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Income distribution and redistribution across Europe: using EU-SILC in two complementary approaches

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Wider context: ALiCE Project

- Analysis of Life Chances in Europe
  - Detailed analysis of family structure, employment and income
  - Cross-national comparisons of patterns across both the ‘old’ and ‘new’ members of the European Union
  - Substantive and methodological strands
  - Use of EU-SILC, EU-LFS, ESS, EUROMOD and ECHP
  - Focus on monetary indicators of living standards

Wider context: EUROMOD

- EU-wide static tax-benefit microsimulation model
- EU-15 + EE, HU, PL, SI; microdata from 15 sources
- Tax benefit systems for 1998, 2001, 2003, 2005 (most)
- Direct taxes, SICs and (non-contributory) cash benefits
- Disposable income includes both simulated and non simulated components
- Indirect taxes and non-cash benefits for a selection of countries
- Modelling benefit non take up and tax evasion is complex: baseline scenario assumes full compliance

Current project (2009-2012) aims at:

- covering all EU countries
- using EU-SILC as input data
- updating policy rules to at least the EU-SILC data year

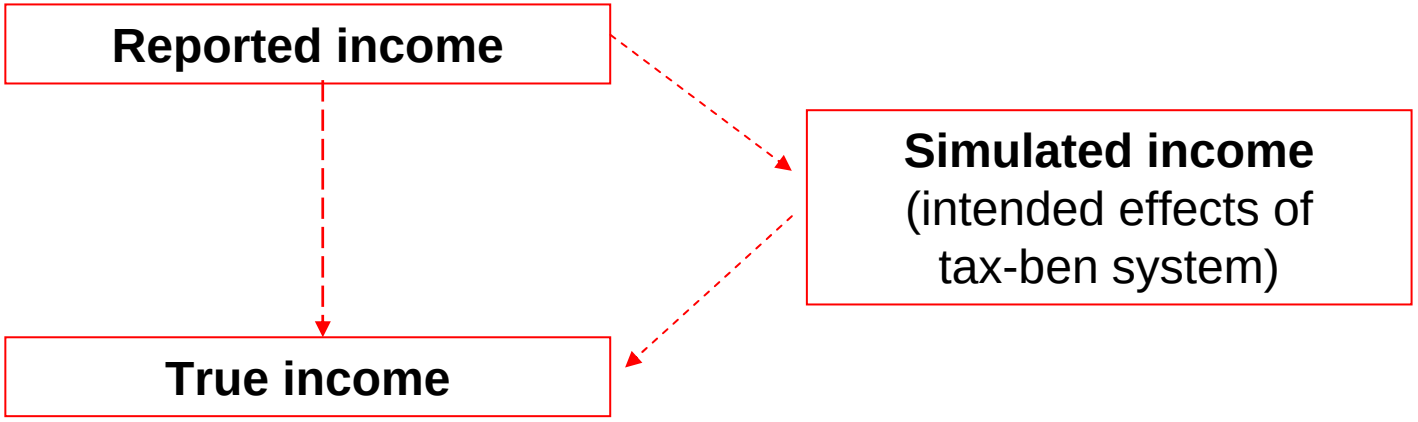
Two complementary approaches...

Analysis of income distribution based on

- Reported incomes in the original survey
- Simulated incomes by microsimulation model:
  - “Tax-benefit” models simulate cash benefits, taxes and contributions using information from the survey
  - Validation of main aggregates versus administrative statistics
  - The main output is individual income and its components

Motivations

- Breakdown of income concept (Atkison et al. 1995)
- Not all income components are reported properly:
  - Bottom and top of the distribution
  - Capital income and self-employment income
  - Means-tested benefits
- Reconciliation exercise of the two approaches



Motivations

- Focus on the main reasons for differences
  (Mantovani and Sutherland 2003, Lietz and Suthrland 2005)
  - Simulation of final annual taxes
  - Income non reporting
  - Benefit non take-up
  - Tax evasion / tax avoidance

- Within country relative measures, but cross country comparison informs the analysis

Microsimulation added value

- Analysis of Income distribution
  - More detail on components of taxes/benefits
  - Annual taxes
  - Analysis at individual level (sharing assumptions)
  - Child contingent support
  - Work incentive indicators
  - Entitlement to benefits, rather than receipt

- Analysis of Income redistribution
  - (Only to some extent feasible with EU-SILC)
  - Forward projections and current policies
  - Impact of policy changes on social indicators
  - “What if” questions and impact of redistributive systems on different national populations

Data and countries

- Data: EU-SILC
- Countries: AT, BE, IT, ES, HU
- Data Years: 2004-1 (AT); 2004-2 (BE, IT); 2005-2 (ES, HU)
- Policy years: 2003 (AT, BE, IT); 2004 (ES); 2005 (HU)
- Equivalence scale: Modified OECD (generally, using "non adjusted" information from the survey)

- Preliminary results!

