Journal of Public Economics 88 (2004) 1295–1306
JOURNAL OF PUBLIC ECONOMICS
www.elsevier.com/locate/econbase

Opting out of social security

Kent Smetters[a,*], Jan Walliser[b]

[a] *Insurance and Risk Management, The Wharton School, University of Pennsylvania, 3641 Locust Walk, CPC 302, Philadelphia, PA 19104-6218, USA*
[b] *The World Bank, New York, NY, USA*

Received 29 May 2000; received in revised form 5 June 2002; accepted 22 July 2002

Abstract

The liability facing a pay-as-you-go social security system can be calculated in several ways. Many conversions, including that which took place in Chile, and in many plans to convert the U.S. system, assume the largest measure, known as the 'shutdown liability.' This measure pays many workers who have contributed to the public system more money than the public system is actually worth to them, thereby placing a larger burden on future generations. But other liability measures are hard to implement due to an information asymmetry between the government and individuals about an individual's skill level. This paper demonstrates that a very simple reform plan—simply letting people opt out of social security—generates a truthful revelation equilibrium in which agents reveal private information about their skill levels. The new assumed liability measure is much smaller since it more accurately assigns a liability to each individual. A smaller liability, therefore, is passed onto future generations, which also generates quicker transition paths. It also does a better job protecting the welfare of the initial elderly when general revenue is used to pay for the transition. Simulation evidence is provided using a large-scale lifecycle model with heterogeneous skill levels.

JEL classification: H0; H1; H3

1. Introduction

Chile, when it converted its pay-as-you-go social insurance system to individual defined-contribution accounts, recognized previous contributions made by workers under the public insurance system by crediting contributions with a 4% real annual interest rate.

* Corresponding author. Tel.: +1-215-898-9811; fax: +1-215-898-0310.
E-mail address: smetters@wharton.upenn.edu (K. Smetters).

0047-2727/$ - see front matter
doi:10.1016/S0047-2727(02)00180-9

People who were retired at the time of the reform continued to collect benefits under the old system. Credits were distributed to workers in the form of 'recognition bonds' that were placed in each worker's new individual account. Bonds are paid off using general revenue when the worker retires.

Many analyses of converting the U.S. Social Security system to individual funded accounts also phase out Social Security benefits based on former contributions. See Feldstein (1975), Seidman (1986), Arrau and Schmidt-Hebbel (1993), Feldstein (1995), Kotlikoff (1996), Kotlikoff et al. (1997), Altig and Gokhale (1997), Feldstein and Samwick (1997), and Huang et al. (1997). Participation in the new system is generally mandatory in these plans, presumably to avoid adverse selection. Gustman and Steinmeier (1995) consider partial-equilibrium responses to allowing people to choose between private saving and social security.

To be sure, the focus on previous contributions is understandable since that measure can be easily calculated. But this measure overpays many participants: for many younger and richer agents, remaining in social security is actually a bad deal since the present value of their future benefits is smaller than the present value of their future social security taxes. Paying these agents money to recognize their *previous* contributions, therefore, gives them more than social security is actually worth to them. In fact, these agents should be willing to *pay* to get out of social security.

A more accurate measure of social security's worth to each person would be based on *prospective* contributions and benefits, not past contributions. But it's hard for the government to calculate a prospective value of social security for each person. As in the optimal tax literature started by Mirrlees (1971), suppose that each agent knows his or her own lifetime skill level which is drawn from a distribution of lifetime skill levels. The government, though, only observes each agent's endogenous wage income, not hours worked. So each agent's lifetime skill level is private information.[1] But to project future labor earnings, the government must know an agent's skill level since two agents with similar earnings histories can belong to different lifetime income classes. An agent with a high eventual lifetime income could have low earnings during his or her early working years due to heterogeneity in skill profiles caused by education, heterogeneous bequests and a progressive social security system also play roles. Future earnings would especially be difficult to project for younger workers with a limited work history. So, not surprising, past plans to convert social security to individual accounts make no effort to calculate prospective taxes and benefits.

This paper demonstrates that a simple reform plan—simply letting people opt out of social security—does a better job at identifying the winners and losers under social security relative to the common liability measure based on previous contributions. An agent who opts out no longer faces future payroll taxes but also forfeits any accrued benefits: they simply drop out. While, politically, it might seem impossible at first to offer people a deal in which they forfeit accumulated benefits, it is shown below that many

[1] Our approach is the same as in the optimal tax literature: an agent's skill level is fully certain to them but unknown to the government. But we allow for more than one period, and so we consider an agent's *lifetime* skill level.