

Public Economics

The aim of the unit is to analyse the most important factors behind the development in public revenues and expenditures. Growth in tax revenues, transfers and demand for public services are strongly dependent on demographic factors, development in supply of labour, economic growth in general and its allocation. Main research issues include fiscal sustainability assessments, effects on incentives, social efficiency, income distribution and the government budget of reforms in the social security and the tax system, as well as evaluation of the successfulness of different kinds of social policy. An important objective for the research is to provide quantitative information.

The on-going research projects may be categorized as follows:

1. Microeconomic studies of individual and aggregate labour supply behaviour, especially how labour supply responds to changes in the tax system and several welfare schemes.
2. Theoretical and empirical studies on income distribution. Specifically, the distributional effects of various welfare schemes are taken into account.
3. Micro simulation of the effects on individual public pension benefits, income distribution and government pension expenditures of changes in demography and the social security system. These studies are based on the dynamic micro simulation model, MOSART. The model is also used by the government in current work on the specifications of the new public pension system.
4. Detailed analyses on the forces driving government consumption expenditures, including demography, service standards, relative prices and efficiency in local government service production. The empirical models used include MAKKO and KOMMODE. The latter model includes endogenous allocation of expenditures to various service sectors.
5. Analyses of fiscal sustainability. These are carried out both within a Generational Accounting framework, as well as by a more sophisticated computable general equilibrium (CGE) model. So far such studies have used the CGE model MSG6 to study the long run fiscal effects of ageing, pension reforms and other policy reforms intended to mitigate the fiscal effects of ageing, as well as tax reforms. The unit has started developing Generational Accounts and a new Overlapping Generation (OLG) model in order to improve the analyses within this field.
6. Regional economics. Here the analyses focus on regional labour mobility and economic development within Norwegian regions. The model REGARD is used in some of these projects.

In 2008 the unit, represented by at least 1 co-author, has published or has got accepted 3 articles in international journals with referee, 12 Discussion papers from SN, 5 reports from SN, and 6 other papers. Contracts related to work on the models MOSART, KOMMODE, MAKKO and the Generational Accounts were fulfilled.

Selected findings 2008

Why Educated Mothers don't make Educated Children? A Statistical Study in the Intergenerational Transmission of Schooling

More educated parents are observed to have better educated children. From a policy point of view, however, it is important to distinguish between causation and selection. Researchers trying to control for unobserved ability have found conflicting results: in most cases, they have found a strong positive paternal effect but a negligible maternal effect. In this paper, I evaluate the impact on the robustness of the estimates of the characteristics of the samples commonly used in this strand of research: samples of small size, with low variability in parental education, not randomly selected from the population. The part of the educational distribution involved in any identification strategy seems to be a key aspect to take into account to reconcile previous results from the literature.

Documentation: DP 563: Chiara Pronzato

Targeting Public Services through Unequal Treatment of Unequals

When private goods are publicly provided, government authorities have to determine the distribution of services on recipients. In this paper, the public service provider is assumed to maximize utility defined over service supply to different target groups, given a budget constraint. The production technology is target group specific and depends on the ability of each target group to produce service outcomes. Three benchmark allocation principles are identified: equality of treatment (ET), equality of outcome (EO) and equality of marginal cost (EMC). These principles can be considered to be consistent with special cases of a public preference model, which allows for compromises between different allocation principles. The condition of technological dominance implies that there is a clear-cut equity-productivity trade-off, whereas violations of this condition may reduce the significance of the trade-off.

Documentation: DP 558: Audun Langørgen

Will the Norwegian pension reform reach its goals? An integrated micro-macro assessment

The Norwegian pension reform of 2006 intends to (1) improve long run fiscal sustainability by reducing the growth in public old-age expenditures, (2) strengthen labour supply incentives, and (3) maintain the main redistributive features of the present system. We assess to what extent the reform is likely to achieve these three goals, using two empirical models iteratively: We combine a detailed dynamic micro simulation of individual benefits and government pension expenditures with a CGE-model, which captures behavioural effects and equilibrium repercussions. We find that the pension reform improves fiscal balances substantially. Compared to a no-reform scenario, the payroll tax rate can be cut by 10 percentage points in 2050. Increased employment contributes more to the fiscal improvement than the reduction in pension expenditures. However, these changes are basically level effects; the reform has a surprisingly small effect on the growth rate of the necessary tax burden starting in 2020. In particular, the growth rate of public pension expenditures is hardly affected. Stronger government finances and higher employment is obtained at the expense of a significant increase income inequality among old age pensioners.

