


PHASED AND PARTIAL RETIREMENT:
PREFERENCES AND LIMITATIONS



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Arthur van Soest and Tunga Kantarci

Phased and partial retirement: preferences and limitations

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Design

Bladvulling, Tilburg

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Editorial address

Netspar
Tilburg University
PO Box 90153
5000 LE Tilburg
Phone +31 13 466 2109
Fax +31 13 466 3066
E-mail info@netspar.nl
www.netspar.nl

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Arthur van Soest is Professor of Economics at Tilburg University, one of the Scientific Directors of Netspar and is associated with the RAND Labor and Population (Santa Monica, USA). Tunga Kantarci is a PhD at the Faculty of Economics and Business Administration.

PREFACE

Netspar stimulates debate and fundamental research into the implications of the aging of the population, the sustainability of pensions and government policy. The aging of the population is front-page news, as many baby boomers are now moving into retirement. More generally, people live healthier and longer while at the same time families choose to have fewer children. Although the aging of the population often gets negative attention, with bleak pictures painted of the doubling of the ratio of the number of people aged 65 and older to the number of the working population during the next decades, it must, at the same time, be a boon to society that so many people are living longer and healthier lives. Can the falling number of working young afford to pay the pensions for a growing number of pensioners? Do people have to work a longer working week and postpone retirement? Or should the pensions be cut or the pension premium paid by the working population be raised to afford social security for a growing group of pensioners? Should people be encouraged to take more responsibility for their own pension? What is the changing role of the social partners in the organization of pensions? Can and are people prepared to undertake investment for themselves for their pension, or are they happy to leave this to the pension funds? Who takes responsibility for the pension funds? How can a transparent and level playing field for pension funds and insurance companies be ensured? How should an acceptable trade-off between social goals such as solidarity between young and old, or rich and poor, and individual freedom be struck? But most important of all: how can the benefits of living longer and healthier be harnessed for a happier and more prosperous society?

The Netspar Panel Papers aim to meet the demand for understanding the ever-expanding academic literature on the consequences of aging populations. They also aim to help give a better scientific underpinning of policy advice. They attempt to provide a survey of the latest and most relevant research, try to explain this in a non-technical manner and suggest some directions for policy-relevant research and, if possible,

offer some policy conclusions. Let there be no mistake. In many ways, formulating such a position paper is a tougher task than writing an academic paper or an op-ed piece. The authors have benefited from the comments of the Editorial Board on various drafts and also from the discussions during the presentation of their paper at a Netspar Panel. This is important, since it concern topics of immense importance for society.

Rick van der Ploeg

Chairman of the Editorial Board of the Netspar NEA Papers and Panel Papers

EXECUTIVE SUMMARY

The traditional retirement scenario is a one-time switch from full-time employment to full-time leisure. A more attractive option, not only for the employee, but also for the employer, is to ease this transition from work to retirement. The employee can then adjust gradually to a new phase in life and the employer continues to benefit from the skills and knowledge of the elderly worker. The opportunity of working after the statutory retirement date can also greatly help to increase the participation rate of elderly people, which, in turn, is needed for the sustainability of the pension system in an aging society. Recent research indicates that the elderly in the Netherlands are more willing to work after the statutory retirement age of 65 years than is commonly thought to be the case, provided that gradual retirement options are available and financially attractive.

This paper first surveys the literature on gradual retirement. The empirical evidence that is presented considers the US, Europe and more specifically, the Netherlands. Two kinds of gradual retirement are considered: partial and phased retirement. Partial retirement is defined as a change to a less demanding job (usually with fewer hours and a lower wage), and phased retirement is defined as a reduction in work hours in the same job. The paper also explores the employer's considerations in deciding whether or not to offer gradual retirement schemes, and the institutional constraints imposed by state- and occupational pension systems.

In the US, phased retirement is less common than partial retirement. This is due chiefly to certain restrictions on phased retirement imposed by employers or institutions. Such restrictions are related to the following: fixed employer costs, the production technology and team production, the difficulty of retaining job skills, an earnings test on old-age social security benefits, employer-provided health insurance or restrictive rules of defined-benefit systems, which prevent employees working for and receiving pension from the same employer. The authors list some

obstacles in introducing alternative job patterns, such as perceived costs, lack of commitment by top management, production scheduling problems, union opposition, resistance by middle- and lower management, disinterest in training older workers, and lack of support from the workforce. Furthermore, it must be noted that opportunities for phased- and partial retirement differ between industries and depend, among other things, on the size of the organization.

The paper surveys several studies on gradual retirement in Europe. Sweden, for example, has been able to reduce the number of early withdrawals from the labor force. One crucial condition for this was a positive attitude of employers to provide an adequate supply of part-time jobs. But also the training of older workers, which is common in Sweden, plays an important role. It turns out that in almost all European countries, part-time employment is more prevalent in the older age category. Comparison of part-time work rates over time, however, yields no evidence that the prevalence of gradual retirement is increasing.

The authors address three questions concerning the Dutch case. First of all, what will make gradual retirement attractive to Dutch workers? Second, will gradual retirement opportunities increase or decrease total labor supply in the Netherlands? Finally, are there any legal issues that make gradual retirement less attractive, and if so, what is their nature and how can they be overcome?

In order to answer the first question, the paper presents several hypothetical retirement scenarios of Dutch workers and former workers. These scenarios contain different options, such as the presence or absence of gradual retirement, different replacement rates and different retirement ages in case of gradual or full retirement. It seems that Dutch employees are willing to work beyond the statutory retirement age of 65, if there are possibilities for working part-time combined with receiving a generous enough partial pension. The study suggests, for example, that compared to the default scenario of working until age 65 with 70% income replacement thereafter, more than 90% of the individuals might prefer to work 60% of their time from age 63 until age 67, with an income of 85% of their pre-retirement wage and 80% of their retirement wage thereafter. With regard to total labor supply, this mechanism would likely increase labor supply. Regarding the third question, although no major legal obstacles seem to exist in the Dutch case, some fine-tuning is still required.

Employer attitudes are also studied. Employees older than 25 years of age were asked how they perceived phased retirement possibilities at their current employer. Almost half of the respondents answered affirmatively when asked whether their employer offers them the possibility of part-time work. The follow-up question was at what age they thought they would be able to reduce their hours of work. Ages 60 and 62 were the most common answers.

The authors conclude that gradual retirement is rather low in Western countries, due to institutional restrictions, real or perceived disadvantages on the employers' side, macroeconomic circumstances and exit routes, such as early retirement. Despite this, gradual retirement seems generally to be seen as an opportunity to keep older workers longer at work. This can be realized by increasing financial incentives, applying less stringent rules on combining work with partial pension receipt and employing tax measures that make gradual retirement more attractive for workers and less expensive for employers.

PHASED AND PARTIAL RETIREMENT: PREFERENCES AND LIMITATIONS

1. Introduction

In the traditional retirement scenario, individuals work full-time or part-time until a given age, and then stop working overnight. This fits with the notion of an institutionalized life course with separate stages of labour force preparation, participation and withdrawal (Kohli, 1986; Mayer and Schoepflin, 1989; Meyer, 1986). Labour market rigidities in terms of team production, fixed employment costs and social security incentives or age discrimination are factors that appear to have contributed to this segregation (Mayer and Muller, 1986; Hurd, 1996; Quinn, 1981).

It seems intuitively attractive from the point of view of the individual, however, to have a smooth transition from work to retirement, gradually reducing the number of hours worked. This is also in line with a more recent view on the life-course trajectory: Brueckner and Mayer (2005) contended that the post-modern epoch identifies 'patterns of a greater variety of partly freely chosen, partly imposed life trajectories.' Opportunities for gradual reduction of the working effort may also increase opportunities for working after the normal retirement age: many people seem to dislike the idea of continuing the same job with the same effort after this age, but may well be interested in continued participation in the labour market at a reduced effort level.

Gradual withdrawal from the labour force can have two forms (see, e.g., Scott, 2004): either phased retirement (reducing work hours in the same job) or partial retirement (changing to a less demanding job with usually fewer hours and lower earnings). Each retirement path comes with its own income trajectories before, during, and after the transition process, with, for example, a combination of wages and a partial state pension and/or occupational pension during the period of gradual retirement.

Several gradual-retirement programs have been created in the past 20 years, at first in combination with early retirement programs and later as

an attempt to reduce complete withdrawal from the labour market and to increase the participation rate of the older part of the workforce. In the United States, about 18% of the cohort of salaried workers born between 1931 and 1941 were in phased- or partial retirement in 1998 and 2000 (Scott, 2004). Hutchens and Grace-Martin (2004) and Chen and Scott (2006) found that phased-retirement programs are more common in the services sector than in the manufacturing sector. Since the share of the services sector in the economy is growing, this suggests that the scope for phased retirement can also grow. According to Brown (2005), 38% of US employees aged 50 years or older in 2005 expressed a moderate or strong interest in phased retirement. In most western countries, the fraction of male and female part-time workers in the age group 60-64 is larger than the overall fraction of part-time workers among males or females. In the Netherlands in 2004, about one-third of former and current employees thought their current or last employer offered the possibility of phased retirement (Van Soest et al., 2006), and the suggestion has recently been made to also introduce gradual-retirement plans for after the statutory retirement age of 65 years.

In order to design successful plans that are attractive to older workers, that increase their lifetime welfare, well-being and their contribution to society, it is essential to know the preferences of these older workers with regard to such plans, as well as the considerations of their employers for offering or not offering gradual retirement to older employees. It is also essential to know the constraints imposed by state- and occupational pension schemes. Institutional restrictions on combining earnings with pension income, or a pension system in which the pension level is determined by final earnings have been shown to severely limit the attractiveness of phased- or partial retirement in the US (Chen and Scott, 2003).

The relevance of this topic for society and public policy seems obvious. Early retirement programmes, their consequences for the welfare and well-being of the elderly, and their financial burden for the macro-economy, magnified by the aging of the population, are at the top of the policy agenda in many countries. Gradual-retirement plans increase the choice opportunities for older workers and thus have the potential to improve their lifetime utility. They may lead to voluntary increases in labour supply, thus increasing the sustainability of the pension system.

Greater flexibility may reduce work-related health problems (both physical and mental) and absenteeism, and may increase employee morale.