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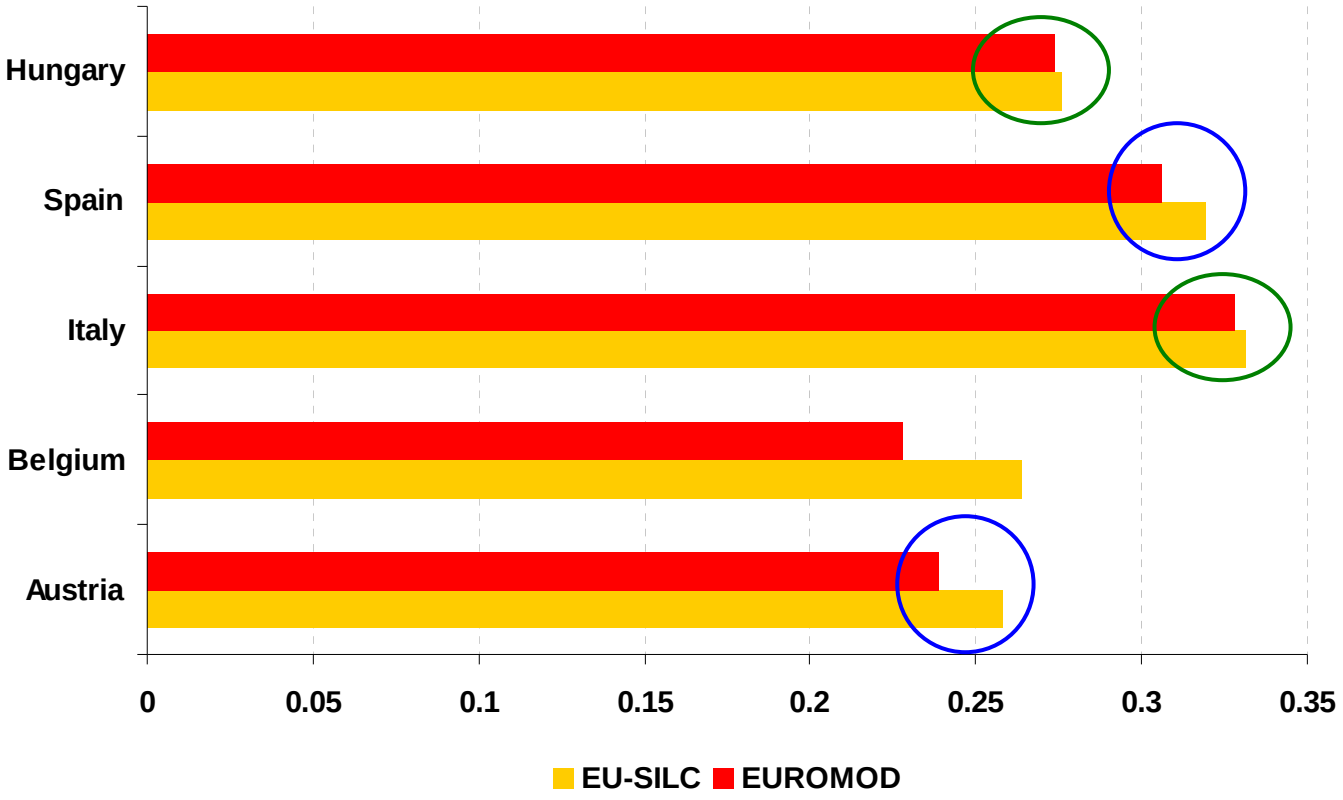
Gini coefficients by country and approach

(net household equivalent income)



