

Fatal attraction? Access to early retirement and mortality

Europe and many other parts of the world face a dramatic demographic transition. Ageing populations will lead to fundamental changes in societies and threaten the sustainability of pension systems. This has prompted the EU to launch a public debate on how to meet this demographic challenge. In a green paper László Andor, EU Commissioner for Employment, Social Affairs and Inclusion, strongly urges an increase in the statutory retirement age. In fact, several European countries have already taken steps to increase the retirement age. In Germany it will increase from 65 to 67 by 2029 and in France from 60 to 62 by 2018. The UK is even more ambitious: it plans to increase the statutory retirement age from 65 to 68 by 2046.

However, workers and their political representatives strongly oppose such reforms, claiming that workers who spent their whole life working in physically demanding jobs should be allowed to retire early to avoid emerging health problems. Leaving a noxious work environment is, *ceteris paribus*, clearly conducive to good health. However, the health effects of permanently leaving the labour force also may go in the opposite direction. Indeed, retirement is not only associated with lower income and fewer resources to invest in one's health, but also with less cognitive and physical activity (eg Rohwedder and Willis 2010) as well as with changes in daily routines and lifestyles that are potentially associated with unhealthy behaviour (eg Balia and Jones 2008). Thus, the overall consequences of early retirement on health could go in either direction.

Is retirement fostering good health?

Estimating the causal effect of retirement on health and/or mortality is difficult mainly because poor health is itself a key determinant in individuals' retirement decision. Among the large number of empirical studies on the health impact of retirement, those addressing this reverse causality problem in a convincing way are rare.¹ Given the use of very distinct outcome measures and identification strategies, it is not surprising that these studies suggest no clear pattern regarding the causal impact of retirement on health.

In [Kuhn et al \(2010\)](#) we offer a clean empirical design to shed new light on the causal effect of retirement on mortality. To solve the problem of negative health selection into retirement we take advantage of a major change to the unemployment insurance system in Austria.² This policy change allowed older workers in eligible regions to retire up to 3.5 years earlier than comparable workers in non-eligible regions. The programme generated substantial variation in the actual retirement age, which, arguably, was driven only by financial incentives and not driven by differences in individuals' health status. This lets us examine the causal impact of early retirement on mortality using instrumental variable (IV) techniques. Moreover, the comparison between ordinary least squares (OLS) and IV estimates allows us to assess the extent of health-driven selection into early retirement.

Apart from a clean design, a particular advantage of the study is its use of a very large administrative data set, the Austrian Social Security Database (ASSD).³ This allows us to draw very specific though still relatively large samples. In this dimension our study overcomes a major problem of the existing literature. The existing literature is mostly based on survey data and hence on comparably small samples, from which only imprecise estimates can be derived. Our sample consists of blue-collar workers born between 1929 and 1941. Blue-collar workers are a particularly interesting group in this context because they typically work in physically demanding jobs and because emerging health problems – and/or their prevention – often induce these workers to retire earlier.

We find that a reduction in the retirement age causes a significant increase in the risk of premature death – defined as death before age 67 – for males but not for females. The effect for males is not only statistically significant but also quantitatively important. According to our estimates, one additional year of early retirement causes an increase in the risk of premature death of 2.4 percentage points (a relative increase of about 13.4%; or 1.8 months in terms of years of life lost). In line with expectations, we find that IV estimates are considerably smaller than the simple OLS estimates, both for men and for women. This is consistent with negative health selection into retirement and underlines the importance of a proper identification strategy when estimating the causal impact of early retirement on mortality. Our results also indicate that the causal effect of early retirement on mortality for females is zero, suggesting that the negative association between retirement age and mortality in the raw data is entirely due to negative health selection. There are several reasons why male but not female blue-collar workers suffer from higher mortality (eg women may be more health-conscious and adopt less unhealthy behaviours than men; they may be more active after permanently exiting the labour market due to their higher involvement in household activities).

Why is retirement bad for males' health?

We consider several channels to understand why male early retirees die earlier.⁴

- A first channel suggests that early exit from the labour market is associated with lower permanent income. We find that earnings losses due to early retirement cannot explain our finding for men, because these losses are quantitatively too small to have a substantial impact on mortality.
- A second channel suggests that changes in health-related behaviours associated with smoking, drinking, an unhealthy diet, and little physical exercise may cause premature death following early retirement. Our results strongly support this hypothesis. Complementary data from cause-of-death statistics reveal that excess mortality is concentrated on three causes of deaths:
 - (i) ischemic heart diseases (mostly heart attacks),
 - (ii) diseases related to excessive alcohol consumption, and
 - (iii) vehicle injuries.

These three causes of death account for 78% of the causal retirement effect (while accounting for only 24% of all deaths in the sample). We calculate that 32.4% of the causal retirement effect can be directly attributed to smoking and excessive alcohol consumption.

- A third channel suggests that the detrimental mortality effect arises from retirement following an involuntary job loss but not from voluntary quits. Even though our data do not distinguish between voluntary and involuntary retirement, we exploit severance payment rules to proxy the voluntariness of the retirement decision. Our empirical results suggest that retirement following an involuntary job loss is likely to cause excess mortality among blue-collar males, while retirement after a voluntary quit does not.

Implications for pension reforms?

Our results suggest that early retirement does not only adversely affect government budgets. Early retirement may also have adverse consequences by increasing individuals' mortality risk. A major implication of our analysis is that labour-market policies that keep older individuals at work have a double dividend. They will contribute to an improvement of government budgets and they will raise individuals' welfare by prolonging their lives. As long as workers can be kept in employment, increasing the retirement age will improve government budgets, though not one-for-one as longer lifetimes will increase social security expenditures in the future. Our results also suggest that preventive health policies should be targeted to (early) retirees. Policies that induce individuals to adopt healthy (or avoid unhealthy) behaviours may have disproportionately positive health consequences for workers who (are about to) permanently withdraw from the labour market.

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¹ Examples include Bound and Waidmann (2007), Coe and Lindeboom (2008), Charles (2004), Neuman (2008), Johnston and Lee (2009), Coe and Zamarro (2008), Kerkhofs and Lindeboom (1997), Behncke (2009), and Dave *et al* (2008).

² To be eligible, a worker had to fulfill the following three criteria at the time of entry into unemployment: (i) age 50 or older, (ii) a continuous work history before becoming unemployed (i.e. 780 employment weeks in the last 25 years preceding the unemployment spell), and (iii) at least 6 months of residence in one of the eligible regions.

³ See Zweimüller *et al.* (2009) for details.

⁴ Access to basic health care does not depend on employment status and thus cannot play any explanatory role.