The Use of Hypothetical Household Data for Policy Learning

Comparative tax-benefit indicators using EUROMOD HHoT

Katrin Gasior & Pasquale Recchia

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1. Tax-benefit microsimulation models typically assess the effect of tax-benefit policies by considering:
   - The interaction effects of policies
   - And the population structure in the underlying micro data

2. Tax-benefit microsimulation models are important tools for assessing the social impact of policy change, where:
   - Concrete examples can help to understand the effects
   - By abstracting from the complexity of the population structure
   - By presenting the pure policy effect
Tax-benefit microsimulation and hypothetical households 2/2

3. As such, they are not a substitute for distributional analysis – i.e. of the actual income distribution – but a valuable complement for various purposes and user groups (Burlacu et.al. 2014)
Policy learning

- Learning from each other is an important element of policy reforms → policy diffusion (Dobbin et.al. 2007) and policy transfer (Dolowitz and Marsh 2000)
- Countries systematically respond to other countries’ reforms by copying or by reacting to the pressure resulting from the reform (Obinger et.al. 2013)
- Intergovernmental exchange and collaboration within the European Union has strengthened and institutionalised this long history of policy learning
  - Many tax-benefit system in the EU show similarities in policy design
  - Policy learning can be used to reduce the uncertainty of consequences of policy change.
Policy learning using tax-benefit microsimulation models

- Provide a better understanding of how different policy designs affect the income situation of a specified household.
- Offer a reference point (baseline results) of current tax and benefit system in the EU.
- Aim of this paper: show how hypothetical household data can be used for both scientific research and policy analysis using EUROMOD HHoT
Hypothetical Household Tool (HHot)

- EUROMOD application for generating hypothetical household data based on user-specified characteristics (Goedemé et al. 2018)
  - Developed by University of Essex and University of Antwerp in the EU-funded InGRID project
  - Freely accessible, user-friendly and flexible (allows user to create ANY type of household)
  - Part of EUROMOD interface allows
    - To explore cross-national differences over time (more than 10 years in most countries)
    - To analyse the effect of policy change
    - To analyse work incentives
  - To carry out analysis on households not well captured in EU-SILC
  - To simulate policies that cannot be simulated using the standard EUROMOD model
Examples using HHoT

- Urban et al. (2017): compare support for children in Alp-Adriatic counties by varying the number of children and the earnings level of the parents
- Navicke and Lazutka (2016): research on work incentives in Lithuania over time
- Atkinson et al. (2017): analysis on Atkinson’s proposal for reducing income inequality
- Van de Ven et al. (2017): assess the implicit equivalence scale of tax-benefit systems.
A proposal for policy learning in the EU using HHoT baseline indicators

- Results based on EUROMOD H1.0+, policies as of June 2017
- Results presented as a percentage of the country-specific 2017 average gross earnings
- Assumptions for hypothetical households:
  - All adults aged 40, children 4 and 6
  - Employment: 40 hours per week, 10 years of work experience, 100% of the average monthly gross earnings
  - Rented accommodation, housing costs = 20% of the country-specific average monthly gross earnings
  - Full take-up, no tax aversion.

Selected results
Gross vs. net income of average earners
Work incentives at the intensive margin: Marginal Effective Tax Rates
Replacement incomes of unemployed and inactive persons
Parental tax premium

Taxes and SIC as % of average gross earnings

CY ES EE MT PT BG LT SK CZ EL SE IT HR FR LU PL UK RO FI LV AT IE NL SI HU DK DE BE

- Single person
- Lone Parent
- Parental premium
Hypothetical household data in combination with tax-benefit microsimulation models are useful to illustrate how tax-benefit elements interact with each other.

The indicators provide insights into the design of tax and benefit policies across the European Union and an opportunity for policy learning.

Future developments and potential use of the tool:
- Bypass the lack of information in available micro data or lack of access to suitable microdata
- Visualisation tool to facilitate the communication of results
The use of hypothetical household data clearly offers opportunities to a simplified presentation of complex realities and an expansion of research questions where no microdata are available.

A discussion of the results needs to emphasize the abstraction from population structure especially (but not only) in cross-country analysis.

Although this is important to highlight, it is at the same time the beauty of hypothetical data: to make complex tax and benefit systems accessible.
Thank you!


- More information on HHoT (user manual, baseline households):
  - https://www.euromod.ac.uk/using-euromod/user-resources/hhot-manual-households

- k.gasior@essex.ac.uk