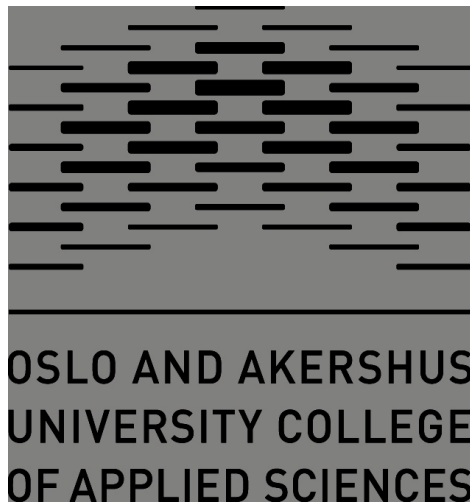


Retaining Older Workers

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Randomness is an important subject in statistics and I often think of randomness (or the possible lack thereof) when working with my statistical models. Now you might question why I start out by writing about randomness. Well, writing a PhD thesis has been one of my great dreams as a Fafo researcher, sitting at my desk dreaming, and I often think of how I ended up being so fortunate to fulfill this dream. You might still wonder why I started out by writing about randomness – well let me try to explain – looking back, life feels like it occurs very much “at random” and I often wonder where I would be if I hadn’t meet some of the significant people I have meet, supporting and guiding me on my way.

When graduating from high school my social science teacher, Jon Ragnar Øfsti, gave me some advice: *“I would strongly advise you to study political science at the university”*. I will always be thankful for Jon Ragnar’s encouraging advice and I have never regretted on following it. You were a truly dedicated teacher, making me believe in myself and my abilities.

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When planning my masters thesis I made a call to Fafo, which was advertising for a masters student to write about occupational pensions, a random call made by a very uncertain master student. I didn’t end up writing about occupational pensions, but I met senior researcher Tove Midtsundstad. I still remember sending Tove a text-message telling her that I had decided on a different theme for my masters project, thinking she would be disappointed with me – however it turnout that she was not. Tove called me straight back after I had texted her, and wholeheartedly supported my decision. We talked for more than an hour and agreed to stay in touch – and so we did. What if I hadn’t made that call to Fafo and I hadn’t met Tove....where would I be today? It’s difficult to express how important Tove has been for me – dedication

and hard work is not enough to succeed in research, someone must also provide you with the opportunities to prove your potential. Dear Tove, thank you so much for providing me with so many great opportunities and, especially, the opportunity of writing this PhD, for being my mentor and such a good friend. You always want the best for me and I would not be where I am today without your support and guidance. I am truly and eternally grateful.

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To my closest family and friends – thank you – in the end having a family and friends to rely on is all that matters!

Summary

Reducing early retirement and prolonging employees' working lives are goals that feature on social policy agendas across Europe. Active ageing has become the leading social policy response. Like many European countries, Norway has adopted a twofold active-ageing strategy consisting of 'passive' labour market policies and 'active' measures aimed at retaining older workers.

The pension reform, implemented from January 1st 2011, represents the 'passive' part of Norway's strategy, and early retirement is discouraged through introducing a pension system based on actuarial neutrality, tightening the link between contributions paid and benefits received, and calculating benefits according to life expectancy.

The second part of the Norwegian strategy, emphasising the use of 'active' measures, was formulated in 2001 at the national level with the signing of the Tripartite Agreement on an Inclusive Working Life (the IWL agreement). With the introduction of the IWL agreement, the Norwegian government and the social partners called for employers to assume greater social responsibility for keeping people in employment and preventing older workers from opting for an early exit. The agreement signifies that Norway, like many European countries, acknowledges that a significant change in retirement behaviour will come from changing employers' policies.

The overarching research questions addressed in this thesis are: *What are the preconditions for retaining older workers and what are the effects of measures offered by employers to alter early retirement?* Five papers form the foundation of this PhD thesis.

