

## RETIREMENT PATTERNS IN EUROPE: THE EFFECT OF HEALTH

AGAR BRUGIAVINI, ENRICA CRODA AND FRANCO PERACCHI

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Population aging is one of the greatest social and economic challenges of the 21st century. Europe is aging faster than other parts of the world: It has the highest proportion of population aged 65 or over (about 15%) among the world's regions, with an old-age dependency ratio expected to increase from 27% in 2000 to 53% in 2050. In addition, Europeans have been retiring much earlier than inhabitants of other developed countries: for instance, in Belgium only a quarter of all males are still in the labor force at age 55-64, compared to three quarters in Japan. Thus, everything else equal, aging places a much higher burden on the sustainability of income maintenance systems in Europe than elsewhere in the world, challenging European public policy – pension policy, health care policy, labor market policy.

In this paper, we exploit the richness of a newly available pan-European dataset, the Survey of Health, Ageing and Retirement in Europe (SHARE) to investigate the retirement (and labor force participation) decisions of older Europeans. In particular, we analyze the role played by health factors and by social security and pension rules in shaping labor supply and retirement decisions.

SHARE is well suited for this task because it is an interdisciplinary household survey collecting strictly comparable information on individuals aged 50 and over, in eleven EU countries ranging from Scandinavia (Sweden, Denmark), Western and Central Europe (France, Belgium, The Netherlands, Germany, Switzerland, Austria) to the Mediterranean (Spain, Italy, Greece).<sup>1</sup>

A first inspection of the data shows that the proportion of Europeans aged 50 and over who are still working ranges from 20% in Italy and Austria, to 38% in Sweden and Switzerland, while the fraction of retired ranges from 35% in the Netherlands and Spain, to 63% in Austria. Men have higher rates of labor market participation or retirement than women. This heterogeneity is possibly due to institutional differences and social norms. Furthermore, when looking at the various age-ranges, Austrians and Italians, both men and women, seem to exit the labor force at earlier ages than other Europeans.

This evidence suggests that pension policies adopted by the different countries are an important determinant of labor force participation decisions at older ages.

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<sup>1</sup> Currently, only one wave, collected in 2004, is available. The second wave will start being fielded in October 2006.

Restricting the attention to “healthy” individuals, namely individuals who do not report any limitation in activities of daily living or instrumental activities of daily living, we find a strikingly high frequency of people with no limitations who report themselves fully retired, in Austria, France and Italy, even among those in early retirement. A widely held view amongst economists is that there is “unused capacity” for active work. The notion of “unused capacity” has been first elaborated by Gruber and Wise (1999) who argue that there is an implicit tax on labor providing the incentive to retire early. The intuition hinges on the incentives, embedded in social security and pension systems, to retire early and implies that amongst other determinants of early retirement health should be considered.

We build on the pioneering work by Grossman (1974) and on recent developments by Currie and Madrian (2000) to construct a theoretical model that allows us to derive an empirical specification of the “demand for health” and its relationship with labor supply, and proceed to estimate the derived equation for the probability of being retired using a sample of 13,000 SHARE respondents aged between 50 and 70 (because for older ages there is basically no variability of the indicator worker/retired) who are working or inactive.

In line with the theoretical framework, in the multivariate analysis, we model the probability of being retired as a function of age, marital status, education and gender, and two indicators which will be the focus of the analysis: a measure of the generosity of the social security system, the social security wealth, and a measure of “health status”.

The measure of “health status” is obtained constructing a cumulative index of the presence of limitations with ADL/IADLs.

The social security wealth measure is constructed as the present discounted value of expected future benefits from social security and pensions, discounted at current age by both a given interest rate and the conditional survival probability. In this definition we include both public social security benefits for old age and/or early retirement and private pensions. This variable captures the differential generosity of the system in the different countries and for the different individuals. The effect of institutions and labor market configuration is captured in two ways: through this variable measuring the generosity of the social security system, and through country-dummies, which pick up several additional dimensions of country specific effects.

To overcome endogeneity and measurement errors problems in the construction of the social security wealth and of the health status variable, we rely on instrumental variables techniques. The social security wealth is instrumented by the type of employment, and the health status index is instrumented by retrospective information on investment in one’s health, and by respondents’ subjective survival probabilities.

The preliminary results indicate that institutional differences in welfare systems clearly affect the distribution and the age pattern of participation to the labor market and of retirement. Countries

where early retirement is allowed and/or is generous see a prevalence of early retirees (typically Southern countries, but also Austria and France). Furthermore, in countries where other exit routes are allowed as form of early retirement (disability and unemployment) these substitute for retirement. There is potentially huge unused labor capacity in countries such as Austria, Italy and France where “healthy” individuals are not in the labor force.