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Projecting the inter- and intra-generational distribution of income using a "hybrid" microsimulation model

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In this paper we try to make a projection of the income distribution in Belgium towards 2030. While much attention has been focused on the sustainability of public pension systems and the need for reform of these, not much is known about the future income position of the elderly, and the impact on this of past and possible future pension reforms. Belgium has a Bismarckian pension system, where pension is a function of all earnings across the entire career. However, the system comprises many elements favoring those with the weakest earnings records, such as imputed wages for periods of non-employment, and conditional minimum pensions. Also, wages are taken into account only up to a ceiling. The future distributional impact of these elements is not at all clear.

To explore these issues we use a microsimulation model, named COSI. As it incorporates both static ageing techniques as well as dynamic elements it can be called a "hybrid microsimulation model". It consists of four steps. First we perform a dynamic simulation of some key transitions (regarding survival, household situation, labour market decisions) over 5-year periods for individuals born before 1964. In the second step we use static ageing techniques to reweight the population below this age limit. Thirdly, we estimate future wages using a regression model. Finally we calculate pensions and other benefits with the tax-benefit model MIMOSIS. The entire analysis is performed on a large sample from an administrative dataset, containing detailed records of past employment, as well as household composition.

The results will be of three kinds. First, they will reveal the impact on the intra- and intergenerational income distribution in 2030 of the ageing of the population, as well as of the increased labour force participation of women and changes in early retirement and unemployment during the last decades. Secondly, the effects of current policy, and of possible pension reforms can be estimated. Thirdly, using partly observed, and partly projected incomes, we can compare life-time incomes of persons in cohorts born before 1964, and assess the degree of life-time redistribution through the pension system within and between these cohorts.