Social security, retirement age and optimal income taxation

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Abstract

It is often argued that implicit taxation on continued activity of elderly workers is responsible for the widely observed trend towards early retirement. In a world of laissez-faire or of first-best efficiency, there would be no such implicit taxation. The point of this paper is that, when first-best redistributive instruments are not available, because some variables are not observable, the optimal policy does imply a distortion of the retirement decision. Consequently, the inducement of early retirement may be part of the optimal tax-transfer policy. We consider a model in which individuals differ in their productivity and their capacity to work long and choose both their weekly labor supply and their age of retirement. We characterize the optimal non-linear tax-transfer that maximizes a utilitarian welfare function when weekly earnings and the length of active life are observable while individuals' productivity and health status are not observable.
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1. Introduction

A trend towards early retirement is currently observed in most European countries. Participation rates for men aged 60–64, which were above 70% in the early 1960s, have fallen to 57% in Sweden and to below 20% in Belgium, France Italy and the Netherlands.

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Similarly, the average labor participation in the age group 55–64 has declined and now ranges from 24% in Belgium, to 88% in Iceland, with the bulk of countries closer to Belgium than to Iceland. Early retirement per se is of course a blessing for a society, which values consumption of leisure. However, it also puts pressure on the financing of health care and pension schemes. This problem is made worse by growing longevity. In the European Union, life expectancy at age 65 has increased by more than 1 year per decade since 1950. As a consequence, instead of 45–50 years of work and 5–10 years of retirement of half a century ago, a young worker can now expect to work for 30–35 years and retire for 15–20 years.

The effective retirement age varies across individuals and depends on features such as wealth, productivity and health. In addition, retirement decisions are likely to be affected by the pension system. When there is no pension system (utility maximizing) people retire when the marginal utility of inactivity is equal to their marginal productivity at work. People in poor health and with low productivity will retire earlier than people in good health and with high productivity. When there is a pension system, this tradeoff may or may not be affected, depending on the design of the benefit formula. In a first-best (full information) setting, an optimal retirement system would imply the same tradeoff. Such a pension system can be referred to as neutral or actuarially fair.[1]

In reality, pension systems are typically not neutral and they distort the retirement decision. As it has been shown by a number of authors, notably (Gruber and Wise, 1999; Blondal and Scarpetta, 1998a,b), the observed age of retirement is likely to be distorted downwards in a number of countries. The main explanation for this distortion appears to be the incentive structure implied by social protection programs aimed at elderly workers: pension plans but also unemployment insurance, disability insurance and early retirement schemes. The authors show that prolonged activity for elderly workers is subject to an implicit tax, which includes both the payroll marginal tax and forgone benefits. Consequently, social protection systems are far from being actuarially fair at the margin in countries such as Belgium, France, Germany or the Netherlands where people retire relatively early. On the other hand, in Japan, Sweden and the US the implicit tax is much lower so that the system tends to be rather neutral and people retire much later.

These results are essentially positive. Nevertheless, they are often, at least implicitly, given a normative connotation and used to advocate reforms tending to remove the bias in the benefit formulas. This raises the question of whether a bias in the benefit formula in favor of early retirement is necessarily the sign of a bad policy. We show in this paper that this implicit tax on postponed retirement is not necessarily due to bad design but can be due to the desire by public authorities of using social security for redistribution when non-distortionary tools are not available.

To address this issue, we determine in the line of Mirlees (1971) the social security benefits, payroll taxation and retirement age policy that are optimal from a utilitarian perspective. We consider a setting with heterogeneous individuals differing in two unobservable characteristics: level of productivity and health status. We study the design

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[1] We are concerned with actuarial fairness at the margin (no distortion) and not with global actuarial fairness (benefits are equal to contributions), which, by definition, is violated by a redistributive scheme.