A central issue is the ambiguous effect on total hours worked. Some workers who choose part-time work would otherwise have retired completely, but others would have kept working full-time. The resulting effect on labour supply depends on which of the two effects is larger. This may vary across skill- and education levels or across sectors and occupations. Understanding the heterogeneous nature of preferences will be crucial for determining labour supply effects, which then can be used as inputs in, for example, a general-equilibrium model to analyse the macroeconomic consequences. This paper aims only at the first step—the micro level.

This paper first surveys the existing literature on partial- and phased retirement. It discusses concepts, measurement and prevalence of phased- and partial retirement. It then discusses worker preferences (supply), advantages and disadvantages for employers (demand), and institutional constraints. Taking an international perspective, the paper considers gradual retirement in both the US and a number of European countries.

The paper also specifically looks at the Dutch situation and the relevance of gradual retirement as a tool to keep people longer at work. Increasing the participation rate to 80% in 2016 is an explicit target of the Dutch government and the social partners. While the rise in participation of women has resulted in a rise in the overall participation rate in the past decades, this rise now seems to have come to a standstill, leaving increasing participation of the elderly as the main alternative. Gradual retirement may be an important tool to make this feasible. Part-time work among the 60–65 age group has become more common in the past 15 years, rising from about 6% in 1992 to almost 10% in 2005, but there is still ample scope for further increases. This applies *a fortiori* to the age group 65+ where part-time work is still much lower, although more common than full-time work.¹ Increasing participation of elderly workers seems particularly useful in light of the rising costs of state pension expenditures due to the aging of the population—the estimated increase is from €24 billion in 2006 to €48 billion in 2036.²

1 Based upon CPB calculations using data from the Labour Force Survey (EBB).

2 As forecasted by the Ministry of Social Affairs and Employment, see Van der Werf et al. (2007).

We summarize a study (Van Soest et al., 2006) that analyses preferences of older workers and shows to which extent gradual retirement would be used if demand-side constraints would play no role. In particular, the study shows how sensitive the potential take-up of gradual-retirement plans would be for the financial arrangements— the pension levels during gradual retirement and thereafter. Second, the paper analyses survey data that were recently collected from employees aged 25 years and older in the Dutch CentERpanel (a representative survey of the Dutch population). Specifically, the data covered employee perceptions: did employees perceive opportunities for gradual retirement at their current employer, and if not, what did they think were their employers' arguments for not offering such opportunities. This gives insight into the nature of the access restrictions to gradual retirement that are imposed by labour demand and labour market institutions. Combining these with findings on preferences gives an indication of what is needed to increase the prevalence of gradual retirement and the participation rate of older workers.

The structure of the paper is as follows. Section 2 considers definitions and measurement issues. Section 3 describes the factors facilitating and obstructing gradual reduction of the work effort from the standpoint of both the employee and the employer, looking at theoretical arguments as well as survey evidence. Section 4 focuses on the empirical facts for the US, considering transitions into and out of gradual retirement, and discussing the correlates of gradual retirement identified in the literature. Section 5 looks at gradual retirement in Europe. Section 6 looks specifically at preferences for and access to gradual retirement in the Netherlands. Section 7 concludes.

2. Concepts and Measurement

Traditional retirement is characterized by a structural break in the late life cycle— from full employment to complete retirement. In contrast, gradual-, phased- and partial retirement involve a time period during which work activity and leisure occur between the polar states of full-time work and complete retirement, implying a transition process rather than an instantaneous transition (Quinn, 1999). The transition into retirement may take various forms (Hayward et al., 1994). The reduction of work can imply a reduction of working hours, hourly wages, or both, in- or outside the career job. Transitions are not always monotonic (from working more to working less), but may be reversible with, e.g., re-entry into a non-career job after spending some time outside the labour market (Hayward et al., 1994). The literature uses a wide range of indicators to identify gradual retirement. These include a reduction in working hours or earnings with an accompanying partial-pension benefit, a change in employer at age 55 or over (implying resignation from the career job), or a subjective qualitative assessment in the form of a self-report. Some measures also combine hours or earnings changes with self-reports (Ruhm, 1990; Scott, 2004), or wages with working hours (Honig, 1985).

Gradual-, phased-, partial- and part-time retirement are all different terms used in this context. In this review, following most of the literature, we define *gradual* retirement as withdrawal from the labour market by reducing work effort. *Phased* retirement is progressive retirement while keeping the same employer within the same system, while *partial* retirement involves a change in employer. *Part-time* retirement concerns only number of work hours.

Phased retirement thus does not necessarily involve departure from the career job. Examples include downsized work schedules, temporary assignments, consulting work, telecommuting, leave of absence and job-sharing (Reday-Mulvey, 1995; Flahaven, 2002; Chen and Scott, 2003). *Partial retirement*, however, involves a change of employer or a shift into self-employment, accompanied by a reduction in working hours and/or the wage rate (Gustman and Steinmer, 1983, 1984b, 1986; Honig and Hanoch, 1985; Scott, 2004). *Part-time retirement* is defined as at most 34 working hours per week by the US Bureau of Labor Statistics, or as fewer than 1600 hours per year (Quinn, 1999), and involves a lower wage. It does not necessarily involve a change of job.

Phased- and partial retirement are often discussed in relation to *flexible retirement*, which refers to flexibility in choosing the retirement age- but still in the context of an abrupt end to labour force participation (Latulippe and Turner, 2000).³

Measurement Issues

Measurement of gradual retirement draws upon the *observed or stated* labour market status. The former is a quantitative, objective realization of an event such as a reduction in weekly or annual working hours, a reduction in earnings, a change away from the life-long job, or receipt of a partial pension. The latter is based upon a qualitative, subjective assessment by a survey respondent. Surveys often ask the respondents to characterize their job, labour market position or job transition. Numerous objective and subjective measures of gradual-, partial- and phased retirement have been used in the literature. These are discussed briefly below.

Working hours

A reduction of working hours is an indication of gradual retirement, although in some cases, the reduction may not be the choice of the worker (Ruhm, 1990). Several cut-off points have been used to define part-time work and part-time retirement. The US Bureau of Labor Statistics' measure for a part-time job is at most 35 hours per week. Empirical results appear insensitive to the cut-off (e.g., Blau, 1994). Others have defined part-time work on an *annual* basis. For example, Haider and Loughran (2001) and Scott (2004) used less than 1,750- 35 hours for 50 weeks- and found that 22% of the employers aged 50 to 58 are part-time retirees in the US in 1996-1998. A rationale to use annual hours is that part-time work may appear as a reduction in weeks per year rather than in hours per week (Quinn, 1999).

3 The terminology is not always used consistently in the literature. For example, partial retirement is often used instead of phased retirement (Gustman 1985; Honig, 1985; Honig and Hanoch, 1985). Equally confusing is the use of 'post career bridge employment' and 'partial retirement' as mutually exclusive terms (in Ruhm, 1990). The US Department of Labor's Working Group on Phased Retirement has narrowed the concept down to 'a gradual change in a person's work arrangements as a transition toward full retirement' (Flahaven, 2002). This study uses the terminology discussed above, even if the studies reviewed do this differently.

Wage rates

Gradual retirement by just reducing hours is often not possible in the career job. It then involves job change, with typically also a lower wage rate and often without pension coverage (Gordon and Blinder, 1980; Gustman and Steinmeier, 1982; Ghent and Clark, 2001). Quinn (1999)'s sample of US workers aged 51–65 in 1992–1996 reported a range of wage rates from \$5 to \$10 for 60% of the bridge jobs, but only for 33% of the career job employees. Yet, *phased* retirement can also be associated with a lower wage, because of reduced productivity (Gustman and Steinmeier, 1982, 1984a).

Earnings

As a combination of the hourly wage rate and hours worked, *earnings* provide an attractive measure of gradual retirement. Gustman and Steinmeier (1984b, 2000) defined gradual retirement as a more than 40% *decline* in both hours worked and earnings. In data from the early seventies, the peaks in the relative earnings distributions by age and year suggest a value of 0.5 to discriminate between gradual retirement and non-retirement (Honig and Hanoch, 1985).

Pension receipt

For private pension plans, a *partial-pension receipt* is an alternative measure of phased retirement. The percentage of the pension that is received is usually the same as the reduction in working hours (an individual reducing work hours by 30% would thus receive 30% of the pension benefits in phased retirement) (Brown, 2005; Latulippe and Turner, 2000). This measure is less useful in the US and several other countries, however, since gradual retirees are not likely to have pension coverage (Ruhm, 1990; Honig and Hanoch, 1985).

Job change and re-entry

Bridge jobs are characterized by changing from a 'career' job with ten (or 20) or more years of tenure to a new job, or by a transition from part-time work or self-employment (Ruhm, 1990; Quinn, 1996). Quinn (1999) noted that in 1996 about 15% of all male workers aged 55–65 had left a career job for a bridge job. Although phased retirement usually immediately follows full-time work, it may also follow a period of full retirement. Re-entry into the labour market is usually into full-time work

(Hayward et al., 1994) but often for a short duration only, and to a non-career job, in which case it can be seen as partial retirement.

Subjective self-reports of labour market, status and retirement transitions

Self-reports have the advantage that they do not require researchers to make arbitrary distinctions, e.g. between working hours per week and working weeks per year. Self-reports also preclude erroneous classification of individuals as partially retired due to involuntary reductions in wages, job demotion or displacement (Ruhm, 1990; Chen and Scott, 2006), and avoid problems due to missing data on hours, weeks or wage levels required to determine the retirement status (Gustman and Steinmeier, 1984a, 1986). A common problem with stated gradual retirement is that respondents who report themselves partially retired often have observed earnings at or near previous levels or haven't held a job for two or more years before the time of the survey waves (Honig and Hanoch, 1985; Gustman and Steinmeier, 1986).

Quinn (1981) compared the subjective account of partial retirement to objective measures, such as labour force status and hours worked annually. His evidence suggests that the self-evaluation is consistent with the quantitative indicators (see also Gustman and Steinmeier, 1984b), but the opposite has also been argued by others (Murray, 1979; Ruhm, 1991). Some studies supplement subjective with objective measures. For example, Ruhm (1990) supplemented the self-classified status with earnings requirements for complete and partial retirement. Morris and Mallier (2003) checked subjective responses against 30 hours of work per week, the French benchmark for part-time.

3. Obstacles and Benefits

Obstacles

As explained by Scott (2004), the fact that phased retirement is less common than partial retirement suggests that workers face restrictions on phased retirement and often have to find a new job if they want to reduce their work effort. Many restrictions have been suggested in the literature, but there is not much empirical evidence on their quantitative importance.