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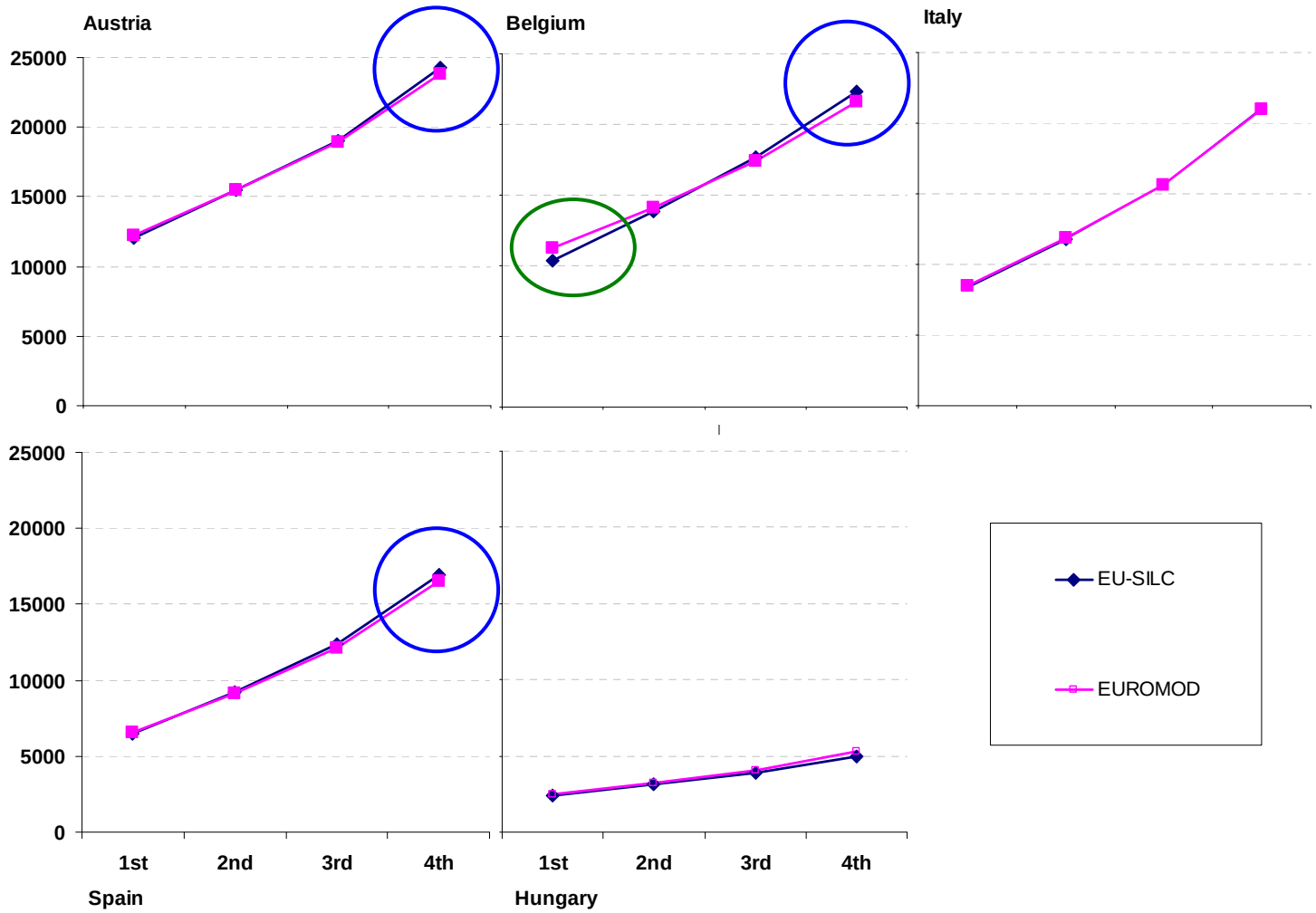
Quintile points by country and approach
(net household equivalent income)



