

## Taxation, Inequality and Consumer Behaviour

**The Unit for Taxation, Inequality and Consumer Behaviour is responsible for developing and applying the tax-benefit model system LOTTE and other static micro simulation models. Our research focuses on micro econometric studies, modelling of consumer behaviour and analyses of the distribution of income and wealth.**

### Main areas of research

Much of the econometric research aims at the parameterisation of our micro simulation models. The LOTTE model system now consists of three modules: a module for simulations of personal income taxes, LOTTE-Skatt, a module for indirect taxation, LOTTE-Konsum, and a module describing the labour supply effects of changes in the personal income tax, LOTTE-Arbeid. The research unit is also involved in other applied fiscal policy analyses, based on micro data. Important research areas are the role of housing markets – for example for estimation of the CPI, for measurement of income inequality and for household saving – and investigation of behavioural and distributional effects of the tax system and of tax reforms.

### Main findings

The tax-benefit model LOTTE system has been extensively used by the Storting (Parliament) and the Ministry of Finance. Documentation of the model system LOTTE is now accessible on web-site, and a shorter version of the model documentation was published in a book, focusing on the main features of the three parts of the micro simulation model system LOTTE: LOTTE-Skatt, LOTTE-Konsum, and LOTTE-Arbeid.

A number of papers aimed at informing the international audience were published in 2008. A paper was published in *Journal of Urban Economics*, employing and improving a Case-Shiller repeated-sales model, to investigate the efficiency of the Norwegian housing market. The constructed index clearly shows auto-correlation, so the Martingale hypothesis is rejected and the market cannot be said to be efficient. In addition, we construct comparison tests with other asset classes to explore differences in Sharpe ratios. The effect from taxes on educational choices (and thus on the economy's skill composition) is discussed in a paper published in *European Journal of Political Economy*. A proportional labour tax induces too many workers with high innate ability to choose education that is associated with high consumption and relatively low effort. This increases mismatching of skills and aggregate unemployment in the society.

#### Documentation:

We also denote some of the main findings from papers published in working paper series of Statistics Norway and other institutions. Two papers published in the working paper series of CESifo discuss effects of taxes on businesses' choice of organizational form, from a firm level and an individual level perspective, respectively. The results (WP no. 2393) show that corporations respond to tax incentives and change tax regime in order to reduce tax payments. But persistent cohort effects in the choice of tax regime and substantial unobserved corporation-specific effects indicate that non-tax factors matter as well. Moreover, tax induced organizational shifts are clearly documented in WP no. 2273. When employing observations of Norwegian owners of small businesses and their organizational forms in the period from 1993 to 2003, we show that certain features of the dual income tax system in combination with certain features of the business (human capital intensive businesses) generated organizational shifting, generating substantial income gains for the people involved. A third paper published in the CESifo WP series (no. 2468) discusses parents motivations for transfers to children inter vivos, suggesting that parents' struggle between altruism and equal division give testable hypotheses: the degree of altruism should be stronger in one-child

families and we expect the altruism motive to dominate the equal divisions at low levels of recipients' income. We find support for both these hypotheses. A paper published in Statistics Norway's Discussion Paper (DP 555) series discusses the tax on use of electricity in Norway. It assesses alternative, internationally legal, designs of the system in terms of their effects on efficiency and distribution, including industrial objectives. Among the reforms we explore, removing the exemptions would be the most effective way of raising revenue, but it would be politically costly by deteriorating the competitiveness of today's favoured industries. An entire abolishment of the electricity tax, and replacing revenue by increased VAT, would generate a more equal distribution of standard of living and, at the same time, avoid the trade-off between efficiency and competitiveness. In DP 545 we discuss procedures for revenue estimation of changes in the personal income tax. Using partial equilibrium revenue estimates of the 2006 tax cuts in the personal income tax in Norway as an example, we show that estimates of costs of cuts differ substantially when different effects are brought into consideration, even in a short-term time perspective. Estimates of revenue effects which take labor supply responses and effects through indirect taxation and the payroll tax into account are presented and contrasted with estimates obtained by current procedures. Further, in DP 547, we discuss discrimination in housing rental markets. We find that tenants born abroad pay a statistically significant and economically important premium for their dwelling unit. Tenants of African origin pay the highest premium. We have also contributed to a paper on emission trade (DP 542). We find that linkage of different countries' domestic permit markets for pollution rights into a single international market alters governments' incentives, and may trigger adjustments of the number of allocated permits. Interestingly, in a non-cooperative equilibrium, international emission trading is likely to increase the total emissions. We also would like to denote that theoretical and empirical results in the literature of optimal indirect taxation have been reviewed in Documents 2008/19. The first part focused on the theoretical contributions and discussed the role of indirect taxation in the presence of a proportional, a linear or an unrestricted direct tax respectively. The second part focused on the empirical contributions, ending up with pointing at some weaknesses of parts of the literature.

*Documentation:*

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