

Aging, Fiscal Sustainability and Occupational Pensions

Projektbeskrivelse

During the 1990s most European countries has witnessed an increase in the contributions to funded pension schemes. In Denmark there has been a substantial increase the contributions due to the introduction of occupational pension schemes for blue-collar workers in the private sector. By 1995 occupational pension contributions were included in all bargaining agreements in Denmark. Contribution rates currently amount to 7 percent of the wage bill, and they are expected to increase to 9 percent in 2004.

The primary goal of the proposed research project is to analyse to what extent the expansion of the funded pension system in Denmark has contributed to a reduction in the financial burden of the demographic ageing of the society. The analysis will approach this issue by focusing on the effect of contributions to the pension system on the sustainable tax rate.

The sustainable tax rate is defined as the constant level of the base tax rate of the personal income tax system which implies that the public sector fulfils its intertemporal budget constraint for a given definition of future public expenditures. In the present analysis public expenditures are given by the demographic development, the distribution of age-dependent public consumption, the age distribution of public transfer, and the indexation rules. The tax structure is assumed to remain stable and the indirect tax rates remain fixed.

The effect on the sustainable tax rate of the increased contributions to the occupational pension schemes will be decomposed into three sub-effects. First, increased contributions will decrease indexation of public transfers due to the specification of these rules. The pure effect on the sustainable tax rate of the implied saved public expenditures will be identified. Second, the interest yield on the accumulated contributions to occupational pension schemes is subject to a tax subsidy compared to the interest yield of personal savings of individuals in the Danish tax system. The pure effect of this tax subsidy on the sustainable tax rate will be identified. Third, increased contributions will increase the general aggregate savings rate in the economy.

Theoretically, there are potentially two main reasons why aggregate saving will increase. First, occupational pension schemes are an imperfect substitute to savings in general. This is primarily due to the fact that occupational pension savings are collective life insurance systems, where the savings are not private property of the individual but pension are paid conditional on the fact the persons in question is alive. Second, credit market imperfections may imply that young and relatively poor households are unable to increase borrowing so one would expect total savings of these households to increase. The analysis will not provide empirical estimates of the increase in the aggregate savings. In stead the analysis will focus on the effect on the sustainable tax rate from a given increase in the aggregate savings.

The second main goal of the project is to characterise the effect of the occupational pension system on the intergenerational distribution of the fiscal burden for a given economic policy using a generational accounting system for future generations. This will be compared to the effect on the intergenerational distribution of welfare from the funded pension system using a standard equivalent variations measure. Finally, we apply a social welfare function, defined as the sum of

discounted equivalent variations for all future generations, to determine whether the expansion of the occupational pension system generated an increase in overall welfare.

The analysis will be conducted using the dynamic OLG-CGE model of Statistics Denmark, DREAM, which is constructed to generate a path of temporary perfect foresight equilibria converging to a steady state from an initial non-steady state temporary equilibrium. The focus of DREAM is the behaviour of the agents in the economy given that representative families evolve according to an exogenous demographic forecast.

The analysis will be conducted in the following way: We first analyse a base scenario, in which the expected expansion of occupational pension contributions is assumed. In this scenario the government follows a tax smoothing policy from 2008. The base scenario is then compared to a counter-factual scenario, where the average contribution rate of the employees in the economy is reduced by 50 percent in 2008. This is not a complete removal of the occupational pensions of blue collar workers as those generations who has contributed to the pension funds from the 1990s will collect the actuarially fair pensions based on these contributions as they retire. For future generations, however, the counterfactual is comparable to a situation without the recent expansion in contributions. In the counter-factual scenario the government seeks to smooth taxes from 2008 and follows the same expenditure policy as in the base scenario.