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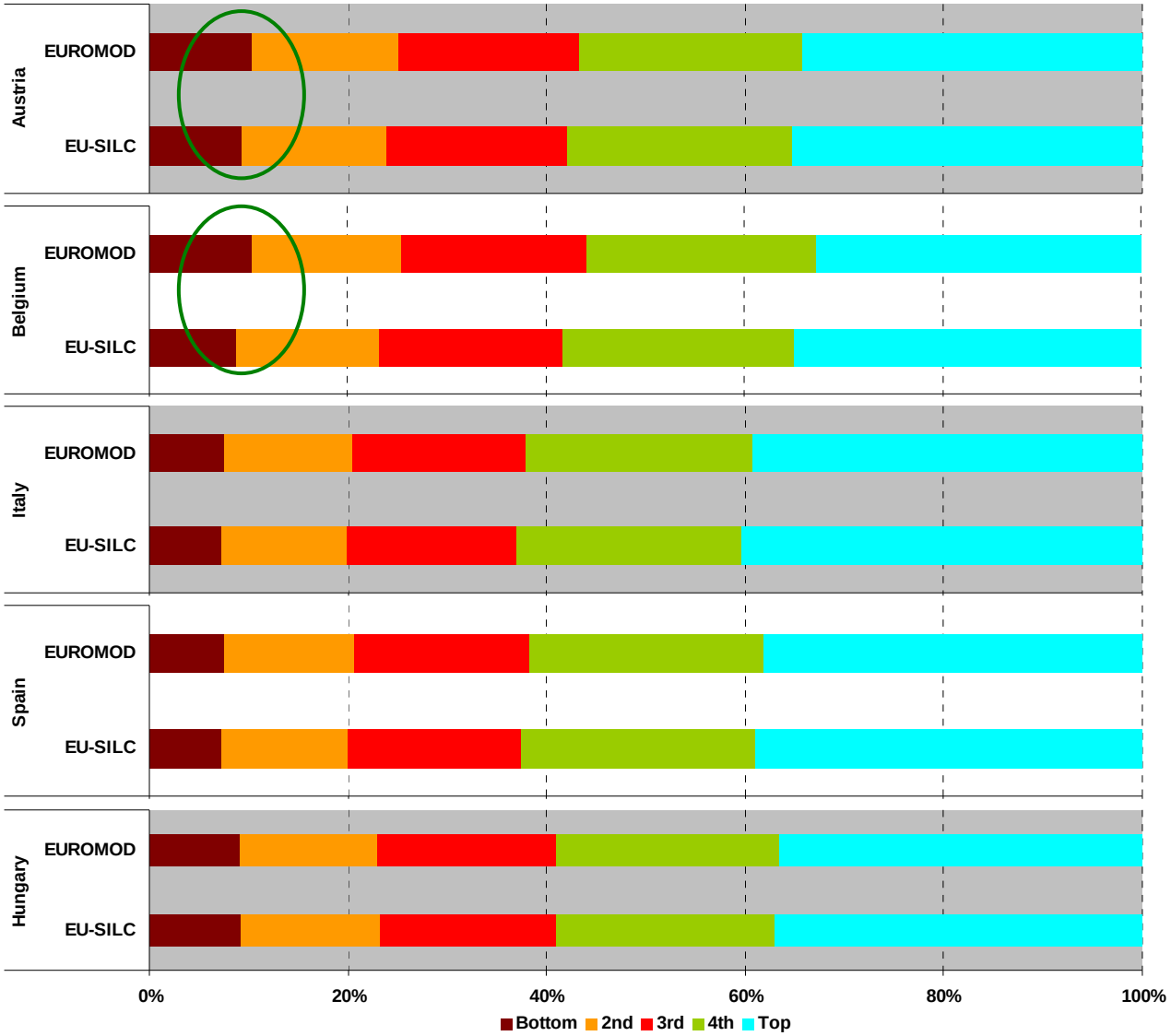
Quintile shares by country and approach

(net household equivalent income)



