

A lost decade? Decomposing the effect of 2001-11 tax-benefit policy changes on the income distribution in EU countries

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Motivation

- ▶ Increase in poverty and inequality (Gini) in almost all EU member states in 2001-11 (Eurostat statistics).
- ▶ Various policy reforms and austerity measures across Europe in the last decade.
- ▶ No papers have looked beyond summary measures of poverty and inequality for this period and on a comparative basis.
- ▶ Evidence mainly on the UK (pre-crisis and early-crisis period, e.g. Clark et al. 2004, Brewer et al. (2012) and Bargain et al. (2013)) and on some EU countries (focus on recent austerity measures, Jenkins et al. 2012, Avram et al. (2013), Matsaganis et al. 2013)

Research questions

- ▶ Have policy reforms in the past decade contributed to the observed increased poverty and inequality outcomes?
- ▶ What is the effect of indexation vs. changes in the structure of the policies?
- ▶ How have policies affected hh disposable incomes across the business cycle?

Contribution

- ▶ Add to the empirical evidence on the effects of tax-benefit policy changes on the income distribution and the extent of fiscal drag and benefit erosion (e.g. Immervoll (2005), Immervoll et al. (2006), Sutherland et al. (2008))
- ▶ Methodological contribution - extending the decomposition framework:
 - ▶ **Indexation Effect** (benefit erosion and fiscal drag) - changes to the monetary policy parameters of the system
 - ▶ **Structural Changes** - changes in the design of the system
- ▶ Analyse changes over the business cycle: a period of economic growth (2001-07) and of economic crisis (2007-11)

Total Change

- ▶ The change in the distribution of disposable income between two periods (0 and 1) is (following on Bargain and Callan (2010))

$$\Delta I = I[d_1(p_1, y_1)] - I[d_0(p_0, y_0)]$$

where I is a summary indicator for the income distribution, y are market income and population characteristics, p the policy monetary parameters and d is the structure of the tax-benefit system, transforming gross incomes into disposable income.

Decomposing the Total Change

$$\Delta I = \underbrace{I[d_1(p_1, y_1)] - I[d_0(\alpha p_0, y_1)]}_{\text{Policy Effect}} + \underbrace{I[d_0(\alpha p_0, y_1)] - I[d_0(p_0, y_0)]}_{\text{Other Effect}}$$

Decomposing the Policy Effect

- ▶ We extend the framework and decompose **further** the Policy Effect into:
 - ▶ **Indexation** effect
 - ▶ **Structural** changes

$$\Delta I_p = \underbrace{I[d_1(p_1, y_1)] - I[d_0(\alpha p_0, y_1)]}_{\text{Policy effect}}$$

$$= \underbrace{I[d_1(p_1, y_1)] - I[d_1(\alpha p_0, y_1)]}_{\text{Indexation effect}} + \underbrace{I[d_1(\alpha p_0, y_1)] - I[d_0(\alpha p_0, y_1)]}_{\text{Structural changes}}$$

- ▶ where α is the counterfactual indexation against which actual changes in monetary parameters are assessed.

Counterfactual Indexation - α

- ▶ Index
 - ▶ Growth in average market incomes (MII)
 - ▶ Growth in prices (CPI)
 - ▶ No indexation, i.e. comparing the nominal levels of benefits and tax thresholds

- ▶ The index is used to show how monetary amounts (e.g. benefits, tax thresholds) have changed relative to the index.

Indexation Effect and Structural Changes

- ▶ Examples of Indexation Effect:
 - ▶ Cuts in the levels of benefits and pensions (Greece)
 - ▶ Freezing of benefit amounts (UK)
 - ▶ Indexation of public pensions (Estonia and Bulgaria)
- ▶ Examples of Structural Changes:
 - ▶ Introduction of contributory maternity and unemployment benefits (Estonia)
 - ▶ Introduction of a flat income tax (Bulgaria and Hungary)
 - ▶ Introduction of 50 percent marginal tax rate (UK)