Hurd (1996) summarized a number of reasons why employers are often reluctant to create opportunities for phased- or partial retirement. The first is *fixed employer costs*, which can be overcome only if the number of working hours is substantial, unless hourly wages are reduced. This may sometimes be possible, but not always (e.g. due to agreements with unions); even so, a greater number of working hours will make gradual retirement less attractive to the worker. Another type of restriction is *production technology and team production* and the difficulty of job scheduling in case of part-time jobs. The third is that reducing hours may make it more difficult to retain *job-specific skills* (cf., e.g., Morris and Mallier, 2003). Investment in on-the-job training is less attractive to the employer for older workers than for younger workers, since workers approaching retirement will not stay with the firm for a long enough period of time to make the investment pay off. This also may explain why employers are reluctant to hire older workers for jobs that require investing in on-the-job skills.

Gustman and Steinmeier (1984b) already noted that phased retirement would be discouraged if earnings in a year in which the individual works part-time would be counted in determining the pension- or social security benefit. A specific financial incentive that makes gradual retirement less attractive is an earnings test on old-age social security benefits that taxes away most of after-tax earnings in a part-time job (cf., e.g., Ghent and Clark, 2001; Zweimuller, 1993). For example, the US old-age social security benefits that people can claim between age 62 and the normal retirement age are reduced by 50% for every dollar of earnings above a given threshold, typically reducing the marginal net wage rate of working part-time by the same 50%.

The rules of defined-benefit pension plans are often particularly restrictive (they may, for example, prohibit workers to work for and

receive a pension from the same employer at the same time) (Chen and Scott, 2003; Forman and Scahill, 2003). Finally, *health insurance* may stand in the way of phased- or partial retirement or job changes of older workers, particularly if the worker has a pre-existing condition (Hurd, 1996).

Hutchens and Grace-Martin (2004) showed that restrictions on phased retirement perceived by white-collar workers in the US vary across industries, and that small organizations are more likely to offer phased retirement than larger organizations. Opportunities are largest in health, education, and social services, but are low in the (other parts of the) public administration sector. Expanding establishments offer phased retirement more often than other firms do, and unionisation reduces phased-retirement possibilities (perhaps due to lower downward wage flexibility or reluctance to reduce pension rights; see Smolkin, 1996).

Smolkin (1996) presented the results of a survey among Western European personnel executives, who were asked which problems they judge to be major obstacles in introducing alternative work patterns, including phased retirement. The results showed a close finish between several reasons, including 'hidden extra costs' (named by 32%), 'inadequate commitment by top management' (31%), 'production problems' (30%), 'union opposition' (30%), 'human problems and reactions' (28%), 'resistance by lower- and middle management' (28%) and 'inadequate briefing/training to show employees how to take advantage' (27%). Only 18% named 'lack of support from the workforce.'

Benefits

Although the literature emphasizes the benefits of partial- and phased retirement for employees and for the macro-economy as a whole, it also mentions advantages for employers. For employees, gradual retirement 'constitutes a way of avoiding the pension shock following an abrupt transition from full-time work to full pensioning' (Reday-Mulvey and Delsen, 1996). It reduces stress and increases job satisfaction (Reday-Mulvey, 2000). It gives the worker an opportunity to benefit from continued membership in a work team, while also providing the free time to develop activities outside work.

Similarly, for employers it provides a soft form of personnel reduction and a cost-effective opportunity to retain people with valuable corporate knowledge and precious skills. Employers can use partial- and phased

retirement as a means to reduce adjustment costs (Ghent and Clark, 2001), increase productivity and reduce absenteeism (by increasing job satisfaction, for instance) (Reday-Mulvey, 2000). It also reduces retirement and unemployment costs, by reducing the number of benefit recipients, by lengthening the contribution period and by increasing the contribution base (Reday-Mulvey and Delsen, 1996). Smolkin (1996) argued that phased retirement could maintain or even enhance employee morale because a properly promoted phased-retirement programme will be perceived as part of a natural evolution rather than a premature career termination.

The macroeconomic benefits focus on labour force participation and the labour supply of older workers. Wadensjö (2006) distinguished three goals in this context: decrease early exit, increase the formal retirement age (or the minimum age for getting an old-age pension), and facilitate work after the normal retirement age. Keeping older workers in the labour force is important not only for the size of the labour force, but also because older workers are generally well-qualified and productive, so that keeping them helps to keep productivity per worker at a high level (Mulvey, 2005). This is in stark contrast with age discrimination because older workers would be too expensive and less productive.

4. Empirical Analysis of Gradual Retirement in the US

This section first discusses the prevalence of gradual retirement, considering *prevalence*, *transition probabilities*, *sequences* and *durations*. We then review the literature on which background characteristics are correlated with gradual retirement, using the terminology introduced in Section 2.1.

The empirical literature in the US is based mainly upon a few surveys. The Retirement History Study (RHS; see, for example, Irelan, 1988) interviewed men and unmarried women aged 58–63 in 1969 in six biennial waves. The study provided only subjective information on whether the main job offered an opportunity for gradual retirement (Gustman and Steinmeier, 1984b). The Health and Retirement Study (HRS) is an ongoing study that began with an interview of a younger cohort aged 51–61 in 1992 and has by now seven biennial waves. Unlike the RHS, it includes also married women. Other cohorts were added later to the study. The RHS and HRS cover retirement, labour force history, demographics, health, income, etc. The National Longitudinal Survey of Older Men (NLS) surveyed men aged 45–59 initially in 1966, and then about every other year, until 1981. The topics included non-work- and work experiences, health and health insurance, leisure time, and labour market decisions (including job changes, retirement, and re-entry). A drawback of the biennial surveys is the limited information on job- and labour supply mobility between waves (Blau, 1994). The Current Population Survey (CPS) is a monthly survey of household members aged 15 and over, which has been conducted for more than fifty years. Interviews include questions on labour force characteristics, such as work experience, schedules, benefits and earnings, as well as demographic and institutional characteristics. The Retirement Confidence Survey (RCS) is an annual study that began in 1991 on individuals over the age of 25, and explores saving behaviour, retirement, and long-run financial security. The Panel Study of Income Dynamics (PSID) is a longitudinal study of a representative sample of US individuals and their families. In recent years, special supplemental datasets were constructed.

Incidence of gradual retirement

Of the employees in the HRS who had at least ten years of tenure, 14.5% held a bridge job in 1992. This increased to 29.3% in 1998 and then fell to

25.3% in 2002 (Quinn et al., 2006). During the first four waves of the HRS, the share of gradual retirees continuously rose with age, to 15% at age 64. Based on a measure combining self-reported status and change in hours worked from one wave to the next in the HRS sample, phased retirement decreased from 7.5 in 1994 to 4.1, 4.2 and 1.3 percent in 1996, 1998 and 2000, respectively. Over the same years, partial retirement rose from 3.7 to 5.5, 13.4 and 15.5% (Scott, 2004).

Expectations of and interest in gradual retirement, as stated by current employees, seem to exceed the actual gradual-retirement rates. In a web survey in 2005, 38% of employees expressed an interest in gradual retirement, and 40% of retirees said that they would have been interested in a hypothetical gradual-retirement plan if it were available at the place of their employment (Brown, 2005). A 1999 AARP survey suggested that about 80% of baby boomers aged 33–52 expect to work at least part-time during their retirement, mainly because they think staying at work is intrinsically interesting (35%) or because of the extra income (23%; Roper Starch Worldwide, 1999). In the 1998 RCS survey, 61% of employees expressed an interest in working after retirement, most of them to improve the quality of their lives and some for their financial situation (Clark and Quinn, 2002; Yakoboski et al., 1998).

Transitions

Table 1 summarizes Figure 1 in Scott (2004).⁴ It merges transitions between consecutive waves (1992–1994, 1994–1996, 1996–1998 and 1998–2000) in the HRS cohort born 1931–1941 of those who were salaried workers in 1992 (4,721 individuals; 14,163 transitions). The table distinguishes four labour market states (full-time work, partial retirement, phased retirement and full retirement) and combines data on number of hours worked and self-reported labour force status.⁵

The most common transition to a different labour market state is from full-time work to full-time retirement (2,686 transitions). Almost 38% of all full-time workers (7,097 observations pooling the four HRS waves) are fully retired in the next wave. Almost 49% (3,451 observations) are still

- 4 Other studies, such as Gustman and Steinmeier (2000), have shown similar transition rates, but usually for the earlier data only and with different labour market state definitions and samples.
- 5 Transitions into phased retirement from partial retirement or full retirement are not possible by construction.

working full-time. The others enter partial- or phased retirement. Of full-time workers who have stopped working full-time two years later, almost one of every ten stay with the same employer with reduced work effort (phased retirement), and almost two in ten change to another job (partial retirement). The other seven have gone into full-time retirement.

Workers typically do not stay long in partial- or phased retirement. Only about one in every four workers observed in gradual retirement was still in gradual retirement two years later. Surprisingly, many of them went back to full-time work, particularly if they had been in phased retirement (a 38% transition rate). This makes the number of transitions from phased retirement to full-time work larger than the number of transitions from phased retirement to full-time retirement. Scott (2004) provides no explanation for this unexpectedly large number of transitions back into full-time work. Similarly, we find many transitions from full-time retirement to gradual retirement or full-time work. Almost one in every three fully retired workers is no longer fully retired two years later. Of those who returned to work, more than a third worked fewer hours than before they retired, and are thus categorized as partially retired. Measurement error might explain part of the large number of transitions, but other research also suggests that this kind of 'reverse transitions' plays a substantial role: Maestas (2007) reports that slightly less than half of all workers follow a traditional retirement pattern without 'reverse retirement.'

All in all, the transition matrix in Table 1 illustrates the substantial mobility in the labour market for older workers in the US. In particular, retirement is not at all an absorbing state (in the sense that people who are once retired never return to work), and gradual retirement is usually not held for a long time, with many exits not only to full retirement but also back to full-time work. Whether this is typical for the US is not clear from the literature, since longitudinal studies similar to the HRS with comparable definitions of full and gradual retirement are, to our knowledge, not yet available for other countries, although SHARE, the Survey of Health, Aging and Retirement in Europe (see www.share-project.org) will fill up this gap when more waves become available.

