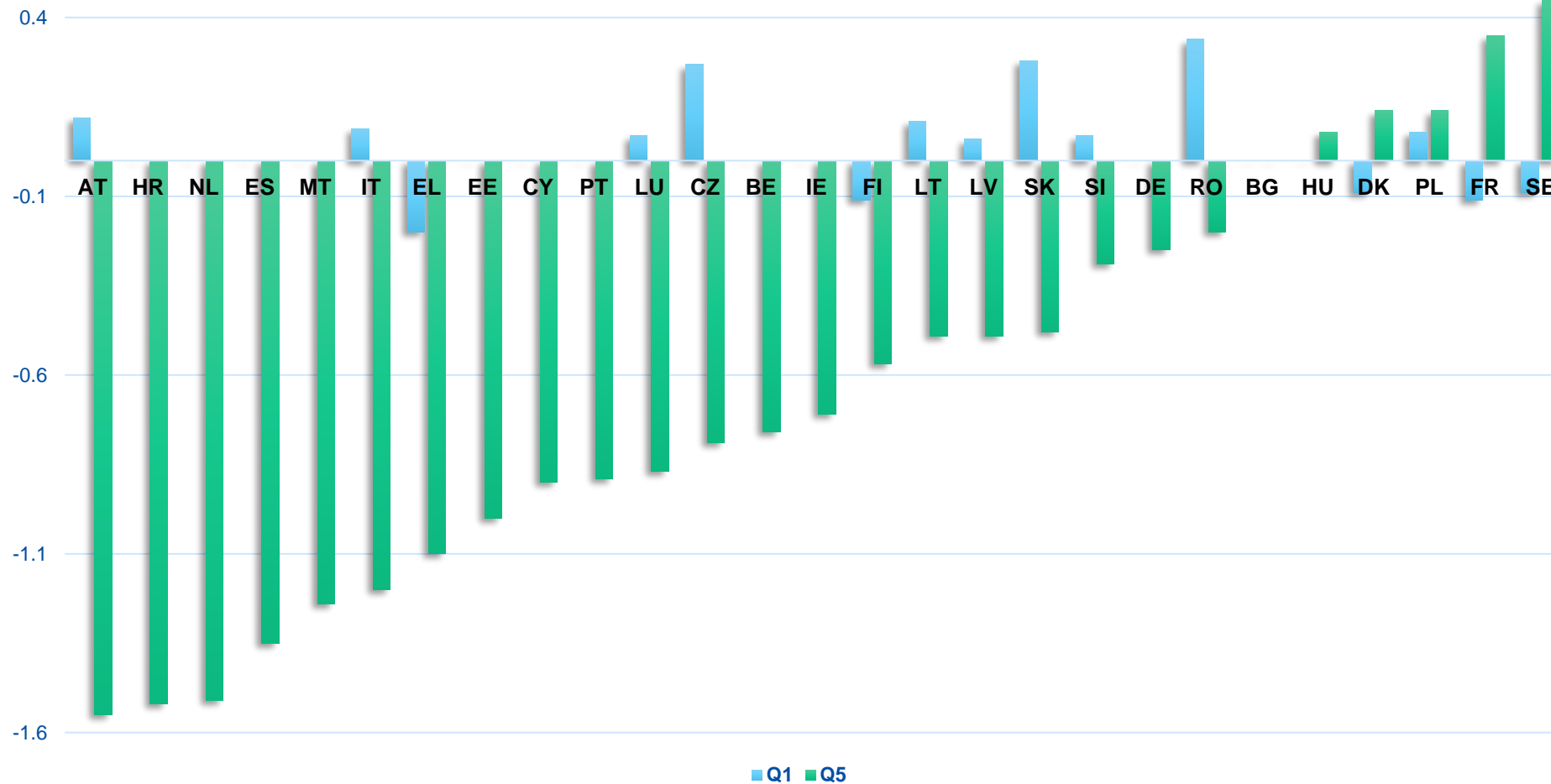
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S1: impact for wage earners Q1 and Q5 (all countries)



Source: Own elaboration using EUROMOD v. 14.0+

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.
- Main results:
 - The relative magnitude of fiscal drag and benefit erosion is not affected by the magnitude of the increase in wages;
 - In almost half countries the positive budgetary effect is large enough to finance a compensation for households;
 - The structure of PIT schedules in each country can influence the change in the share of income tax paid by richest workers after the wage increase.

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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