

Increasing longevity and social security reforms—A legislative procedure approach[☆]

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Abstract

Increasing longevity causes an upward trend in the dependency ratio in many countries. This raises concerns about the financial sustainability of social security schemes, and reform proposals and initiatives abound. It is shown that a fundamental policy choice inevitably arises since a given social security system cannot be maintained by simply indexing pension ages to longevity. The political reform process is analysed using the so-called legislative procedure. When longevity increases, the retirement age is raised more than proportionally to the increase in longevity, but the young also make larger transfers to the old.

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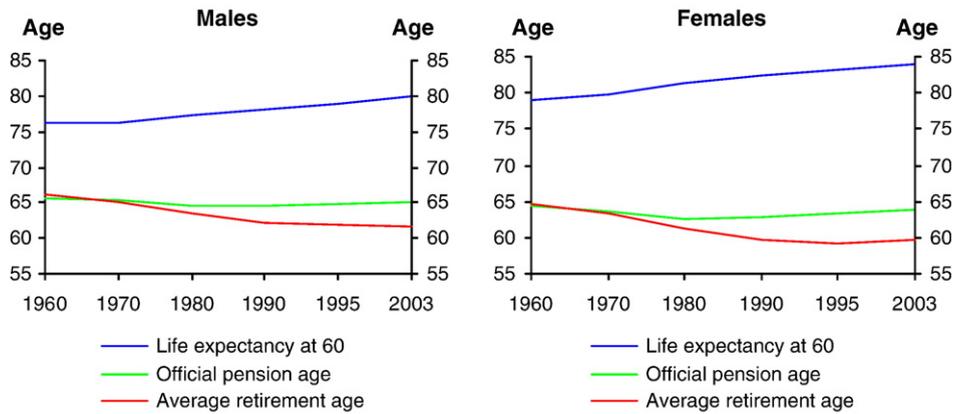
1. Introduction

Social security systems are in focus due to undergoing demographic shifts, in particular as a result of increasing longevity. According to UN forecasts (UN, 2004), life expectancy is rising in most countries, and for e.g. European countries, life expectancy at birth will increase from 73.8 in 2005 to 81 in 2050. Most countries face the challenge of how to exploit the opportunities arising from increasing longevity and the implied increase in the share of old people in populations (see e.g. EU, 2006; IMF, 2004).

Most countries have social security systems that do not include automatic responses to changes in longevity. Therefore, political decisions are needed to ensure the viability of the systems. Often, social security systems have given statutory pension (and retirement) ages, and these age limits have remained invariant (or have even in some cases declined) despite increases in longevity, cf. Fig. 1. Moreover, most social security systems are of the defined benefit type, providing a given benefit flow (could depend on past earnings and be indexed) from the statutory pension age and until death (see e.g. Werding, 2004); that is, a life annuity is provided. It follows straightforwardly that the combination

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Note: Average for 20 OECD countries.

Source: Danish Welfare Commission (2005)

Fig. 1. Life expectancy and age of retirement.

of given statutory pension ages and benefits provided as life annuities leads to financial problems when longevity increases.

It is a highly topical policy issue how social security schemes should be adapted to changes in the demographic composition and in particular to the increase in longevity. This issue is debated widely in most countries, and some countries have already undertaken some reforms. Recent reforms or reform proposals in e.g. US, UK, Germany etc. imply that both pension ages and contribution rates are going to increase. One interesting aspect is that some recent reforms have explicitly made the properties of the social security system contingent on longevity, either by adjusting benefits to longevity¹ or by making eligibility ages dependent on longevity. Examples of the former^{2,3} are found in e.g. Sweden, Italy, Poland and Latvia, and the latter in Denmark.

There is a voluminous literature on social security schemes, but, surprisingly, the issue of longevity has not attracted much attention (see however Auerbach and Hassett, 2004a,b; Andersen, 2006). The policy debate has until recently mainly centred on the implications of an increase in the dependency ratio driven by more old relative to young (change in fertility). While this is also an implication of increases in longevity, it is important to be explicit about the reason for the increase in the dependency ratio.⁴ A change in fertility affects population growth and thus the return offered by a PAYG social security scheme. A change in longevity may also change the return, but in addition it has an individual utility effect. The latter arises through the direct utility effect of the increase in longevity and the indirect effects arising via an increase in the marginal utility of a given present value of benefits (the consumption flow thus becomes smaller) and a possible decrease in the disutility of work (the retirement period becomes longer), see Andersen (2006). Hence, the question of how to adjust the properties of the social security scheme to changes in longevity is not trivial (see also Mulligan and Sala-I-Martin, 2003, 2004a).

An indexation of pension ages to longevity may seem a simple and fair solution. This would imply that the relative amount of time spent as contributor to and beneficiary of a social security scheme would be the same across generations

¹ In an actuarial system, the benefit level would of course adjust to the period over which the funds are to be distributed.

² Note that Germany has introduced a sustainability factor where benefit levels are made dependent on the dependency ratio.

³ This is in the form of a so-called notional defined contribution scheme, see e.g. Börsch-Supan (2004). This scheme is characterized by pension rights being accumulated in a notional way based on individual contributions, but the actual pension benefits are determined on a PAYG basis but proportional to individual rights. The calculation of the benefit flows depends on expected longevity, and in this way there is an automatic adjustment to changes in longevity.

⁴ The other main reason for an increase in the dependency ratio is the trend decline in fertility; i.e. high fertility in the 1940s and 1950s, and lower fertility in subsequent periods. Adaptation of the social security system to the change in fertility is a backward looking problem since the change in fertility cannot be undone. The changes caused by longevity are forward-looking in the sense that this relates to an ongoing process. Note that an increase in fertility would not directly remedy the consequences of increasing longevity because newborns also will have a long life expectancy.

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