Sequences

Sequences discern particular retirement pathways, summarizing behaviour over a larger part of the life cycle, characterized by durations in and

transitions between states. Three types of sequences can be distinguished. The first is an instantaneous exit from career employment into retirement, without gradual retirement. The second is a three-step sequence: career job employment – gradual retirement (partial or phased) – full retirement. The third category consists of all sequences that are non-monotonic, in the sense that they include transitions from gradual retirement to full-time work or from full retirement to gradual retirement (or both).

Gustman and Steinmeier (2000, Table 7) presented the sequences over the six years spanned by the first four waves of the HRS (1992–1998; cohort born 1931–1941).⁶ Four self-reported labour market states are distinguished: full-time work, full retirement, gradual retirement and 'not available.'⁷ These sequences are incomplete, in the sense that many respondents had not yet retired in 1998, explaining why 24.7% were continuously in full-time employment over the four waves. On the other hand, 8.0% were completely retired in all four waves. Partial retirement occurred at least once in about 22% of all sequences. In about 14% of all sequences, a 'reverse transition' took place: a transition from full retirement to partial retirement or from full- or partial retirement to full-time work. In 8.9% of all sequences, the transition pattern was monotonic without partial retirement, with one transition from full-time work to full-time retirement.

Durations

Duration analysis is the study of time spent in a state. Gustman and Steinmeier (1984a, 2000) based their computations on the exponential distribution with a constant hazard rate, and found estimates of the average duration in gradual retirement of 2.55 years in the HRS and 2.76 years in the older RHS data. In contrast, Sueyoshi (1989) obtained an estimate of the average duration of 5.5 years for the RHS, ascribing the difference with Gustman and Steinmeier's estimate to a different definition of partial retirement. For the OECD as a whole, Reday-Mulvey and

6 Blau (1994) presented an overview of sequences in the older RHS cohort, but these are difficult to compare with those of Gustman and Steinmeier since the HRS cohort is observed at a younger age.

7 This includes those who refused to answer the question on labour market status, those who answered 'don't know', proxy interviews for respondents who were not able to answer the questions, and respondents who dropped out of the survey.

Delsen (1996) reported that the period of gradual retirement typically lasts about five years.

Depending on when it starts and on its duration, gradual retirement may extend employment beyond the normal retirement age. In the RHS, direct retirees left full employment at age 64.8 (on average) (Sueyoshi, 1989, Table 2). Gradual retirees went into gradual retirement at age 64.7 (on average), and then fully withdrew from the labour market at age 69.8 (on average), much later than the normal retirement age. This suggests that many workers remain in the labour market for about five more years, while they would have left if there were no opportunities for gradual retirement. Scott (2004, Table 10) addressed the same issue in a different way. He found that (keeping age and other variables constant) phased retirees are less likely to leave the labour force than full-time workers, although the difference is significant only at the 11% level.

Correlates of Gradual Retirement

Several studies have analysed how preferences for phased- or partial retirement in the US vary with background variables. Gustman and Steinmeier (1984b), Honig and Hanoch (1985) and Sueyoshi (1989) used RHS data for this analysis. Here, we focus on three studies that have used the more recent data from the HRS.

Quinn (1996) studied transitions between the 1992 and 1994 waves of the HRS. He considered full-time workers in 1992, and estimated separate logit models for holding a bridge job in 1994 and not working in 1994 (where a bridge job is defined as part-time, or full-time but for less than ten years). He found that transitions to a bridge job are significantly more likely for workers aged 63–65 and for construction workers, and less likely for the self-employed, for those with the highest education level, for home-owners, and for those who have children living with them. He found no independent effect of health on the probability to get a bridge job. On the other hand, he did find a smaller probability to enter a bridge job for employees who would lose their health insurance and for employees with an employer-provided pension plan (irrespective of whether or not they were of eligible age). Both findings are in line with what one would expect, since losing health insurance or the opportunity to build up an occupational pension reduce the attractiveness of moving to another (bridge) job.

Ekerdt et al. (1996) analysed retirement plans in the HRS 1992, distinguishing five categories (stop working altogether, reduce effort, change job, never stop, or having no plans) and using multinomial logit analysis. They found that women are less likely to take phased- or partial retirement than men. The tendency to reduce hours rather than change jobs increases with age. Both reducing hours and changing jobs are more prevalent for the higher than for the lower education levels. The self-employed are more likely to reduce hours, in line with the notion that they face fewer restrictions doing so. Entitlement to a private pension increases the tendency to stop working altogether, at the cost of all other alternatives. Being married increases the odds to stop working altogether.

Kim and DeVaney (2005) explored the transition from full-time work in 1992 to full-time work, gradual retirement or complete retirement in 2000. They found that the self-employed have a higher probability of gradual retirement, perhaps because of more flexibility in determining their own working hours. Unlike other studies, they did find a health effect: those with more chronic conditions are more likely to reduce hours rather than staying at work full-time. The likelihood of gradual retirement compared to staying in full-time work also rises with age and education. They found that DB pension entitlement and investment assets increase the probability of full retirement, but do not change the odds of gradual retirement versus full-time work. Income variables seem to have no significant effect. Having financial debts reduces the likelihood of full retirement. Their conclusion: workers are heterogeneous and retirement decisions are sensitive to financial incentives (like pension plans), which creates scope for public policy.

The findings that DB pensions make partial retirement less likely and that the self-employed are more likely to take phased retirement are in line with the earlier studies based upon the RHS. These findings illustrate the importance of institutional restrictions on combining a DB-pension receipt with continued work, and employer-imposed restrictions on working part-time.

5. Gradual Retirement in Europe

Several studies have provided overviews of partial-retirement arrangements in Europe. Delsen (1996) is an early example. Describing policies in Denmark, Finland and Sweden, he concluded that only the Swedish programme could be called successful, in the sense of reducing the number of early withdrawals from the labour force. The Swedish partial-pension scheme was introduced in 1976, with a generous partial pension in combination with work for workers of 60 years and older. Several substantial changes in generosity were introduced in later years. Both the government and the employers supported the Swedish scheme, which was seen as a means of reducing labour costs during an economic recession and improving productivity. The crucial condition to make it a success was an adequate supply of part-time jobs. This condition was met, since Swedish firms were already familiar with organizing part-time employment and willing to share the responsibility of society to guarantee employment to older workers. An important attraction for employees is that the Swedish scheme counts the partial pension as pensionable income.

Although the Danish scheme was modelled after the Swedish model, it was much less successful. Delsen (1996) argued that this was due mainly to the unfavourable labour market at the time of its introduction – a severe recession, with pressure on older workers to take full- rather than partial early retirement. A similar argument explains the lack of success in problem of aging, raising the effective retirement age and easing future fiscal problems. Finland. Other reasons why the Finnish system was not successful were that the Finnish system is more complicated and part-time jobs were hard to find. Delsen also described some tendencies towards partial- retirement opportunities in the Netherlands, which he identified as a promising way to cope with the problem of aging, raising the effective retirement age and easing future fiscal problems.

Wadensjö (2006) studied the Swedish partial-pension scheme in detail. He exploited changes in the system to analyse its consequences for participation and labour supply. Although he did not estimate any econometric models but merely looked at the raw data, he was able to conclude that the positive effect of increased participation clearly outweighs the negative effect of full-time workers reducing their hours to part-time, so that the total effect of a more attractive partial-pension

programme on labour supply is positive.

Reday-Mulvey (2000) found that most EU countries have introduced schemes that make it possible to combine work and pension receipt. She describes programmes in France, Germany and Finland. Particularly in France and Germany, it seems that the programmes were successful as a substitute for very generous schemes of early complete retirement. She emphasizes the key role of training older workers, which is commonly done in Sweden and in the larger companies in France.

Morris and Mallier (2003) analysed the importance of part-time work and self-employment among older age groups for the EU-15. They found that in many countries, part-time work among men is much more prevalent at ages 60-64 and 65-69 than at earlier ages, although there is huge variation across countries. In particular, part-time work among men is much more common in the Northern parts of Europe than in the Southern European countries, where self-employment is more prevalent.

The most recent overview of partial-pension schemes that make it possible to combine part-time work with receiving a pension is Belloni et al. (2006), who summarized current arrangements in Sweden, Denmark, Finland, Spain, France and Germany. The Swedish system was abolished in 2001, but a new scheme was introduced in 2003. The current system entitles workers older than 61 to reduce working hours by as much as 50%, and to draw 100%, 75%, 50% or 25% of the full pension. The Danish system applies to workers between the ages of 60 and 65 satisfying some conditions concerning their past participation (and, for the self-employed, profits). They can reduce their working hours and receive a partial pension proportional to the reduction in working time. The Finnish system was introduced in 1987. The current rules allow workers between the ages of 58 and 67 to reduce their working hours to 16-28 hours per week and replace 50% of foregone earnings by a partial pension. Gradual-retirement arrangements in Spain were already introduced in the 1960s. The current system allows workers aged 61 and older to reduce working time to 25%-75% of full-time employment with a corresponding partial pension (75%-25% of the full pension). In France, partial pensions were introduced in 1988. The system allows workers older than 60 years who contributed enough quarters to the social security system to reduce working hours by at least 20% of the full working time of their firm, in return for a partial pension that is a decreasing step function of the new working hours (30% of a full pension if working

hours are between 80 and 60% of full-time employment; 50% if working hours are between 60 and 40% of full-time employment, etc.). The German system, introduced in 1992, allows workers aged 60 and over to receive 33%, 50% or 67% of a full pension with a corresponding cut in working hours. These are the only countries that have an explicit arrangement for combining part-time work with a part-time pension. The situation in the Netherlands is more complicated, due to the variety of occupational pension schemes with their own rules. Belloni et al. (2006, p.12) stated, 'some of these schemes allow workers at the end of their careers to reduce their working hours and receive a partial pension.'⁸

In their evaluation of the reforms, Belloni et al. (2006) focused on the trade-off between negative- and positive effects on total labour supply. The only countries for which they found empirical evidence are Sweden and the Netherlands. They emphasized the positive aggregate effect in Sweden found by Wadensjö (2006). For the Netherlands, they referred to the stated-preference study by van Soest et al. (2006), who also found a positive effect on total hours worked. The latter study will be the focus of the next section.

