



# The effect of disability pension incentives on early retirement decisions<sup>☆</sup>

Barbara Hanel<sup>\*</sup>

Melbourne Institute of Applied Economic and Social Research, The University of Melbourne, Australia

## ARTICLE INFO

### Article history:

Received 31 October 2011  
 Received in revised form 3 May 2012  
 Accepted 8 May 2012  
 Available online 18 May 2012

### JEL classification:

I12  
 J26

### Keywords:

Disability pensions  
 Labour force exit

## ABSTRACT

I investigate the incentive effects of disability pensions on disability retirement entry as a special type of early retirement. The implicit tax rate on further work is included as a forward looking incentive measure. A substantial change of the disability pension legislation caused exogenous variation in disability benefits in Germany in 2001 and is used to obtain estimates of individual's responses to financial incentives. Benefit levels appear to have no effect on the labour market behaviour. At the same time, there is a sizable and significant disincentive effect of implicit taxes on labour market income, indicating that alleviating such disincentives would likely increase labour force participation. Since the response to financial incentives occurs mainly among those in good health, such a policy might on the other hand imperil the aim of providing insurance against a health-induced loss of one's working capacity.

© 2012 Elsevier B.V. All rights reserved.

## 1. Introduction

Losing the ability to work is one of the most personally disastrous and financially costly events in life. The social safety nets of all industrialized countries therefore provide insurance against the risk of becoming disabled and provide benefits for those with a limited working capacity. In the European Union in 2005, 7.9% of the total expenditures on social benefits were spent on disability. The expenditures on disability exceeded those on unemployment by about 30% on average (Eurostat, 2008). While being of high importance in the prevention of poverty among those who lose their ability to work, these benefits may on the other hand serve as an exit route to early retirement and encourage individuals to withdraw from the labour force early. In many countries in the European Union (e.g. Denmark, UK, Belgium and the Netherlands), permanent labour force withdrawal occurs on average about two years prior to the earliest age of entitlement for old-age benefits (OECD, 2009a). Entry into

disability retirement may be misused to finance labour force exit before old-age benefits are legally available and thus regular retirement becomes feasible.

The previous literature regarding the effect of disability pensions on labour force participation led to ambiguous conclusions.<sup>1</sup> The earliest analyses such as Parsons (1980a, 1980b), Leonard (1979), and Slade (1984) estimated the probability of labour force participation as a function of the replacement rate and found large elasticities with respect to disability benefits. In a second strand of the literature, later contributions used instrumental variable estimators to deal with the endogeneity of benefits and wages, such as Haveman and Wolfe (1984a), Haveman et al. (1991), Riphahn (1999), and Kreider and Riphahn (2000). They find much smaller to almost no response of labour force participation to disability benefits. For example, the elasticity found by Haveman and Wolfe (1984b) was about 80% smaller than the first result by Parsons (1980a). In a third approach, variation in benefit regulations over time and across regions is used to identify their effect on labour force participation (e.g. Gruber, 2000; Campolieti, 2004; Autor and Duggan, 2003). Some studies use rejected applicants for disability benefits as a control group (Bound, 1989; Chen and van der Klaauw, 2008). Those analyses found responses to disability benefits within the range of the first two approaches, yet the results vary greatly with the estimation method.

Although disability retirement is often interpreted as an alternative pathway into old-age retirement, well established methods for the analysis of old-age retirement decisions are seldomly applied for the analysis of disability retirement. There is widespread agreement

<sup>☆</sup> I am grateful to Regina Riphahn for the continuous advice and insightful guidance. My thanks also go to the participants at the 23rd EALE conference and the participants of the Applied Micro Seminar at Ohio State University, in particular David Blau, as well as Deborah Cobb-Clark, Guyonne Kalb, Hielke Buddelmeyer, Duncan McVicar, Robert Orlowski, Steffen Mueller and Peter Sivey for their helpful comments. I would like to thank Hannah Wesker for the excellent research assistance, and the FDZ-RV and the DIW for provision of the data. I am grateful to Michael Stegmann, Ingmar Hansen and Frank Roeder at the FDZ-RV for their valuable advice about the data. The financial support of the Deutsche Forschungsgemeinschaft (DFG) is thankfully acknowledged.

<sup>\*</sup> Melbourne Institute of Applied Economic and Social Research, Alan Gilbert Building, University of Melbourne, VIC 3010, Australia. Tel.: +61 3 9035 4565; fax: +61 3 8344 2111.

E-mail address: [bhanel@unimelb.edu.au](mailto:bhanel@unimelb.edu.au).

<sup>1</sup> For a detailed discussion of the literature see Haveman and Wolfe (2000).

in the literature on old-age pensions that not only the level of available benefits at the time of decision-making affects the retirement decision, but also expected future benefits if retirement is delayed for one or several years (e.g. Stock and Wise, 1990; Samwick, 1998; Gruber and Wise, 2004; Heyma, 2004). While forward-looking behaviour in a disability retirement scheme should not occur in an 'ideal world', this is no longer true as soon as there are moral hazard and imperfect medical screening procedures. It is thus interesting to explore to what extent models developed for old-age pension schemes can be applied to the analysis of disability retirement schemes. However, forward-looking behaviour has rarely been integrated in models of disability retirement decisions. Notable exceptions are Burkhauser et al. (2004), van Vuren and van Vuuren (2007) and Iskhakov (2010) who use dynamic programming to model the timing of disability retirement. I add to this scarce literature by using forward-looking incentive measures in a model of disability retirement entry, while exploiting exogenous variation in these incentive measures caused by an institutional reform of disability pensions in Germany in 2001. Eligibility criteria are now stricter than before for some population groups, and benefits are substantially lower. The reform led to substantial exogenous variation in benefits, and moreover, in benefit accruals from an additional year of work during an anticipation period. This exogenous variation can be used to identify to what extent financial incentives affect individuals' labour market behaviour.