Data and Countries

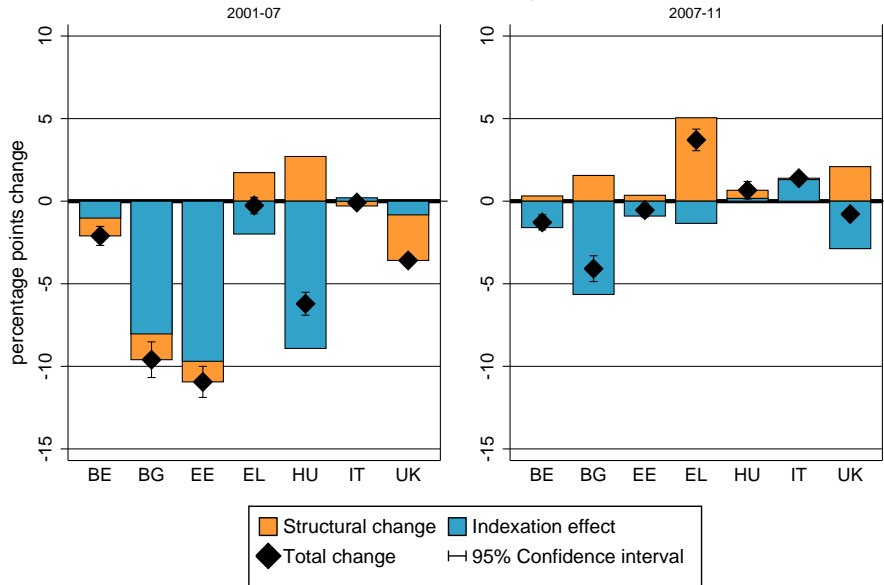
- ▶ Belgium, Bulgaria, Estonia, Greece, Hungary, Italy, UK
- ▶ Period: 2001-2011, midpoint 2007
- ▶ Data - EU SILC 2008 (income reference period 2007), FRS 2008-2009 (for UK)
- ▶ The tax-benefit microsimulation model EUROMOD is used to simulate the counterfactual scenarios and calculate disposable incomes

Effect of policies on anchored poverty

- ▶ Poverty line is 60% of the median in 2007
- ▶ 2011 vs. 2001 policies indexed by **CPI**:
 - ▶ Poverty reducing effect in BE (3pp), BG (14pp), EE (11pp), HU (6pp) and UK (4.4pp);
 - ▶ Increasing effect in EL (3pp) and IT (1.3pp)
- ▶ 2011 vs. 2001 policies indexed by **MII**:
 - ▶ Reducing effect in BE (4pp), EE (5pp) and the UK (2pp);
 - ▶ Increasing effect in EL (4pp) and BG (2.4pp)
- ▶ Indexation Effect vs. Structural Change:
IE contributed to poverty reduction, while SC typically lead to an increase.
- ▶ Policies since the crisis achieved less compared to the pre-crisis period (except in Belgium).

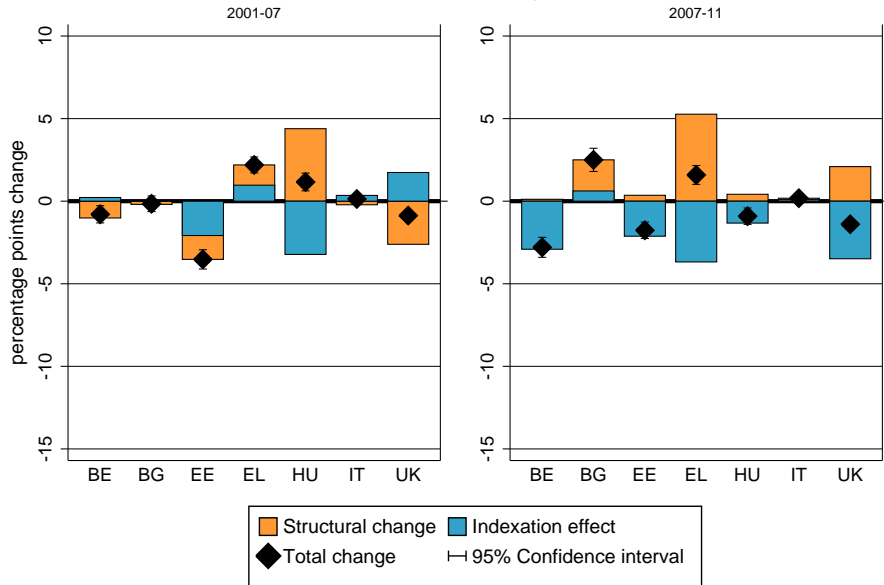
What effect did policy reforms in **2001-11** have on **anchored** poverty? Indexation Effect vs. Structural Change

Policies indexed by **CPI**



What effect did policy reforms in **2001-11** have on **anchored** poverty? Indexation Effect vs. Structural Change