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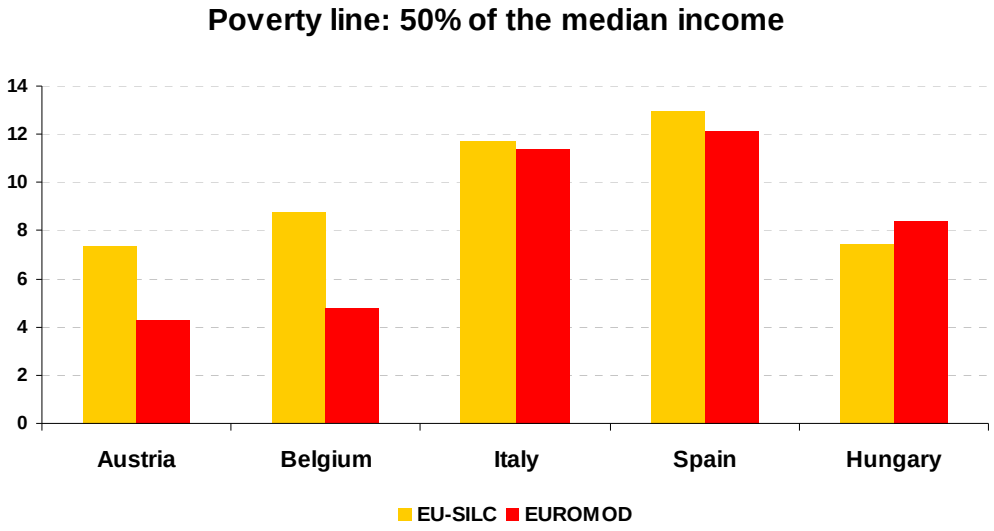
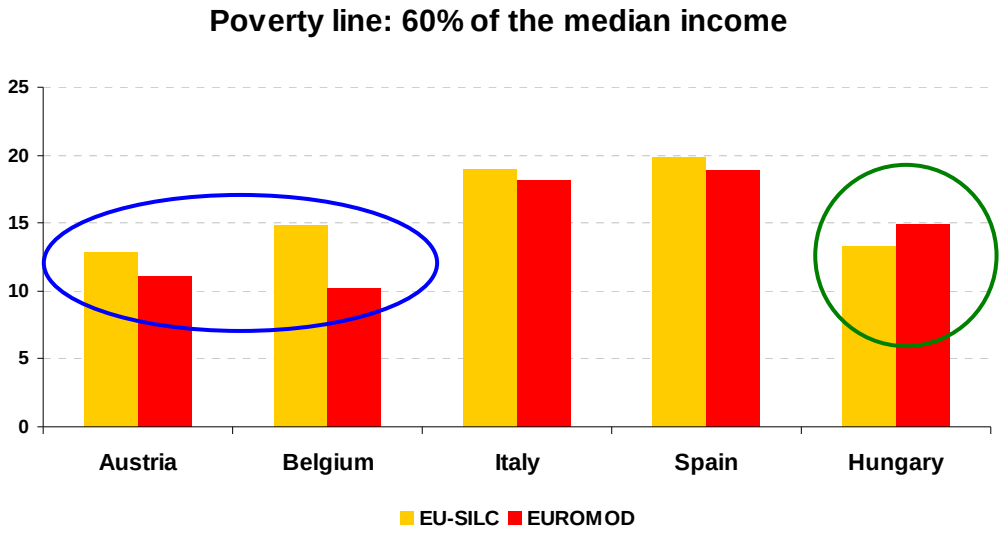
Poverty rates by country and approach