Part-time Work in Europe

Whether employees in European countries prefer to reduce their work effort as they age can be inferred by comparing part-time employment in the young- and old-age cohort. Part-time workers are not always in gradual retirement, of course, but comparing part-time work among younger and older age groups will still give an impression of how many older workers reduce their working hours towards the end of their career. The data used here were drawn from the European Community Household Panel, a panel dataset following individuals 16 years and over from 1994 to 2001.⁹

Table 2 presents the share of part-time workers among male and female workers (working either part-time or full-time) for two age categories, 35-50 and 51-65, and for the years 1994, 1998 and 2001. Part-time status is determined by the subjective question 'Did you work full-time or part-time?'. Barring a few exceptions, in all European economies and in all three years, regardless of gender, part-time employment

8 On p. 22, Belloni et al. (2006) have replaced 'some' by 'many.'

9 See Peracchi (2002) for more information on ECHP.

seems to be more prevalent in the older age category. This suggests that workers reduce their work effort later in life. In many countries, the proportions of part-time workers decline over time, particularly for males. Thus, there is no evidence that gradual retirement becomes increasingly prevalent over this time period. There is huge variation in the prevalence of part-time work across countries, for both sexes and in both age groups. In the Netherlands, part-time work among older men and among women in both age groups is much higher than in most other countries.

Table 3 is based on defining part-time as working less than 35 hours per week – the threshold of the US Bureau of Labor Statistics. Again, there is no clear time trend. In comparison to Table 2, the preference for reduced labour in the late life is even more pronounced, particularly among male workers. Table 3 also contains the U.S., with data drawn from the Panel Study of Income Dynamics (PSID). (The PSID has no self-assessed part-time status, which it cannot be used for Table 2). It shows part-time work is quite common among elderly males in the US compared to Europe. Only in France in 2001, part-time work among older males is higher than in the US, but this may well be related to shortening the normal (full-time) working week in France, since it is not confirmed by Table 2.

In the previous section, we discussed the remarkably large number of reverse retirement transitions in the US, from gradual retirement back to full-time work, or from full retirement back to either full-time or part-time work. Although we cannot use Scott's labour force status definitions for Europe to compare this type of mobility in Europe and the US, comparing ECHP and PSID as in Table 3 gives the possibility for a comparison of mobility based upon working hours only. Average two-year transition rates for 1994 – 2000 between full-time work, part-time work and no work, the same classification as in Table 3, are presented in Table A1 in the appendix. The table reveals many differences across countries. The Netherlands stands out as the country where part-time work is most persistent, among both the younger and the older age group. In general, for the age group 50–64, reverse transition rates for the US are among the largest, although not completely out of line with the European transition rates. Thus it seems that reverse transitions also deserve more attention in many European countries. For example, it would be worthwhile to investigate the extent to which such transitions are anticipated, or are a reaction to an unexpectedly low replacement rate (cf. Maestas, 2007).

6. Gradual Retirement in the Netherlands

This section analyses gradual-retirement arrangements in the Netherlands, addressing three questions: first, what does it take to make gradual retirement attractive to Dutch workers, and do gradual-retirement opportunities increase or decrease total labour supply? Are there any legal issues that make gradual retirement less attractive? Finally, are there demand-side constraints on gradual retirement, and if so, what is their nature and how can they be overcome?

Preferences for gradual retirement and labour supply

Van Soest et al. (2006) used a stated-preference technique to estimate preferences of Dutch workers and former workers. They presented hypothetical retirement scenarios to a sample of workers and former workers aged 25 and over, and asked them to rate each of these scenarios on a scale from one to ten. An example of such a scenario is as follows:

until 65	from 65 until 70	70 and over
Working 38 hrs per week	Working 23 hrs per week, after-tax earnings are 100% of earnings at age 65.	Not working, pension equal to 90% of after-tax earnings at age 65.

This scenario has gradual retirement from age 65 until age 70. The introductory text to the scenarios explained that the respondent is asked to assume that the employer fully cooperates, so that the scenario must be seen as phased- rather than partial retirement. The replacement rates during phased retirement and after full retirement are randomized. Respondents reacted to eight scenarios, some with and some without gradual retirement, and with varying replacement rates and ages of gradual- and full retirement.

The differences between the average ratings give a first impression of people's preferences. For example, the scenario presented above has an average rating of 4.0, whereas the benchmark scenario- full-time work until age 65 and complete retirement thereafter with a 70% replacement rate- gives a much better average rating of 4.8. This suggests that people dislike working after age 65, even if it is part-time, and the compensation in the form of a higher income after age 65 is, on average, not enough to make them choose the scenario of late phased retirement.

Higher average ratings are given for scenarios of gradual retirement centring at age 65 (gradual retirement at age 63; full retirement at age 67).

Van Soest et al. (2006) used these ratings to estimate an intertemporal model explaining retirement choices. Table 4 reproduces some simulation results based upon their model estimates, giving the average probabilities that a number of hypothetical scenarios would be rated higher than the benchmark scenario (no gradual retirement; full retirement at age 65 with replacement rate 70%). The table shows that hardly anyone would be interested in working full-time until age 70, even if the replacement rate were 100%. Early retirement, on the other hand, is much more attractive, particularly for a high (and actuarially unfair) replacement rate of 60%. Of course these preferences may be affected by the fact that early retirement has been very common, making it the social norm, whereas late retirement is quite rare. Phased retirement can be made quite attractive with high replacement rates. In particular, the choice seems to be more sensitive for the replacement rate after full retirement than for the replacement rate during gradual retirement.

Van Soest et al. (2006) then used their model to simulate choices between early retirement, late retirement, and a stylized scenario involving phased retirement, with hours equal to 60% of pre-retirement working hours during the phased-retirement period. They used self-reported earliest and latest retirement ages and (after-tax) replacement rates (depending on the age of retirement), and assumed that income during partial retirement is a weighted average of pre- and post retirement income. They found that 67% would prefer early retirement, and 33% would prefer late retirement if no partial-retirement option were available. If partial retirement were added as a third option, then their simulations suggested that 43% would have chosen partial retirement, 38% would still have chosen early retirement, and 19% would have chosen late retirement. In this simulation scenario, total labour supply would increase substantially (by more than 50% in between the early- and late retirement age). While this outcome depends on many factors (such as the generosity of the hypothetical gradual-retirement scheme), it also illustrates the potential of gradual retirement as a tool to increase the labour supply of older people.

Bruinshoofd and Grob (2005) also found that the Dutch are willing to work beyond the normal retirement age (65 years) if they can do so part-time. They analyse a survey question on whether people are willing to

work after age 65, without losing their old-age state pension (AOW). While only 2% of the respondents answer 'yes, full-time,' 32% answer 'yes, part-time.' The others answer 'no' (57%) or 'don't know' (9%). This question does not specify the financial compensation for working longer, but the other results in this study imply that retirement decisions can be strongly influenced by financial incentives.

Legal issues

Ceelen (2007) considers legal issues that restrict access to gradual retirement. The general conclusion of his analysis: although no major legal obstacles seem to exist, some fine-tuning is still required, particularly concerning taxation. Specific issues arise if gradual retirement is combined with another tax-favoured arrangement, the so-called life-course scheme. Ceelen recommended more transparency of the tax treatment in such cases. Other issues arise with working after age 65. For example, not all pension funds allow for accumulating pension entitlements after age 65. Moreover, the obligation to pay wages for two years if someone gets ill may be an impediment for employers. Thus there is some scope for specific policies for workers aged 65 and older.

Employer attitudes

In March 2007, we fielded a survey focusing on opportunities provided by and restrictions imposed on phased retirement. Employees older than 25 years of age in the CentERpanel were asked how they perceived the possibilities for phased retirement at their current employer. The CentERpanel is a representative Internet panel of the Dutch adult population managed by CentERdata, affiliated with Tilburg University. To avoid biases due to selection on Internet access, selected respondents without Internet access can participate using specific tools provided by CentERdata, like a set-top box to connect their television set to the Internet. Sample weights are used to correct for unit non-response, based on gender, age, education, income, homeownership and region.

For the specific module on phased retirement, we selected employees only. The questions were fielded in March 2007. Selecting employees aged 25 and over, we gathered 815 observations. Table 5 presents some definitions and summary statistics of a number of background variables. Most of the individuals in the sample are males (due to selection on employees), about 77% have a partner, and 53% have one or more children.

We distinguished three age groups (young (25–44), middle-aged (45–54) and old (55+)), and three education levels (low, intermediate and higher). We also considered three categories of after-tax income (low (below 1,000€ per month), medium (1,000–2,000 € per month) and high (more than 2,000€ per month)). Five regions were distinguished, with the three largest Dutch cities as the benchmark, and the other four regions the western, southern, eastern and northern provinces. Finally, we defined three sectors of economic activity of the organization where the respondent is employed, which seems to be an important factor for the current analysis of perceived employer behaviour. We used the following categories: commercial services,¹⁰ public services, and a benchmark category of everything else, including ‘non-services’ (mainly manufacturing industry and construction, also a few employees in agriculture, etc.).

The first question in the model on phased retirement read as follows: *‘Does your employer offer you the possibility of part-time retirement? (Part-time retirement means that you retire part of your working week but keep working the other part— for example, from age 62 until age 65.)’*

Almost half of the respondents (47.3%) of the sample answered affirmatively. This is a much higher percentage than that in van Soest et al. (2006), who used data collected for 2004, also including former employees who are now retired. They found that 34.2% of the sample responded affirmatively. The difference cannot be explained solely by the lower rate among retirees (who were asked about their last job as an employee). It suggests that perceived access to phased retirement has increased, which corresponds to the fact that large pension funds have created transparent opportunities for partial pensions.

The first column of Table 6 shows how the answers vary across subsamples. Workers in the public sector much more often think that they have access to phased retirement than do workers in the private sector. Access is also relatively likely for the highly educated and for those in the age group 45–54.

Table 7 shows what remains of these differences when other factors are kept constant. The table presents the estimates of a logit model

¹⁰ We also tried splitting this into two subcategories, distinguishing financial and business services, on the one hand, and trade, transport etc., on the other, but found no significant differences between these two sub-sectors.

explaining the variable that can have only two values: it is coded as one if the respondent thinks he or she has access to phased retirement, and zero if the respondent thinks he or she has no access. Most of the differences come from differences between sectors of industry. A positive coefficient on an explanatory variable thus means that an increase in this variable makes access to phased retirement more likely. Phased-retirement opportunities are significantly more common in the public sector than in manufacturing or the commercial services sector. The difference in the probability of access to phased retirement for an average worker in the public sector and the manufacturing sector is about 18%–points, keeping other background variables constant. Once the sector is controlled for, most background variables are not significant, although the income variables are jointly significant at the 10% level, suggesting that access to phased retirement is more common among the higher income occupations.¹¹

Employees who answered the question on access to phased retirement affirmatively then got a follow-up question on the earliest age at which they thought they could reduce their hours of work. The histogram of the answers (393 observations, excluding some outliers) is presented in Figure 1. The distribution is concentrated at ages 60, 61 and 62, with another, smaller, concentration of respondents giving age 55. The overall mean is 60.3 years of age.

