
1. INTRODUCTION

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1.1 | Background

The consequences for social security expenditures of the process of population ageing have been studied extensively in many societies. However, these studies have concentrated mostly on the changing age structure of these societies, but have given almost no attention to changes in living arrangements of the elderly, although they form an important aspect of the ageing process. As an example, consider the international comparative studies carried out in the 1980s in which the demographic impact on future public expenditures was investigated, for instance those of the IMF (Heller *et al.*, 1986) and the OECD (e.g. Holzmann, 1987). On the basis of an assumed increase of two years in average life expectancies at birth until 2050, Holzmann concluded that (real) public expenditures to old age pensions in the OECD would rise by 35 per cent in the period 1985-2010, and by 87 per cent during the years 1985-2030. The results of the IMF-study point out even stronger growth rates for public expenditures for old age pensions, for instance 89 per cent for Canada for the period 1980-2010, and no less than 185 per cent for Italy during that period.

The methodology chosen for these comparative studies was rather straightforward. Projections for the population broken down by age and sex were combined with age profiles concerning public expenditures. Hence the demographic impact was limited to effects of mortality and fertility, and links between expenditures on the one hand, and contributions from the working population on the other, were not explicitly made. The implication was that the answers which were found to the original problem formulations were necessarily crude.

However, during the 1980s, several developments took place in the modelling and projection of demographic and public expenditure developments. More realistic pension models than the simple age profile approach were developed. Existing models for the projection of fertility and mortality were supplemented with algorithms which describe married couples, families, and households. These new methods facilitated, by the end of the 1980s, an update and extension of the pioneering studies carried out by the OECD and the IMF.

This book reports the results of an international comparative study into the impact of dynamics in living arrangements on future public pension expenditures in industrialized countries. It presents various demographic and pension scenarios for pension costs until the year 2050 for 12 countries: Austria, Canada, Czechoslovakia¹, Finland, France, Germany¹, Hungary, Italy, the Netherlands, Norway, Poland, and Sweden. It extends earlier comparative studies into future costs associated with public pensions into several directions.

1. In contrast with the studies carried out by the OECD and the IMF, the current project also includes countries from *Central and Eastern Europe*. Demographic developments in these countries in the past have been different from those in western countries, with higher fertility and mortality levels. But above all, recent changes in their socioeconomic structure, imply that the policy relevance of our results should be beyond any doubt.
2. A pension cost model is used in which *individual pension benefits are endogenized*. These depend explicitly on the number of years worked. This provides a direct link between labour market variables and pension costs.
3. The demographic aspects of fertility and mortality are supplemented with *living arrangement*, a general notion which covers the demographic elements of marital status, family type, and household situation. In many

¹ The project was planned in 1988, and the majority of the analyses were carried out before the two Germanies were unified (1990) and hence also before the Czech Republic and Slovakia came into existence (1993). Thus, we have only results for Czechoslovakia as a whole. Furthermore, the calculations were carried out for the former FRG and GDR separately, and the results were combined.