The 'active' part of Norway's strategy is based on employers' willingness to make use of retention measures and employers are key players in defining the opportunities for working longer. Thus, the individual company is the focal point for age management and adjustments to an ageing workforce, regardless of the actions of policymakers. The first paper in this thesis addresses the employer's perspective and the results show that the most common retention measures offered by Norwegian employers are "additional leave", "phased retirement" and "bonuses". Furthermore, the results show the retention efforts to be significantly more extensive in 2010 than in 2005, measured as the number of retention measures offered. The retention efforts of Norwegian companies seem to be part of a holistic approach to active ageing, focusing on prevention and retention throughout employees' working lives. Offering a number of different retention measures is more common among companies having initiated "measures to

facilitate lifelong learning” and “measures to prevent health problems or reduced work capacity”. The financial incentives embedded in the contractual early retirement scheme seem also to have a significant impact on retention efforts.

Addressing the employee’s perspective, the second paper in this thesis provides a descriptive picture of what characterises employees in the private sector who report to know their pension entitlements and what characterises those who report that they do not know. What employees know, or at least believe they know, concerning their own entitlements to early retirement benefits will be important for the choices they make regarding early retirement. I argue that if employees are imperfectly informed or are otherwise incapable of making informed choices, offering retention measures may not alter retirement behaviour. The results show that a large majority, and especially older employees, report to know their pension entitlements, which arguably reflects collection of information and that this retirement planning phase also involves the identification of possibilities offered by the employer, such as retention measures.

The main body of this thesis, papers III, IV and V, links in a unique way the employer’s and employee’s perspective by investigating the effects of the most common retention measures – as identified in the first paper – on retirement behaviour. The analyses show that it is “additional leave” and “bonuses” which affect the early retirement behaviour of older employees and not measures involving an adaption of the work situation, in the form of phased retirement. Thus, the most commonly used measures that have an effect on early retirement behaviour are arguably purely external motivators, aimed at strengthening the desire to work and to a lesser extent enhancing the opportunities for continuing working or employee’s belief in their ability to do so, through adapting the work situation.

Many older workers retire on the disability pension before they reach the age of eligibility set for being offered these measures. Thus, measures such as phased retirement might be too late for enhancing the opportunity structure of these workers. As an alternative or an addition to these retention measures, I argue for a stronger emphasis on the prevention of health problems and reduced work capacity from an earlier age. Measures aimed at preventing health problems and reduced work capacity will also arguably be more complementary to the strong financial incentives embedded in the pension reform.

Sammendrag

En helt sentral målsetning på den sosialpolitiske dagsorden i Europa er å redusere tidligavgangen og forlenge yrkeskarrierer til eldre arbeidstakere, og 'aktiv aldring' presenteres som det sosialpolitiske svaret på denne utfordringen. I likhet med mange europeiske land har Norge implementert en todelt strategi for aktiv aldring bestående av 'passiv' arbeidsmarkedspolitikk og 'aktive' tiltak for å fastholde eldre arbeidstakere.

Pensjonsreformen, innført fra 1. januar 2011, representerer den 'passive' delen av Norges strategi. Innføringen av et pensjonssystem basert på aktuariell nøytralitet, en sterkere kobling mellom innbetalinger og pensjonsytelser, og levealdersjustering av pensjonsytelsen, gir sterke insentiver for å velge arbeid fremfor tidligpensjon.

Inngåelsen av avtalen om et mer inkluderende arbeidsliv (IA-avtalen) i 2001 representerer den 'aktive' delen av den norske strategien. Med IA-avtalen ble arbeidsgivere oppfordret til å ta et større ansvar for å holde folk i arbeid, herunder redusere tidligpensjoneringen gjennom å fastholde flere eldre arbeidstakere. IA-avtalen representerer dermed en erkjennelse av den sentrale rolle arbeidsgiverpolitikken og tiltak på virksomhetsnivå har for å oppnå målet om å forlenge eldres yrkeskarrierer; en erkjennelse Norge deler med mange europeiske land.

De overordnede problemstillingene i avhandlingen er: *Hva er forutsetningene for å fastholde eldre arbeidstakere, og har tiltak som tilbys av arbeidsgivere for å redusere tidligpensjonering effekt?* Avhandlingen består av fem artikler.

