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Active aging, preventive health and dependency: Heterogeneous workers, differential behavior

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ABSTRACT

In a dynamic framework, in which early health spending mitigates productivity losses in later years, we show that the labor supply of older workers and investment in preventive health go hand-in-hand: high-productivity workers are more involved in active aging and in preventive health. As a consequence, for a delay in the legal retirement age to have the desired effect on the labor supply of the elderly, an affordable system of preventive health is required, especially among those workers with low socio-economic status. In this context, the labor supply of the elderly would expand at a faster rate than would life expectancy, thus allowing for a reduction in the dependency rate.

1. Introduction

Aging is one of the primary challenges facing developed economies. Although the prospect of a longer life is undoubtedly interpreted as a sign of success in our society, it has economic implications that have turned out to be not so simple to manage. Perhaps the most important factor is the financial pressure on social security systems, arising from the increasing numbers of retirees with no parallel expansion of the working population. While those aged 65 and over currently make up about 25% of the population aged 18–65 in Europe, Eurostat (2008) projections show an increase of this ratio to around 50% by 2060. There is no doubt that an increase in the retirement age would alleviate public finances, which is why so many governments are either increasing the legal retirement age, and/or increasing the required number of years of contribution to qualify for a full pension. The purpose of this paper is to show that mandating a higher legal retirement age may not have the desired effect on the labor market participation of older workers, if it is not accompanied by effective preventive health programs.

There exists a variety of individual concerns about the willingness to extend, or not, the years of working, beyond that of simply delaying retirement, which appears to be the rationale of most policy-makers. The empirical evidence supports this heterogeneity of behaviors facing retirement. For example, using USA data, Haider and Loughran (2002) find that the labor supply of people over 65 years is concentrated among the healthiest, wealthiest, and most educated individuals. Kalwij and Vermeulen (2008) find that a higher labor-participation rate of Europeans aged 50–64 is positively related to both health and level of education. In the Spanish case, the likelihood of retirement is lower for individuals with at least

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a high-school education, compared to those with a lower educational level (Jiménez-Martín and Sánchez-Martín, 2007). Staubli and Zweimüller (2013) find that the employment response to a delay of the early retirement age in Austria was greatest among high-wage and healthy workers, while low-wage and less healthy workers either continued to retire early, via disability or unemployment benefits. To reflect this heterogeneity within a cohort, following Ales et al. (2012), we build a framework in which individuals have different life-cycle productivity profiles, conditional on an initial productivity level. To reflect health inequalities within a cohort, we consider that each individual affects his/her own health level by devoting effort to preventive health that mitigates the health deterioration due to aging and, hence, affects the individual decision to shorten or lengthen the working life. In this context, where individuals decide jointly whether to participate in the labor market in old age, and whether to invest in preventive health, we find that those who decide to remain longer in the labor market are also those who devote more resources to preventive health, namely those with the highest levels of productivity. The explanation is that preventive health slows down the decline in productivity over time more effectively among the most productive and, those with the highest levels of education, and in the most human-capital-intensive sectors, will have the greatest interest in extending their working lives, relative to the general population. The reverse applies for those who are more disadvantaged.

We find that the proportion of individuals willing to extend their working life is larger, the higher the expected labor income when older, the lower the utility derived from leisure, and, more interestingly, the lower the price of preventive health strategies. A good health sector, which provides accessible health services, enhances the activity rate among the elderly, and lowers the dependency rate of the non-active population. In fact, given an increase in life expectancy, an affordable health system emerges as a necessary condition for the dependency rate to remain *in stasis*, and enhances the importance of the authorities providing preventive health programs with the goal of extending the years of work, especially those programs providing services for individuals with lower socio-economic status.

The rest of the paper is organized as follows. Section 2 provides a review of the existing studies of the relationships among health, retirement, and the labor supply of the elderly. In Section 3, individual behaviors with respect to preventive health and the retirement decision are characterized. Section 4 presents the implications of these individual behaviors at an aggregate level, focusing on two factors: the rate of activity among older workers, and the rate of dependence. Section 5 presents our conclusions.

2. A review of the current literature

Although, up to the mid-1990s, the general rule was to retire increasingly early in developed countries, the trend has reversed and the participation rate of older individuals in the labor market is now increasing in most OECD countries. This behavioral change has generated a new strand of the literature devoted explaining the mechanisms of delayed retirement. Some studies focus on the role of institutional changes toward less generous pension, tax, unemployment, and disability policies as explanatory factors, while others highlight improvements in health among potential retirees. Our research follows the line that individuals in better health tend to retire at a later age than those who are not so healthy. There is a variety of theoretical explanations of the positive effects of health in delaying the timing of retirement. Coile and Levine (2007), for example, find that older workers with health problems have a greater probability of becoming unemployed, or finding themselves constrained by poor labor conditions, in such a way that retirement comes as somewhat of a relief, while Bloom et al. (2007) maintain that the fact that individuals of all ages are generally healthier, and live longer lives, leads to a reduction in the disutility of work and, hence, to an increase in the optimal retirement age. Taking a different point of view, Ferreira and Pessôa (2007) explain that individuals retire earlier because longer lives imply declining productivity, and that the link between age and productivity has a homogeneous hump shape. More recent analyses estimate age-productivity profiles that increase up to the age of 50–55 years, and then remain flat (Cardoso et al., 2011; Dostie, 2011; Mahlberg et al., 2013).

To find an association between health and the retirement decision, we posit that planned health investment, i.e. preventive health, affects the age-productivity profile by slowing down the decline in productivity over time, and to a greater extent among more productive individuals. Consequently, those individuals with the highest levels of productivity will have a greater interest both in extending their working life and in investing in preventive health, compared to the rest of population. This mechanism is based on four key points that are well-supported by empirical evidence. First, the connection between having a good health status at retirement age, and postponing the retirement timing; second, the long-term effects of health investments later in life; third, the positive effect of health on labor productivity; and fourth, the greater probability that a higher-income adult uses preventive care. Bringing together the first three links, we maintain that a good health status at retirement age is likely to be the result of health investments in childhood and in early adulthood which, in turn, positively affects labor productivity. In other words, preventive health slows down the age-related decline in productivity and health and, hence, makes it more attractive to delay the time of retirement. The fourth point allows us to establish that this connection between preventive health and retirement is stronger for more productive individuals.

On reviewing the relevant empirical research that supports each of these four points, we take particular note of the work of Sickles and Taubman (1986) who, using longitudinal data from the Retirement History Survey, for the period 1969–1977, confirm that retirement decisions are strongly affected by health status at that age. More recently, empirical studies have concentrated on correcting the problems that arise from potential endogeneity of self-rated health data. For instance, Dwyer and Mitchell (1999) exploit the 1992 Health and Retirement Study (HRS), finding that health problems have a greater influence on retirement than do economic variables. In particular, men in poor overall health retire one to two years earlier.