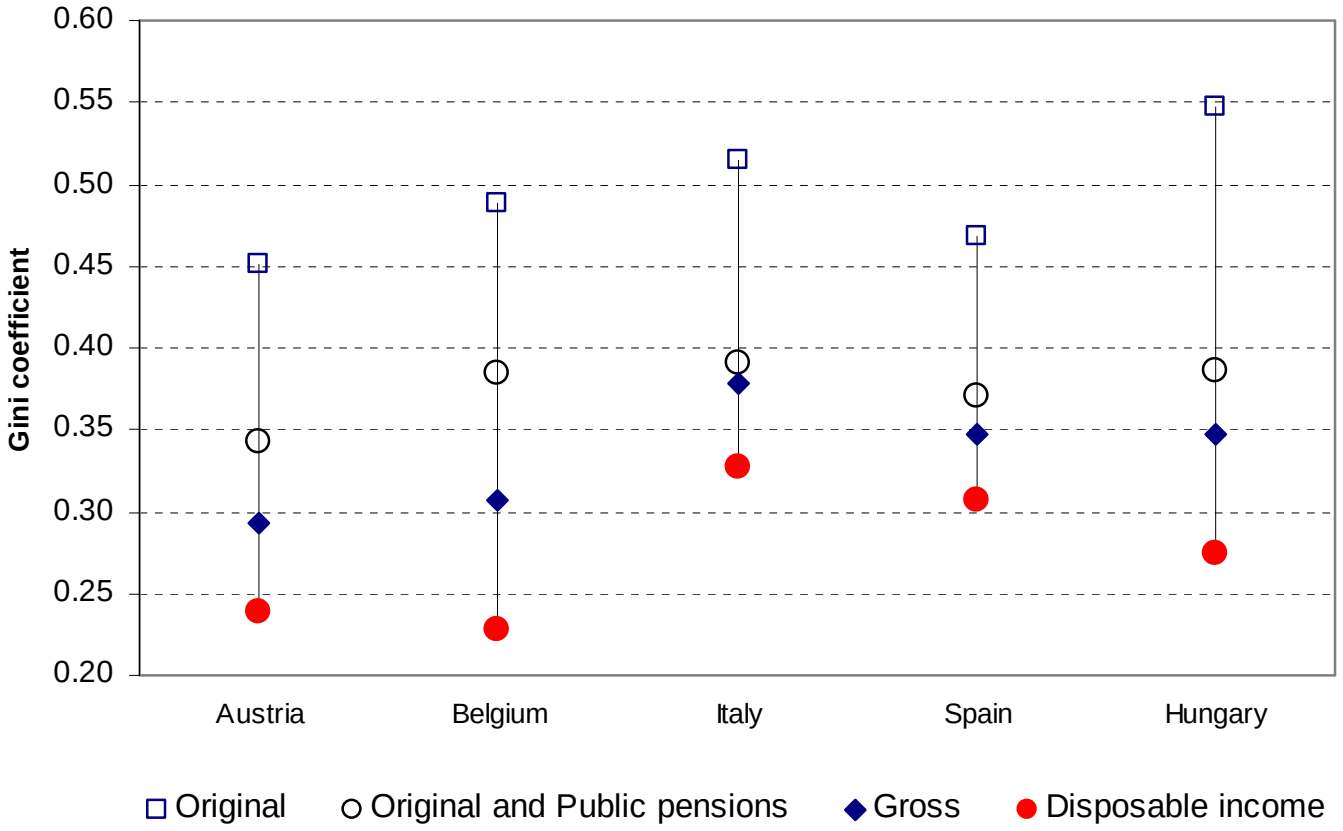




Explaining the differences

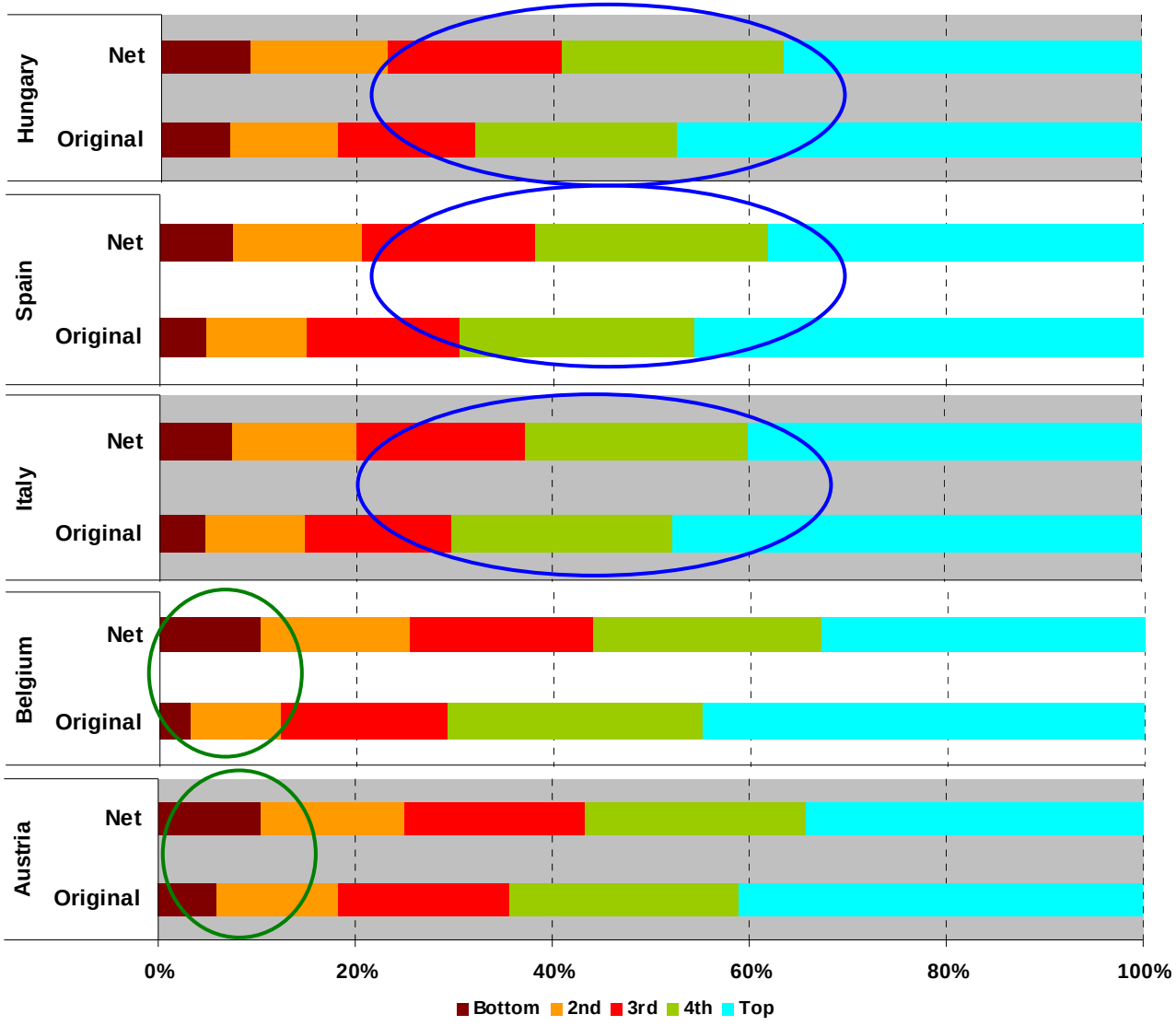
- Country specific reasons:
  - ES: underreporting of Unemployment Benefits and Child benefit (Levy and Mercader-Prats 2003)
  - AT: benefit non take up (50/60%, Fuchs 2007)
  - BE: Income support, Withholding / Annual taxes
  - HU: Concentration of people (elderly) near the poverty line; updating to 2005 policy year