Policies indexed by **MII**



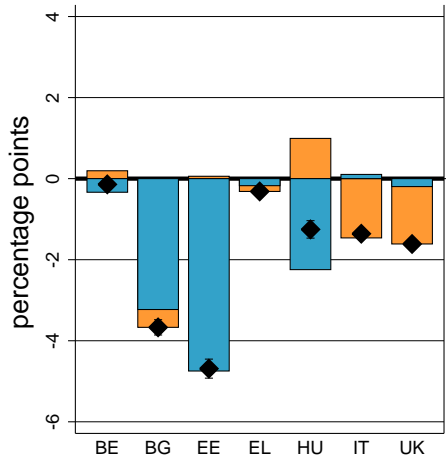
Effect of policies on inequality (Gini)

- ▶ 2011 vs. 2001 policies indexed by **CPI**:
 - ▶ Gini reduction in all countries with a much smaller effect in 2007-11.
- ▶ 2011 vs. 2001 policies indexed by **MII**:
 - ▶ In 2001-07, fairly stable inequality levels.
 - ▶ In 2007-11, increase in Gini in HU (2.2pp) and BG (1.7pp), reduction in the other countries (0.5-1.5pp).
- ▶ Drawing back of safety nets at the time when they are needed the most.

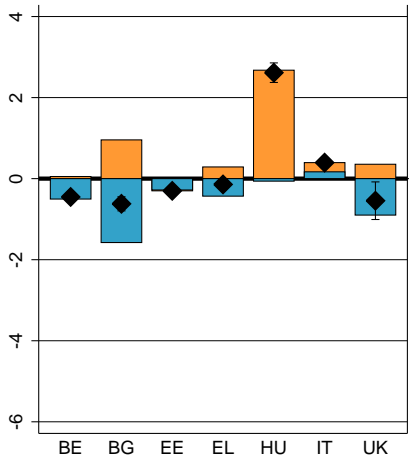
What effect did policy reforms have on the Gini coefficient?

2001 and 2011 monetary policy parameters indexed by **CPI**

2001-07



2007-11



Structural change Indexation effect
Total change 95% Confidence interval

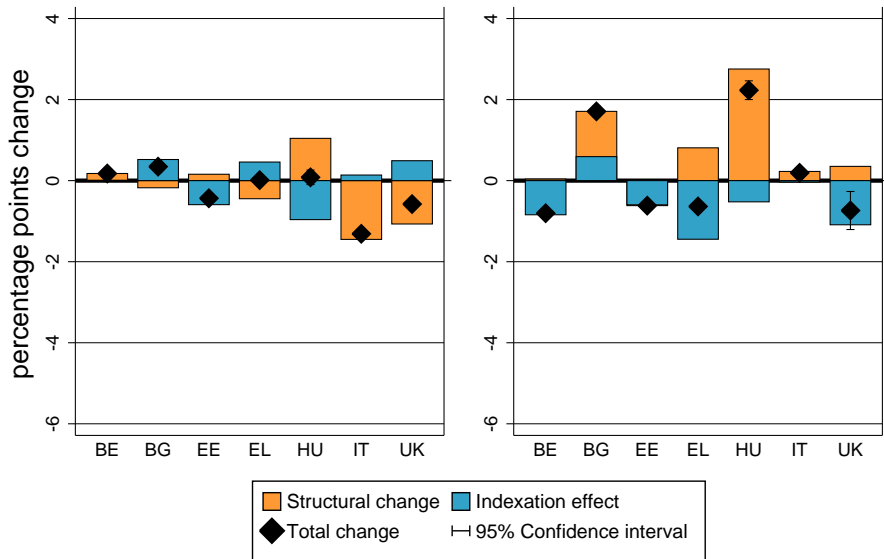
Note: Gini based on disposable income

What effect did policy reforms have on the Gini coefficient?

2001 and 2011 monetary policy parameters indexed by **MII**

2001-07

2007-11



Note: Gini based on disposable income

Summary

- ▶ Policies have done less in the crisis period in terms of poverty and inequality reduction.
 - ▶ Drawing back of safety nets at the time when they are needed the most.
 - ▶ Need to achieve more under favourable economic conditions.
- ▶ Monetary policy parameters were adjusted ahead of CPI (except for EL and IT) and during the crisis, ahead of market incomes.
- ▶ Indexation Effect contributed to poverty and inequality reduction, while Structural Changes typically lead to an increase.
- ▶ **Not a lost decade!** Policy reforms have helped to reduce the risk of poverty and inequality in most of the countries.

Thank you!

Reference: Hills, J., A. Paulus, H. Sutherland and I. Tasseva (2014):
"Decomposing the effect of 2001-11 tax-benefit policy changes on the
income distribution in EU countries", ImPRovE Working Paper
forthcoming