Documentation: DP 557: Erling Holmøy and Kyrre Stensnes

Top incomes in Norway

Based on data back to 1875 the paper traces the evolution of the top of the income distribution over a period when Norway industrialised and then became oil-rich, making a comparison with other countries. A primary goal of the chapter is to provide a new data series and to spell out the issues involved in its construction. Specifically, it examines to what extent income inequality at the top of the distribution in Norway has increased, as it has in Anglo-Saxon countries. In sum, the Norwegian experience has been broadly similar over the twentieth century to that in the UK and in Sweden (but not Germany) in that top shares, and the concentration among top incomes, have first fallen and then risen. Note, however, that the top shares rose less sharply in Sweden than in Norway between 1990 and 2006. Moreover, the figures for Norway also – intriguingly – suggest that the nineteenth century may have been rather different.

Documentation: DP 552: Rolf Aaberge and Anthony B. Atkinson

The Impact of Local Public Services and Geographical Cost of Living Differences on Poverty Estimates

Despite a broad consensus on the need to account for the value of public services and geographical cost of living differences on the measurement of poverty, there is little reliable evidence on how these factors actually affect poverty estimates. Unlike the standard approach in studies of the distribution of public services, this paper employs a method for valuing sector-specific local public services that accounts for differences between municipalities in the costs and capacity to produce public services. Furthermore, recipient frequencies in various demographic groups are used as the basis for determining the allocation of the value of these services on citizens of the municipalities. Geographical differences in living costs are accounted for by using municipal housing price indices or by replacing the country-specific poverty line with municipal-specific poverty lines. Applying Norwegian register data for the period 1993-2001, we find that disregarding the value of local public services and geographic cost of living differences yields a misleading picture of poverty.

Documentation: DP 551: Rolf Aaberge, Audun Langørgen, Magne Mogstad and Marit Østensen

Simulated Maximum Likelihood using Tilted Importance Sampling

This paper develops the important distinction between tilted and simple importance sampling as methods for simulating likelihood functions for use in simulated maximum likelihood. It is shown that tilted importance sampling removes a lower bound to simulation error for given importance sample size that is inherent in simulated maximum likelihood using simple importance sampling, the main method for simulating likelihood functions in the statistics literature. In addition, a new importance sampling technique, generalized Laplace importance sampling, easily combined with tilted importance sampling, is introduced. A number of applications and Monte Carlo experiments demonstrate the power and applicability of the methods. As an example, simulated maximum likelihood estimates from the infamous salamander mating model from McCullagh and Nelder (1989) can be found to easily satisfactory precision with an importance sample size of 100.

Documentation: DP 540: Christian N. Brinch

Non-parametric Identification of the Mixed Hazards Model with Interval-Censored Durations

Econometric duration data are typically interval-censored, that is, not directly observed, but observed to fall within a known interval. Known non-parametric identification results for duration models with unobserved heterogeneity rely crucially on exact observation of durations at a continuous scale. Here, it is established that the mixed hazards model is non-parametrically identified through covariates that vary over time within durations as well as between observations when durations are interval-censored. The results hold for the mixed proportional hazards model as a special case.

Documentation: DP 539: Christian N. Brinch

Are Lone Mothers Responsive to Policy Changes? The Effects of a Norwegian Workfare Reform on Earnings, Education, and Poverty

The generous Nordic model of welfare is commonly viewed as an exceptional success both in terms of equality and economic growth. However, it has recently become evident that subgroups of the population with weak labour market attachment and high welfare dependency, such as lone mothers, were vastly overrepresented among the poor. This motivated a workfare reform of the Norwegian welfare system for lone mothers; activity requirements were introduced, time limits imposed, and benefit levels raised. To evaluate the welfare reform we introduce an estimator that, unlike the much used difference-in-difference approach, accounts for the fact that policy changes are typically phased

in gradually rather than coming into full effect at once. We find that the workfare reform did not only increase earnings and education as well as lower welfare caseloads and by this route ease the financial burden of the government, but also reduced poverty.

Documentation: DP 533: Magne Mogstad and Chiara Pronzato

The Effects of an Upper Secondary Education Reform on the Attainment of Immigrant Youth

The national Norwegian school reform of 1994, which gave statutory right to at least three years of upper secondary education, had a significant impact on educational attainment among immigrant youth. In particular, we find that the immigrant transition rate from compulsory schooling to completion of the first year of upper secondary education improved from the pre- to the post-reform period. Using a sequential binomial logit framework, we present evidence that the improvement can be attributed to reductions in capacity constraints, rather than cohort heterogeneity. An important implication is that non-targeted educational reforms may have large impacts on the educational attainment of disadvantaged groups in general and ethnic minority youth in particular.

Documentation: DP 528: Christian N. Brinch, Bernt Bratsberg and Oddbjørn Raum

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