BIHMOD: Development and use for simulation of effects of labour legislation

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Outline

- Developing model for Bosnia and Herzegovina
  - Challenges
  - Current activities
  - Future of the model

- Example of use of BiHMOD: Simulation of effects of labour legislation
Developing BIHMOD (1)

- The initiative started in 2015 by Centre for Development Evaluation and Social Science Research (CDESS)

- The initial support for development was received by the EU project InGRID thought visiting grant to the Essex University and CERGE-EI Foundation thought visiting grant to CERGE-EI, Prague, both in 2015

- The major work on the model was done in 2017 and 2018.
Developing B1HMOD (2)

- Static microsimulation model
- Based on hybrid HBS data from 2015 (7702 households and 22483 individuals). SILC should be implemented from 2019.
- 2017 was chosen as a baseline year
- All policies at the entity level
- Syntaxes written in STATA (.do files)
- All variables and observations are labelled to follow Euromod labeling convention
Challenges in building BiHMOD

- Access to the HBS 2015 dataset
- Transformation of variables to be similar to those used in SILC
- Gross imputation of income - variables in dataset were in net values, needed to be transformed into gross values in order to obtain values of income tax and SSC.
- Generation of proxy variables
- Building sub-national models for Federation of BiH and Republic of Srpska
Challenges in simulation of policies in model

- Federation of Bosnia and Herzegovina:
  - Child allowance - information about different systems in different cantons; calculation of different eligible criteria and transformation of variables
  - Maternity benefit for unemployed mothers, One-time grant for equipment of newborn, Support in child feeding up to 6 months and additional food for breastfeeding mothers - linking same information about mother and children
  - Permanent financial assistance - defining who is a person with disability in order to fulfil eligibility criteria
Challenges in simulation of policies in model

- Republic of Srpska:
  - Family grants (One-time grant for equipment of newborn; Assistance for 3rd and 4th child) - recalculating age based on birth month and year
  - Permanent financial assistance - defining who is person with disability in order to fulfil eligibility criteria
  - Child allowance - calculation of different eligible criteria and transformation of variables
BIHMOD - example of use

- First use of BiHMOD for policy making purposes was simulation of effects of proposed changes in labour legislation in BiH for Market Makers project on state revenues and household income
- Revisions of social contributions in order to be paid proportionally based on actual salary of the part-time employee are proposed, thereby removing practice of tax authorities that minimum contributions must be paid are the ones payable to lowest salary applicable for full-time work in FBIH
- We changed syntaxes in simulation files to produce these changes and then run the model
- Research projects about effects of changing minimum wages and introduction of basic income scheme
Application of microsimulation techniques

- Based on experience in developing BiHMOD

- Microsimulation model for ex-ante evaluation of property tax and property transfer tax - subnational model

- Microsimulation model for ex-ante evaluation of communal taxes - subnational model

- In the future: use of microsimulation model based on LFS (Labour Force Survey) data
BIHMOD - current and future activities

- Continuous maintenance and extension of capabilities of the model
- Redesigning the model for use of datasets that will be available from 2020 (BiH SILC 2019).
- Drafting feasibility study
- Publishing results from MarketMakers simulations, possibly as EUROMOD Working Papers
- Integrating BIHMOD into WesternBalkanMod/EUROMOD
Thank you for your attention!

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