Reduction in Gini coefficients by country

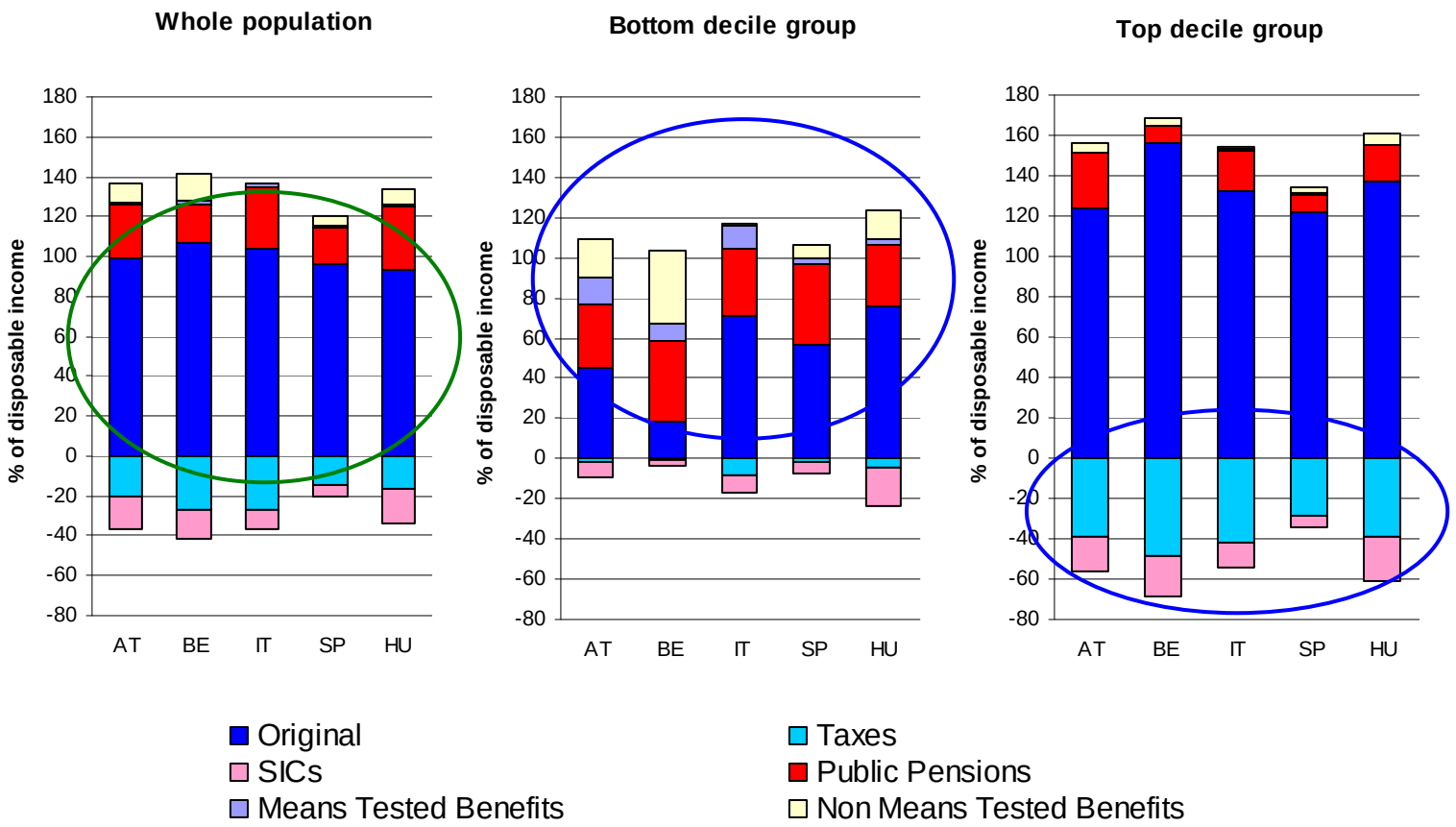


Source: EUROMOD

Changes in quintile shares by country

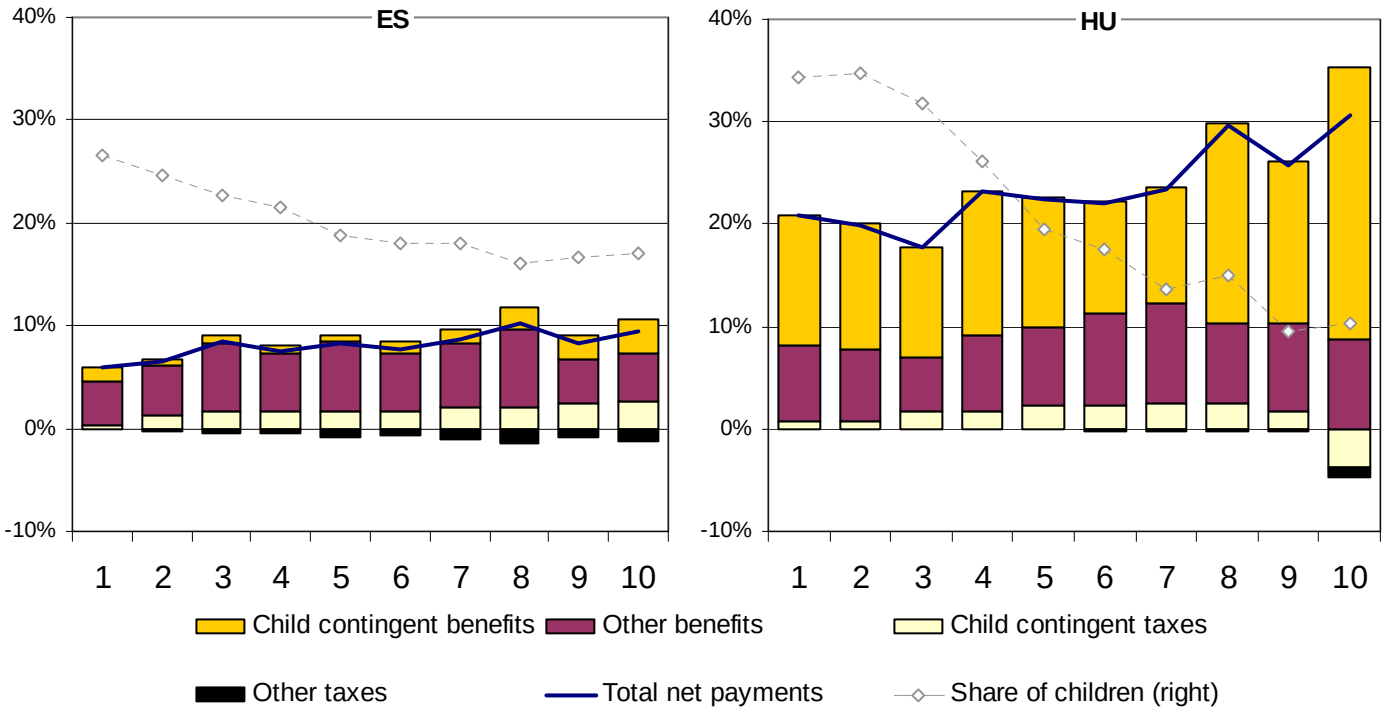


Income composition



SOURCE: EUROMOD

Child support



Source: EUROMOD

Conclusions

- Results from the two approaches are broadly consistent
- Ranking of countries does not change
- Measures sensitive to low incomes differ in countries where benefits subject to non-take up are prevalent
- Microsimulation added value to analyse income distribution and composition

Further developments

- More detailed comparison of the two approaches:
  - Distinguishing between underreporting and non take up
  - Child contingent support vs “family allowances”
- More countries
- Analysis of household characteristics when reported and simulated income is very different:
  - Labour market participation
  - Household composition
  - Deprivation indicators