I find no behavioural response to benefit levels, but a substantial effect of the implicit tax on further employment. Responses to financial incentives occur mainly among those in relatively good health, while individuals in bad health do not adjust their labour market behaviour substantially. This corroborates that forward-looking behaviour occurs as a result of moral hazard and imperfect medical screening. The results are robust to the inclusion of different subjective and objective health measures and to the application of different distributional assumptions and discount rates.

## 2. Institutional background

An important advantage of the public retirement system in Germany for the analysis of retirement behaviour is that it is almost universal and the most important income source for most retirees, with private pensions or company pensions being relatively unimportant. About 80% of the labour force is covered, and the average net replacement rate with respect to the last wage is high. It was 61.3% in 2008 (OECD, 2009b). Besides old-age pensions and survivor's pensions, disability benefits are provided that are proportional to the individual's old-age pension entitlements. Individuals are eligible for disability benefits if they meet some lenient criteria regarding their employment history and their earnings capacity is reduced for health reasons. An important feature is that there is no waiting period, i.e. an applicant does not have to quit employment before applying for benefits. Instead, disability benefits are paid from the first day when a health-induced reduction of the working capacity occurs, and it is only after a disability pension has been approved that the retiree's employment opportunities are limited by law.<sup>2</sup> This implies that there is no direct risk of income loss involved with an application. After the applicant has handed in the application, a medical assessment is undertaken by insurance doctors, who assess the working capacity based on a physical examination or based on medical files in case of recent in-patient treatment. This screening procedure is supposed to limit potential moral hazard among the insured population, who may overstate a limitation due to their working impairment in order to get access to benefits. If the application is rejected, applicants

<sup>2</sup> Disability retirees are legally permitted to be casually employed. If their additionally work income exceeds a certain threshold, disability benefits are gradually reduced, and their payment will eventually be ceased.

can appeal the decision. They then have to provide additional evidence for a reduction of their working capacity, for example the result of an additional medical assessment from a previously uninvolved doctor. If the application is still rejected, the applicant can take the case to a social court.

Until 2001 the program was generous. It distinguished between occupational disability and general disability. Benefits for general disability amounted to the individual's full old-age pension entitlements and were granted if an individual was unable to perform any regular employment in any occupation on a continuous basis. New retirees received €738 (~US-\$ 1000) in 2000 on average (Deutsche Rentenversicherung Bund, 2008). Benefits for occupational disability amounted to two thirds of full old-age benefits and were granted if an individual's working capacity was less than four hours per day in his or her occupation. Additionally, general disability benefits were provided if an occupationally disabled individual was "effectively excluded from the labour market", i.e. the health situation would allow for employment in part-time jobs at suitable workplaces, but the individual could not find such employment after searching for one year. After one year, occupational disability benefits were then upgraded to general disability benefits.

The reform of the disability retirement insurance involved three major modifications: first, benefits in case of occupational disability are paid only for those who are born before 1960, and they amount to half of the full old-age pension now, rather than previously two thirds.<sup>3</sup> Second, all disability benefits are reduced by 10.8% if claiming takes place prior to age 60.<sup>4,5</sup> A third modification affects only individuals born after 1960: they cannot claim any benefits for *occupational disability*. However, benefits for the *partially disabled* are provided for those who are not able to work six hours per day in *any occupation*. Like the benefits for occupationally disabled who were born prior to 1960, those benefits for the partially disabled amount to half of the full old-age pension.

The legal changes were first passed shortly before the parliamentary elections in September 1998 at the initiative of the conservative government at the time. Before the new regulations took effect, the Social democrats and Greens won the elections and suspended the enforcement of the reform until 2001. In December 1998, the new government announced to the public that the reform will apply to individuals who enter disability retirement after January 1, 2001, yet individuals entering prior to that date will be subject to a grandfathering clause and their benefits will remain unchanged. Table 1 illustrates the announcement and enforcement of the reform. As discussed later, the timing is important as it resulted in a period when anticipated changes in benefit regulations substantially altered the implicit tax on an additional year of labour market income receipt.

## 3. Empirical approach

The entry to disability retirement depends on the individual's decision to apply for benefits and on the granting agency's decision to accept the application. The reform in 2001 thus changed two important determinants of disability retirement entry: first, the amount of pensions was changed, which will affect the relative attractiveness of disability retirement entry compared to continued labour force participation and therefore the probability of applying for benefits.

<sup>3</sup> For those born later, there is no pension in case of occupational disability available. However, individuals can draw benefits if they are partially disabled, i.e. they cannot work at least six hours per day in *any occupation*.

<sup>4</sup> Between age 60 and age 63, monthly benefits are gradually increased by 0.3% for every month the retirement entry is delayed. The full pension for the fully disabled and half of the pension for the partially disabled is paid, if disability entry takes place from age 63 onwards.

<sup>5</sup> When the reform was passed, the concept of "effective exclusion from the labor market" was also abandoned at first. However, that legal change was redeemed again before the new law was actually enforced.

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات