

Microsimulation of taxes and social contributions in Poland: Measures to ensure the efficiency of public policies

Title of the governance practice: Microsimulations in the area of taxes and social contributions

Summary of the governance practice

The Ministry of Finance has built a microsimulation model to estimate the fiscal costs of policy proposals related to personal income tax and social security contributions. The model is based on administrative, individual data and thus allows for precise calculations. Advanced modelling tools provide good assessment of policy interventions and thus foster evidence-based policy. The model is still being developed and will ultimately cover three systems: personal income tax, social security contributions, and social transfers.

Short description of the governance practice

The microsimulation model is a powerful tool to assess the impact of policy changes on individuals. The benefits of microsimulation models are threefold: they provide a precise calculation of the total costs of a planned regulatory change; a microsimulation model can pinpoint the distributional effects of a policy; those models identify intersections between reform proposals and other systems (social security contributions, the personal income tax and social transfers).

The current microsimulation model is based on data from tax returns (PIT) and from the Social Security Fund (SSF). It is a static model, applied for estimations of fiscal costs of changes in PIT, SSF and health insurance contributions. The model has been written in R language and recalculates PIT declarations. An updated model is currently being developed for more complex simulations of three systems: social contributions, taxes and social transfers. A labour supply module is envisioned to assess the behavioural impact of reforms and to connect the microsimulation model with the existing Computable General Equilibrium (CGE) model.

Achievement/Outcome of the governance practice

The microsimulation model produces precise budgetary estimates of policy reforms and therefore high-quality impact assessments. As such, it contributes to evidence-based approach in many policy areas and may generate more effective management of the state institutions for growth and social inclusion. The PIT-SSF model is already used for assessment of policy changes proposed by the Ministry of Finance and other Ministries and public entities including the Ministry of Entrepreneurship and Technology, the Ministry of Family, Labour and Social Policy and the Chancellery of the Prime Minister. Thanks to cooperation of experts from different public units, the extended model is going to be a comprehensive analytical tool, as it will encompass the whole tax-contribution-benefit system and will thus become the main microsimulation model in the Polish public administration.

The PIT-SSC database has been used to calculate the fiscal costs of many crucial reforms, i.a. the Constitution for Business (in terms of start-up exemption from SSC during first 6 months as well as the so-called “not-registered activity”), the Act on Lowering SSC for Natural Persons with Business Activity on Small Scale and Employees’, Capital Pension Schemes (Pol. Pracownicze Programy Kapitałowe), lowering the PIT rate from 18% to 17% and the ‘Zero-PIT’ program for employees under 26.

Source: Example of country practice provided by the Government of Poland as part of the Policy Framework's consultation process