The second column of Table 5 shows the means for some sub-samples. The largest differences are found across age groups— young respondents typically think they can go into phased retirement at an earlier age than older respondents do.

Table 7 presents the results of a linear regression explaining the age at which respondents with access to phased retirement think they can go into phased retirement. No attempt is made to correct for selective access; the regression is conditional on (being an employee and) perceiving access to phased retirement. Several variables are significant. Respondents with one or more children can take phased retirement at a later age than respondents without children. This might reflect a selection effect— respondents with children might have chosen different types of jobs. The older age groups perceive older ages at which they can take

11 Other job characteristics that might play a role are occupation (level) and firm size, but these are not available in the current data set.

phased retirement. The highest age of phased retirement is reported in the three big cities; phased-retirement ages are significantly lower in the rest of the western provinces and in the southern part of the country. And, somewhat surprising, no differences across sectors were found. In general, it seems difficult to interpret these results, perhaps due to the selective nature of access to phased retirement or because variables proxy something else.

The respondents who reported not to have access to phased retirement were asked follow-up questions about why they think their employer does not offer such opportunities. Six reasons were offered, and for each reason the respondent was asked to assess its importance on a five-point scale (see the notes to Table 5 for the reasons and the exact scale). Table 5 shows the mean assessments by sub-sample (with the answers coded as 1: 'does not apply' to 5: 'the decisive argument'); Table 8 gives the complete frequency distribution.

Judging from the final row of Table 5 and the frequency distribution in Table 8, reasons 4 and 1 are the most important ones for the sample as a whole. Employers more often want to keep their workers full-time than to let them retire completely as early as possible. Although this seems to emphasize the notion that older workers are seen as valuable, experienced workers with high productivity, some words of caution are necessary: first, this is the selective sub-sample of respondents who say they do not have access to phased retirement, and second, this reflects the views of the responding workers on their employer's considerations, and not directly the view of the employers.

Table 8 also reveals substantial differences across demographic groups and sectors, but, somewhat surprisingly, these often seem to go in the same direction for all or many of the six reasons. For example, each reason is considered more important for men than by women. Similarly, whichever reason is taken, workers in the manufacturing industry think it is more important than workers in the public sector.

Table 9 presents ordered logit estimates where each of the six reasons is treated separately. The difference between men and women is positive and significant in several cases, but is outstandingly so for the first reason: part-time work is not attractive for the type of work done by the responding employee. This seems in accordance with the fact that women often choose occupations where part-time work is more common and generally accepted; controlling for occupation might shed more light

on this. Men are also much more often in jobs where (at least in the worker's perception) employers want to keep them full-time until normal retirement age.

The education patterns show surprisingly that workers with an intermediate level of education differ quite a bit in their answers, while workers with high- and low levels of education are more similar. Workers with intermediate education are often skilled workers with vocational training that have jobs in which part-time work is not commonly accepted (reason 'Ra' in Table 5). They also relatively often give reason 'Rc' (restrictions in the rules imposed by their pension funds). Perhaps this is because they often work for (smaller) pension funds, where rules for phased retirement are either not as generous or not as transparent as they are for larger pension funds.

For high-income workers, the argument that employers want to keep their workers full-time is relatively important (reason 'Rd'), but they also attach significantly more weight to reasons 'Ra' and 'Rb', which both refer to the nature of their work.

Differences across regions largely disappear when other variables are controlled for. The only significant difference that remains is that workers in the northern provinces more often have the impression that their employer wants to consign them to early retirement as soon as possible. Differences across the three sectors remain significant, in spite of all the other controls. Several reasons are much less important in the public sector than in the private sector, particularly the manufacturing industry. The most important reason is that employers simply do not offer part-time jobs (reason 'Rb') – this is much more common in the public sector than elsewhere.

7. Conclusions

In both Europe and the US, gradual retirement is generally seen as an opportunity to keep older workers longer in the labour market. The few studies that make the quantitative trade-off of the negative- and positive labour supply effects unambiguously conclude that the positive effects dominate: creating attractive opportunities for gradual retirement can lead to an increase in total labour supply. This makes it attractive from a public policy point of view. The evidence of the effect of gradual retirement on productivity is scarce, but points in the same direction: the older workers who are kept in the labour force are typically well motivated, highly skilled and productive. Gradual retirement can become particularly attractive in combination with abolishing (very) early retirement. For workers, the main advantage is a smooth transition to the next stage of life, and an escape from the choice between two inferior options: continuing in a stressful career job with the risk of work disability, or full retirement with its financial and social consequences. For employers, there seem to be advantages and disadvantages, and not all employers are as yet convinced that gradual retirement should be stimulated, although employers seem to realize increasingly that older workers offer valuable experience, can guarantee continuity, and can contribute to the corporate spirit. These advantages may outweigh such potential disadvantages as fixed costs of work and problems in organizing part-time job schedules.

Still, take-up of gradual retirement is rather low in most Western countries. Other than real or perceived disadvantages on the employers' side, institutional restrictions imposed by the government or providers of pension plans also seem to play a role. Macroeconomic circumstances also matter— gradual retirement is less accepted in times of recession— and policies that jointly consider several exit routes (early retirement, disability, unemployment) are probably preferable. There is room for less stringent rules on combining work with partial-pension receipt, and for more transparency of these rules. In addition, the government can stimulate gradual retirement through tax measures that make gradual retirement more attractive for workers and less expensive for employers. Other issues are, for example, access to employer-provided health insurance, and the possibility to keep building up full pension rights.

While the descriptive evidence of the prevalence, nature and duration of gradual retirement is abundant for the US, gradual retirement is much less studied in Europe. Part-time work is generally more common among older than among younger workers, but there is substantial variation across countries that remains to be analysed and explained. To analyse, for example, the consequences of policy measures that increase financial incentives, there seems to be scope for more quantitative studies based upon the type of structural models that have become prominent in the literature of retirement decisions. See, for example, Stock and Wise (1990), Gustman and Steinmeier (1986), Blau (1994), or Rust and Phelan (1997). These models could be extended to incorporate gradual retirement. The quantitative impact of policy measures thus remains largely to be determined. Whether they give the same results in different countries remains to be seen – there are many differences in the institutional settings (e.g. DC and DB pensions, health insurance, housing markets, borrowing constraints, etc.) that may lead to differences.

Data on stated preferences can be a useful tool to identify workers' preferences and disentangle them from limitations imposed by employers and institutions. In addition, richer data on actual opportunities and choices are becoming available, for example in the form of register data from the Dutch pension funds. Exploiting, for example, the fact that restrictions on gradual retirement were relaxed at different points in time, will make it possible to analyze labour supply effects without referring to stated preferences data, and to compare stated preference data with revealed preference data based outcomes.

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FIGURES AND TABLES

Figure 1. Distribution of age at which workers expect to be able to take phased retirement; workers who perceive access to phased retirement only (CentERpanel March 2007; 392 observations)

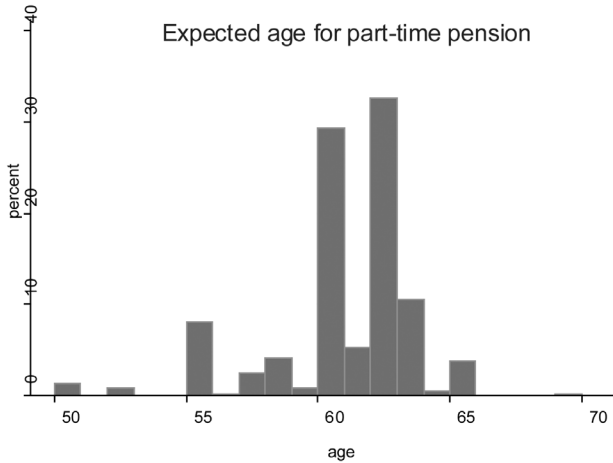


Table 1. Transitions in the HRS, 1994–2000

From:	To:	Working full-time	Phased retirement	Partial retirement	Full retirement	Total
Working full-time		48.63	4.48	9.05	37.85	100
Phased retirement		38.00	18.80	7.73	35.47	100
Partial retirement		28.40	-	24.46	47.14	100
Full retirement		22.27	-	12.59	65.14	100

Source: Scott (2004, Figure 3). Sample of salaried workers in 1992 (4,721 observations).

Number of transitions in % of number in origin state. For example, on average over the four two year periods, 48.63% of those working full-time at a given point in time are still working full-time two years later.

Table 2. Part-time work in % of total employment						
	1994		1998		2001	
	35-50	51-65	35-50	51-65	35-50	51-65
	Men		Men		Men	
Germany	2,1%	7,3%	2,3%	8,6%	2,8%	2,8%
Denmark	2,5%	6,8%	2,4%	8,0%	2,1%	4,8%
Netherlands	4,6%	13,4%	5,3%	11,6%	5,7%	10,4%
Belgium	2,3%	6,9%	1,7%	5,2%	0,8%	5,1%
France	5,8%	9,4%	1,3%	3,9%	1,3%	3,6%
U.K.	5,1%	8,9%	2,5%	6,4%	2,5%	4,8%
Ireland	5,3%	8,8%	5,7%	12,0%	5,3%	11,9%
Italy	5,9%	10,4%	2,1%	5,7%	1,6%	4,1%
Greece	6,6%	9,0%	2,1%	2,6%	1,2%	2,8%
Spain	3,7%	6,5%	1,9%	3,4%	2,2%	2,9%
Portugal	3,0%	9,0%	1,3%	6,8%	1,1%	5,3%
Austria	<i>0,7%</i>	<i>3,5%</i>	1,8%	4,2%	1,9%	5,8%
Finland	3,3%	8,5%	3,2%	9,0%	3,1%	7,5%
Sweden	2,3%	6,4%	1,7%	6,2%	1,5%	4,6%
	Women		Women		Women	
Germany	37,9%	39,7%	32,5%	37,1%	30,0%	33,4%
Denmark	19,4%	37,3%	16,9%	28,6%	14,7%	28,6%
Netherlands	63,8%	68,3%	63,2%	64,0%	61,6%	60,4%
Belgium	28,6%	32,3%	30,8%	29,4%	32,6%	35,1%
France	23,3%	27,8%	17,0%	19,7%	14,3%	20,3%
U.K.	43,7%	45,3%	15,8%	23,7%	14,0%	26,0%
Ireland	46,4%	42,6%	44,6%	55,5%	40,3%	46,3%
Italy	26,2%	29,9%	12,4%	11,1%	13,3%	10,6%
Greece	17,0%	21,6%	9,6%	18,9%	7,6%	17,4%
Spain	21,5%	23,4%	16,2%	24,1%	19,7%	22,4%
Portugal	12,5%	25,6%	11,7%	24,8%	10,8%	25,2%
Austria	27,6%	25,9%	29,3%	31,5%	30,6%	27,5%
Finland	8,6%	12,8%	9,1%	15,7%	8,0%	17,3%
Sweden	15,9%	22,0%	16,8%	20,2%	13,0%	19,4%
Notes: Based upon self-assessed labour market status.						
For Germany, Sweden and the U.K., the presented numbers are from national surveys converted into the ECHP format.						
The numbers in italics refer to the closest survey year that data is available: for Austria it is 1995, for Finland it is 1996, and for Sweden it is 1997.						
The numbers in bold indicate that data are missing for various ages within the age category.						
The sample is weighted with cross-sectional weights for interviewed persons.						

