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A retirement decision in the presence of a social security system

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Abstract

We compare a retirement decision in the presence of a social security system with that in the first-best allocation, using an overlapping-generations model in which the labor supply of elderly agents is endogenous. We show that although the social security subsidizes a retirement decision, the retirement period may be shorter than in the first-best allocation. More importantly, such results occur even when the retirement decision (i.e., leisure demand) is not backward-bending. We also show that the levels of elasticity in decisions regarding retirement and consumption among both young and old agents play important roles.

JEL classification: E65; H55
Keywords: Overlapping-generations model; Retirement decision; Social security

1. Introduction

In many countries, it has been observed that in a postwar period, the labor force participation rate of the elderly has dropped. On the other hand, social security benefits have increased sharply in the postwar period. Table 1 shows the historical trends of the these levels in the US economy. The second and the last columns of the table show the labor force participation rate (of civilians) for men aged 55–64, and the percentage of Old-Age and Survivors Insurance (OASI) benefit payments in comparison with the US gross domestic product (GDP), respectively. Although both the labor force participation rate of the elderly workers and the OASI/GDP ratio declined

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Table 1
Historical trends in the US economy

	OASI/GDP (%)	Total LFP rate
1951–1955	0.82	87.84
1956–1960	1.73	87.6
1961–1965	2.26	85.98
1966–1970	2.47	83.92
1971–1975	3.25	78.72
1976–1980	3.60	73.26
1981–1985	4.09	69.32
1986–1990	3.86	67.38
1991–1995	4.00	66.4
1996–2000	3.71	67.58

Sources: Total labor force participation (LFP) rates are taken from the US Bureau of Labor Statistics. Old-Age and Survivors Insurance (OASI) benefits are taken from the Social Security Bulletin Annual Statistical Supplement.
Gross domestic product (GDP) values are taken from the US Department of Commerce.

temporally in the 1980s (see Krueger and Pischke, 1992), in general, a negative correlation can be observed. (See Diamond and Gruber (1997). With regard to other industrialized countries, it is useful to see the National Bureau of Economic Research Conference Report, edited by Gruber and Wise (1999).)

Many previous studies have investigated the extent to which social security affects the retirement behavior of the elderly. The results on this issue are divergent. Some studies—for example, Feldstein (1974), Boskin (1977), Sheshinski (1978), Hurd and Boskin (1984), Kahn (1988), Hurd (1990), and Yamada (1990)—maintain that social security systems exert enormous influence on retirement decisions and on declines in the labor force participation of the elderly; other studies—for example, Burtless (1986), Blau (1994), and Ruhm (1995)—argue that social security has large effects on retirement, but that the effects of an increase in social security benefits on a decline in labor force participation are not large. Ruhm (1995) notes that when the level of social security benefits increases, those who would otherwise leave the labor force at age 60 or 61 may delay retirement until they become eligible for social security benefits (at age 62). On the other hand, other studies—for example, Hu (1979), Blinder et al. (1980), and Krueger and Pischke (1992)—have cast doubt on the view that social security provides a significant work disincentive for the elderly. Krueger and Pischke (1992) argues that the relationship between social security benefits and retirement becomes insignificant by controlling for the effects of age and period, and thus that social security benefits cannot explain a large degree of decline in male labor supply. (It is useful to see Ruhm (1996) on this point.)

These preceding studies follow one of the two following paths. Some studies compare the decision to retire in the presence of a social security system with that in the absence of such a system. Other studies investigate the effects of an increase in social security benefits on retirement decisions. When the issue is whether or not retirement age is lowered by the presence of a social security system, such approaches are appropriate. However, the issue is whether or not retirement decisions in the presence