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Social security incentives, human capital investment and mobility of labor ☆

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Abstract

Migration between countries with earnings-related and flat-rate pay-as-you-go social security systems may change human capital investments in both countries. The possibility of emigration boosts investments in human capital in the country with flat-rate benefits. Correspondingly, those expecting to migrate from the country with earnings-related benefits to a country with flat-rate benefits may reduce their investment in education. Allowing for migration may generate an intertemporal Pareto-improvement with cross-border transfers, and the contribution rates satisfying certain conditions. However, these conditions are not satisfied with those contribution rates that would arise if the governments maximize the welfare of their citizens without migration.

JEL classification: H55; I2; F22
Keywords: Social security; Education; Migration; Earnings-related and flat-rate pensions

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1. Introduction

Pensions are the single largest government transfer program in the European Union. In 2001, the then 15 EU member states spent on average 8.8% of their GDP on public retirement benefits (OECD, 2003). Pension policies have traditionally been viewed as a domain of nation-states and, correspondingly, there are wide differences in how benefits are determined. In Continental Europe, like France, Germany, and Italy, pensions are viewed as postponed wage income and their aim is to smooth lifetime consumption. In such "Bismarckian" programs, retirement benefits are linked to past earnings. In the competing "Beveridgean" tradition, retirement benefits are used to protect the elderly against poverty. Benefits are then rather flat, with the link to past earnings weak or even non-existent. These rather flat-rate systems dominate, or at least play an important part, in public pensions in Denmark, Ireland, the Netherlands, and the United Kingdom (Disney, 2004). Both earnings-related and flat-rate pensions are mainly organized according to the pay-as-you-go (PAYG) principle, implying that the benefits of the current retirees are paid by current workers.[1]

Migration may endanger both earnings-related and flat-rate pension systems. With migration, the intragenerational redistribution of flat-rate systems may generate an adverse selection problem. Earnings-related systems, on the other hand, may benefit from the inflow of high-income contributors. The intergenerational redistribution component, on the other hand, poses a more severe challenge to earnings-related systems as these are larger.[2] In 2001, public spending on retirement benefits was on average 6.4% of GDP in OECD countries with flat-rate benefits, and 9.4% in countries with earnings-related benefits (Disney, 2004; OECD, 2003).

Social security rules and migration possibilities also influence incentives to invest in human capital. An option to migrate to a country with a less redistributive social security system increases the expected private return to human capital, thus boosting such investments. When young people do not know beforehand how mobile they will be, the investments of those who finally remain change. Such uncertainty about one's own future mobility may result from uncertainties related to family formation, future partnership status, and on random events related to employment.

This paper takes a dynamic view of economic integration and the challenges it poses to social security systems of different types. There are two countries, one with earnings-related benefits, and another with flat-rate benefits. The two countries may differ also in social security contribution rates, and both have organized their social security system on a PAYG-basis. At the starting point, there is no migration. Then labor becomes mobile, corresponding to tighter integration. Since production technologies are identical in both countries, migration does not affect the productivity of the human capital stock of the migrant. This paper asks three questions. The first one is how the possibility of migration affects incentives to invest in human capital and economic well-being in the two countries. The second question is what are the welfare effects of migration. The third and final question is whether both social security systems can be maintained after the labor markets have been integrated.

The main findings are the following. Assume first that neither country has a social security system that would be preferred by all citizens. Then allowing for migration would increase the

[1] Some countries, like the Netherlands, also have a prominent funded part of social security. This paper focuses on PAYG systems.

[2] The average rate of return offered by the PAYG system equals only the growth rate of the economy, which always falls short of the market interest rate (Aaron, 1966). The lower rate of return that the PAYG systems offer can be interpreted as an interest payment on the implicit debt, which was created when older cohorts were paid pensions, even when they had not previously contributed to the system.