Table 3. Percentage of workers working less than 35 hours per week						
	1994		1998		2001	
	35-50	51-65	35-50	51-65	35-50	51-65
	Men		Men		Men	
Germany	4,0%	8,8%	6,6%	15,9%	5,2%	11,1%
Denmark	3,7%	8,7%	3,7%	10,5%	4,1%	6,7%
Netherlands	6,7%	16,4%	9,1%	18,5%	11,2%	17,0%
Belgium	5,1%	9,5%	3,9%	12,9%	4,8%	10,1%
France	8,0%	9,7%	8,2%	9,7%	33,0%	28,5%
U.K.	5,7%	14,0%	6,6%	14,0%	6,4%	15,3%
Ireland	9,7%	12,0%	12,0%	20,5%	12,8%	18,0%
Italy	7,6%	9,8%	6,3%	11,2%	5,4%	9,9%
Greece	11,4%	13,7%	11,1%	17,4%	9,5%	14,2%
Spain	9,1%	10,0%	8,7%	9,0%	8,4%	9,1%
Portugal	10,7%	12,3%	9,3%	12,3%	9,9%	13,9%
Austria	2,4%	3,4%	3,5%	3,8%	3,8%	7,7%
Finland	8,0%	8,7%	8,6%	12,2%	5,2%	12,3%
Sweden	3,7%	<i>10,1%</i>	3,8%	8,9%	4,6%	8,0%
U.S.	13,8%	37,5%	12,5%	27,3%	<i>10,2%</i>	<i>25,1%</i>
	Women		Women		Women	
Germany	47,3%	59,5%	43,8%	55,0%	43,7%	45,7%
Denmark	31,7%	54,3%	35,3%	45,7%	32,1%	45,9%
Netherlands	61,2%	69,9%	63,7%	74,6%	65,1%	76,3%
Belgium	32,9%	33,5%	34,8%	37,4%	38,8%	41,4%
France	32,5%	31,8%	37,0%	35,0%	55,1%	47,3%
U.K.	53,2%	56,2%	49,9%	60,7%	46,2%	65,9%
Ireland	51,2%	40,3%	63,8%	62,1%	67,3%	51,0%
Italy	28,3%	33,4%	32,5%	38,1%	35,6%	36,4%
Greece	29,5%	40,6%	29,4%	42,5%	27,9%	42,5%
Spain	35,4%	31,4%	30,7%	37,8%	40,4%	37,7%
Portugal	30,1%	37,6%	38,3%	25,7%	42,0%	47,3%
Austria	40,9%	29,6%	44,7%	38,2%	46,2%	40,0%
Finland	<i>14,9%</i>	<i>14,3%</i>	17,7%	21,1%	19,5%	22,9%
Sweden	32,0%	<i>35,7%</i>	35,3%	36,6%	31,8%	33,6%
U.S.	36,5%	58,7%	33,0%	47,8%	<i>30,9%</i>	<i>44,7%</i>
For Germany, Sweden and the U.K the presented numbers are from national surveys converted into the ECHP format.						
The ECHP sample is weighted with cross-sectional weights for interviewed persons.						
The US numbers are from the PSID, the '1994-2001 Hours of Work and Wage Files' suplement. The numbers are not weighted.						
The numbers in italic refer to the closest survey year that data is available: for Austria it is 1995, for Finland 1996, for Sweden 1997, and for the U.S. 2000.						
Numbers in bold indicate that data are missing for various ages within the age category.						

Table 4. Simulated Choice Probabilities: Alternatives to the Benchmark

Scenario	Partial retirement		Full retirement		Prob.
	Age %	Income	Age %	Income	
1: Postponed retirement	--	--	70	90	0.04
2: Postponed retirement	--	--	70	100	0.13
3: Early retirement	--	--	62	60	68.21
4: Early retirement	--	--	62	50	11.32
5: Partial retirement	63	85	67	70	66.34
6: Partial retirement	63	100	67	70	77.79
7: Partial retirement	63	85	67	80	91.30
8: Late partial retirement	65	90	70	90	20.12
9: Late partial retirement	65	100	70	100	47.16
10: Early partial retirem.	60	75	65	60	69.17

Source: Van Soest et al. (2006, Table 6)

Note: 'Prob.' is the probability that the given scenario is preferred to the benchmark, which is full retirement at age 65 for a 70% net pension. Simulated probabilities assume no optimization error.

Table 5. Phased retirement questions: means by sub-sample

	Access	Age	Ra	Rb	Rc	Rd	Re	Rf
men	0,45	60,64	2,80	2,49	2,31	2,99	2,00	2,54
women	0,50	59,91	1,98	1,88	1,93	1,98	1,63	1,96
children 0	0,44	59,83	2,48	2,23	2,07	2,65	1,81	2,31
children 1+	0,50	60,68	2,45	2,25	2,23	2,51	1,88	2,29
partner	0,48	60,48	2,53	2,23	2,17	2,56	1,86	2,27
age 34-	0,47	59,24	2,50	2,49	2,13	2,59	1,88	2,44
age 35-44	0,44	60,43	2,36	2,08	2,21	2,50	1,87	2,15
age 45-54	0,54	60,90	2,65	2,39	2,11	2,59	1,79	2,39
age 55+	0,45	60,91	2,34	1,88	2,12	2,73	1,82	2,26
education low	0,44	60,40	2,25	2,01	1,88	2,61	1,74	2,25
education mid	0,44	60,38	2,66	2,55	2,26	2,63	1,98	2,32
education high	0,56	60,16	2,30	1,88	2,23	2,44	1,71	2,32
income low	0,42	60,32	2,07	1,71	1,84	1,76	1,82	1,83
income mid	0,49	60,21	2,41	2,36	2,16	2,67	1,82	2,44
income high	0,48	60,64	3,05	2,36	2,45	3,09	1,97	2,29
region cities	0,52	60,77	2,49	2,30	1,86	2,49	1,56	2,35
region west	0,43	59,99	2,35	2,06	2,17	2,50	1,74	2,19
region north	0,45	60,43	2,96	2,55	2,16	2,72	2,29	2,44
region east	0,47	60,77	2,37	2,11	2,11	2,41	1,84	2,26
region south	0,51	59,94	2,39	2,41	2,33	2,78	1,91	2,39
sector manuf. etc.	0,43	60,48	2,78	2,82	2,28	3,16	2,14	2,69
sector comm. Services	0,34	60,43	2,58	2,26	2,21	2,65	1,83	2,30
sector publ. Services	0,62	60,19	2,01	1,73	1,95	1,99	1,64	1,99
all	0,47	60,31	2,46	2,24	2,15	2,58	1,85	2,30

Notes: Employees aged 25–65, CentERpanel, March 2007

Access: Dummy for perceived access to phased retirement

Age: Age when phased retirement is possible (respondents with access)

Ra – Rf: Reasons for non-access (respondents without access);

1: does not apply, ..., 5: this is the decisive reason

Ra: Part-time work is not attractive for the type of work I do

Rb: My employer does not offer any part-time jobs

Rc: My pension fund does not allow for a partial pension

Rd: My employer prefers that people like me keep working full-time until normal retirement age

Re: My employer prefers that people like me retire completely as early as possible

Rf: My employer thinks the cost of part-time workers relative to full-time workers is too high

Table 6. Logit estimates for access to phased retirement

	coef	z
men	-0,13	-0,60
children 1+	0,20	1,00
partner	0,14	0,63
age 35-44	-0,18	-0,73
age 45-54	0,16	0,68
age 55+	-0,07	-0,25
education mid	0,02	0,07
education high	0,19	0,77
income mid	0,37	1,30
income high	0,48	1,33
region west	-0,35	-1,27
region noorth	-0,12	-0,36
region east	-0,08	-0,28
region south	0,00	0,01
sector comm. service	-0,28	-1,20
sector publ. service	0,73	3,10
intercept	-0,68	-1,44

Notes: Employees ages 25–65, CentER panel, 815 observations

Dependent variable: dummy for perceived access to phased retirement with current employer

Table 7. OLS estimates age of phased retirement

	coef	t-val.
men	0,47	1,33
children 1+	0,90	2,26
partner	0,40	0,81
age 35-44	0,93	1,85
age 45-54	1,72	3,41
age 55+	1,99	3,49
education mid	0,50	0,96
education high	0,59	1,01
income mid	-0,02	-0,03
income high	-0,41	-0,61
region west	-1,01	-2,32
region north	-0,54	-0,87
region east	-0,38	-0,91
region south	-1,18	-2,40
sector comm. Services	0,19	0,39
sector publ. Services	-0,12	-0,25
intercept	58,57	57,68

Notes: Employees ages 25–65, CentER panel, respondents with access to phased retirement at current employer; 393 observations

Dependent variable: perceived age at which phased retirement can start

Table 8. Reasons for non-access to phased retirement – Frequency distributions

	1	2	3	4	5
Ra	38.91	15.15	15.31	21.88	8.75
Rb	46.68	13.75	17.63	12.65	9.28
Rc	38.48	24.1	24.78	7.46	5.17
Rd	31.9	17.31	21.53	18.69	10.57
Re	54.28	18.55	17.11	6.71	3.34
Rf	35.86	20.48	25.83	12.59	5.23

Notes: Employees ages 25–65, CentER panel, respondents without access to phased retirement at current employer; 423 observations.

Ra–Rf: importance of argument why employer does not give access to phased retirement; see Table 5.

Answers: 1: does not apply; 2: applies perhaps; 3: probably applies; 4: definitely applies; 5: this is the most important reason

Table 9. Ordered logits for reasons for non-access to phased retirement

ordered logistic regression e7a-e7f											
	Ra		Rb		Rc		Rd		Re		Rf
	coef	t-val	coef	t-val	coef	t-val	coef	t-val	coef	t-val	coef
men	0,87	3,36	0,28	0,98	0,27	1,06	0,74	2,83	0,54	1,95	0,57
children 1+	-0,18	-0,71	-0,04	-0,16	0,39	1,48	0,00	0,01	0,18	0,63	0,09
partner	0,54	1,98	0,09	0,35	-0,03	-0,11	-0,13	-0,47	-0,16	-0,56	-0,26
age 35-44	-0,14	-0,45	-0,53	-1,71	0,13	0,42	-0,32	-1,09	-0,12	-0,39	-0,37
age 45-54	0,19	0,63	-0,19	-0,59	0,09	0,32	-0,24	-0,80	-0,17	-0,53	-0,07
age 55+	-0,52	-1,34	-0,95	-2,58	0,10	0,25	-0,18	-0,50	-0,21	-0,56	-0,29
education mid	0,64	2,25	0,57	2,10	0,75	2,59	-0,04	-0,16	0,54	1,85	0,09
education high	-0,07	-0,22	-0,47	-1,56	0,65	1,88	-0,40	-1,46	0,06	0,17	0,22
income mid	0,07	0,20	0,71	1,90	0,49	1,47	0,79	2,47	-0,29	-0,75	0,53
income high	0,98	2,20	0,98	2,14	0,68	1,47	1,30	3,15	-0,05	-0,11	0,13
region west	-0,30	-0,92	-0,42	-1,23	0,39	1,24	0,05	0,15	0,24	0,70	-0,20
region north	0,58	1,37	0,06	0,15	0,37	1,00	0,10	0,21	0,99	2,23	-0,16
region east	-0,22	-0,60	-0,29	-0,76	0,32	0,95	-0,05	-0,13	0,39	1,08	-0,14
region south	-0,43	-1,24	-0,15	-0,41	0,58	1,81	0,17	0,49	0,49	1,38	-0,10
sector comm. serv.	0,05	0,17	-0,59	-1,98	0,20	0,71	-0,29	-1,08	-0,36	-1,26	-0,32
sector publ. serv.	-0,39	-1,20	-1,02	-3,08	-0,28	-0,84	-0,94	-2,87	-0,46	-1,42	-0,70
threshold1	0,49		-0,31		1,28		-0,45		0,56		-0,66
threshold2	1,19		0,33		2,33		0,43		1,43		0,24

Notes: Employees ages 25–65, CentER panel, respondents without access to phased retirement at current employer; 415 observations. Dependent variable: importance of argument why employer does not give access to phased retirement. Reasons Ra–Rf are explained in Table 5.

<i>Table A1. Two-Year Transition Rates 1994–2000 (%)</i>									
	FF	FP	FO	PF	PP	PO	OF	OP	OO
<i>35 – 50 Years Old in 1994</i>									
Austria	93.1	3.7	3.1	14.8	77.8	7.4	7.0	13.7	79.4
Finland	92.4	4.8	2.9	40.1	48.3	11.6	26.1	12.7	61.2
Denmark	92.2	4.7	3.1	20.9	70.7	8.4	18.4	15.2	66.4
The Netherlands	92.4	5.4	2.2	8.1	84.5	7.6	4.6	15.3	80.2
Belgium	90.3	5.9	3.7	17.9	73.4	9.0	4.8	5.3	89.9
France	84.0	11.1	5.0	17.3	69.1	13.6	9.9	7.3	82.8
Ireland	88.7	7.6	3.8	17.4	69.0	13.5	6.6	15.3	78.1
Italy	90.5	4.1	5.4	23.8	64.4	11.9	5.3	4.0	90.7
Greece	85.9	7.5	6.5	33.0	51.8	15.1	10.4	6.0	83.6
Spain	86.0	6.7	7.3	33.9	47.9	18.2	10.7	5.5	83.8
Portugal	86.0	7.9	6.1	21.7	69.5	8.9	12.3	7.0	80.6
Germany	88.2	6.1	5.7	17.6	73.1	9.5	13.3	12.8	73.9
UK	88.7	7.1	4.2	18.0	73.5	8.5	9.2	12.5	78.3
US	93.0	4.9	2.0	47.0	44.4	8.6	15.3	12.7	72.0
<i>51 – 65 Years Old in 1994</i>									
Austria	63.0	2.8	34.2	16.4	51.0	32.7	0.4	0.9	98.7
Finland	70.8	9.8	19.4	18.2	48.0	33.8	1.9	2.5	95.7
Denmark	73.5	6.9	19.6	7.7	58.1	34.2	1.6	2.7	95.8
The Netherlands	68.5	10.6	21.0	4.1	69.5	27.4	0.6	1.7	97.7
Belgium	69.5	6.5	24.0	11.0	49.4	39.6	0.2	0.6	99.1
France	62.3	7.4	30.3	10.5	45.9	43.6	0.9	0.5	98.5
Ireland	75.2	9.7	15.2	17.5	57.3	25.4	1.2	4.5	94.3
Italy	69.4	5.1	25.6	16.3	47.8	35.9	1.3	1.0	97.7
Greece	64.3	11.0	24.6	21.9	39.4	38.7	1.8	2.4	95.7
Spain	69.2	6.1	24.7	23.4	37.5	39.1	1.5	1.2	97.3
Portugal	73.9	10.1	16.0	18.3	50.3	31.5	2.8	4.2	92.9
Germany	66.8	7.5	25.8	9.2	58.8	32.5	1.4	2.7	96.0
UK	72.4	9.1	18.6	7.9	63.9	28.2	1.3	2.8	95.9
US	74.2	12.5	13.3	20.2	58.8	21.0	2.9	3.3	93.6

Notes: 'F' refers to full-time work, 'P' to part-time work, and 'O' to other (not working). In the PSID the 'other' category refers to 'did not work for money now or did not work at all' and in the ECHP it refers to 'unemployed, discouraged worker, or economically inactive'. Full-time and part-time work definitions are based on actual work hours. Part-time work is 1 – 35 hours of work per week.

The table is based on survey units which are traceable through all four waves. The numbers for Austria and Finland are over the last three biennial waves, 1996–2000, due to missing data for 1994. For Germany and the U.K. the numbers are from national surveys (GSOEP and BHPS) converted to the ECHP format.

SUMMARY OF DISCUSSION

By Norma Coe

Phased and partial retirement: preferences and limitations

By Arthur van Soest and Tunga Kantarci

Chairman: Rick van der Ploeg

Discussants: Jan-Maarten van Sonsbeek (Ministry of Social Affairs and Employment) and Daniel van Vuuren (Netherlands Bureau for Economic Policy Analysis (CPB))

Netspar Panel: October 18, 2007

The paper discusses the literature on actual retirement transitions, stated preferences about retirement options, and a short discussion of some of the limitations that exist to implementing the preferred options. One of the issues highlighted in the discussion was the difference in retirement behavior between the US (where most of the literature is from) and the Netherlands. In the US, gradual retirement is relatively common, but there are also a lot of transitions out of retirement. In the Netherlands, gradual retirement is not common, but would be preferred if available (Van Soest et al 2006).

The remaining unanswered question is if gradual retirement would be more prevalent in the Netherlands, would this lead to an increase or a decrease in the overall labor supply. Both discussants, Jan-Maarten van Sonsbeek and Daniel van Vuuren outlined room for future research in order to try to answer this question. The general discussion focused on the potential differences between the US and the Netherlands, and the constraints to gradual retirement that are currently in the Dutch pension system.

Jan-Maarten van Sonsbeek would support gradual retirement if it has a positive effect on total labor supply, and helps the Netherlands reach the government target of labor force participation rates of 80 percent by 2016. In order to help determine if gradual retirement will increase labor supply, he suggests further examining the preference data already col-

lected. He also suggested going beyond the current research, and to do more comparative research within the Netherlands and between countries in order to determine the importance of any institutional limitations to gradual retirement. He emphasized that there have been a number of recent changes in the Netherlands that change the financial incentives for working in ones 60's. Early retirement has been made much less attractive. Pensions have gone from final pay to average pay schemes, which makes gradual retirement more attractive. Theo Nijman noted that pension contracts are not the most important constraint to gradual retirement, according to the individual-level survey data. This emphasized what policy recommendations might be useful in the future.

Van Sonsbeek highlighted two areas where limitations may still exist. First, income in old-age is already very generous, so it may be difficult to encourage people to work past the age of 65. Second, there is a lack of coordination between the sick-leave policies and the disability policies for those working past the age of 65. More coordination between these policies could limit the cost to employers while still encouraging labor force participation for workers aged 65 and over. Van Soest agreed that since only sickness pay, and not disability insurance, is available for workers aged 65 and over, it is even more difficult to get at the role the constraints play in the retirement decision.

Daniel van Vuuren discussed why the literature from the US might not be applicable to the Netherlands, emphasizing that differences in liquidity constraints between the countries will decrease the size any participation effect that has been found in support of gradual retirement schemes. Katherine Carman also pointed out the prevalence of defined contribution pension plans may also be a contributing factor to the lack of retirement constraints in the United States. Van Vuuren suggested further work utilizing the differences between pension funds in the Netherlands. Tom Steenkamp mentioned that abolishing institutional restrictions on retirement has had a large impact for ABP. He estimated that the retirement age has increased by three years since the changes have occurred.

Van Vuuren also added that it is important to determine not only the total effect of gradual retirement on labor force participation, but also the effect on all of society. This was seconded by Rick van der Ploeg, who inquired about welfare aspects of the policies.

The discussion concluded with a general agreement that gradual retirement may be a policy worth pursuing, depending on the effects on society and labor force participation. More research must be done before we will know these effects, though. Whether or not there will be different responses based on education, marital status, or immigrant status has not been examined yet. The netspar theme, 'Pensions, Savings and Retirement Decisions' is working on linking surveys, administrative data, and tax information, which will enable them to better answer these questions in the future.

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