Utgangspunktet for den første artikkelen er den sentrale rolle arbeidsgivere spiller i forhold til å definere mulighetene for lengre yrkeskarrierer. Den 'aktive' delen av Norges strategi forutsetter at arbeidsgivere er villige til å ta i bruk fastholdelsestiltak for å redusere tidligavgangen. Den første artikkelen i denne avhandlingen har et arbeidsgiverperspektiv og viser at de vanligste fastholdelsestiltakene som tilbys av norske arbeidsgivere er "ekstra ferie", "reduert arbeidstid/gradert pensjonering" og "bonuser". Resultatene viser også at intensiteten i fastholdelse av eldre arbeidstakere har økt betydelig fra 2005 til 2010. Videre ser det ut til at fastholdelsestiltakene inngår i en holistisk tilnærming til aktiv aldring, med fokus på forebygging og fastholdelse gjennom hele yrkeskarrieren, da virksomheter som tilbyr fastholdelsestiltak i langt større utstrekning også tilbyr tiltak for livslang læring og forebygging av helseproblemer og reduert arbeidsevne. Analysene viser også at virksomheter med avtalefeste pensjon (AFP) i større utstrekning tilbyr fastholdelsestiltak, og at økonomiske insentiver dermed påvirker arbeidsgivernes innsats.

Det å tilby fastholdelsestiltak vil ikke nødvendigvis endre pensjoneringsatferden, dersom de ansatte mangler kunnskap om egne rettigheter eller er ute av stand til å foreta informert valg. Den andre artikkelen i avhandlingen har derfor et arbeidstakerperspektiv, og beskriver hva som kjennetegner ansatte i privat sektor som oppgir å kjenne sine pensjonsrettigheter til forskjell fra dem som ikke gjør det. Hva ansatte vet, eller i det minste tror de vet, om sin rett til avtalefestet pensjon (AFP) er av betydning for valget om å gå av tidlig versus å fortsette i arbeid. Resultatene i denne artikkelen viser at et stort flertall, og da særlig eldre arbeidstakere, oppgir å kjenne sine pensjonsrettigheter. Jeg argumenterer for at dette gjenspeiler en innhenting av informasjon når eldre skal planlegge for pensjonering eller fortsatt arbeid, og at denne planleggingsfasen også består i å identifisere mulighetene som tilbys av arbeidsgiver, som for eksempel fastholdelsestiltak.

Artikkel III, IV og V knytter sammen arbeidsgiver- og arbeidstakerperspektivet på en unik måte og utgjør hoveddelen av denne avhandlingen. I de tre artiklene undersøkes effektene av de tre vanligste tiltakene, henholdsvis ekstra ferie, redusert arbeidstid/gradert pensjonering og bonuser på tidligavgang blant eldre arbeidstakere. Analysene viser at det er tilbudene om ekstra ferie og bonuser som bidrar til å fastholde eldre arbeidstakere og ikke tiltakene som innebærer en tilpasning av arbeidssituasjonen, i form av redusert arbeidstid/gradert pensjonering. Jeg argumenterer for at ekstra ferie og bonuser er tiltak som vektlegger betydningen av ytre motivasjonsfaktorer. Formålet med disse tiltakene er derfor kun å bidra til å styrke insentivene til fortsatt arbeid, og i mindre grad å påvirke muligheten til fortsatt arbeid, eller troen på at det er mulig å fortsette, fordi arbeidssituasjonen tilpasses.

Mange eldre arbeidstakere går av på uførepensjon før de fyller 62 år, og får dermed ikke muligheten til å nyte godt disse fastholdelsestiltakene. Det kan derfor være at redusert arbeidstid/gradert pensjonering tilbys for sent til å kunne påvirke muligheten for fortsatt arbeid for denne gruppen arbeidstakere. Som et alternativ eller supplement til disse fastholdelsestiltakene, argumenterer jeg derfor for at forebygging av helseproblemer og redusert arbeidsevne tidligere i yrkeskarrierer bør vektlegges sterkere om man ønsker lengre yrkeskarrierer for flere. Tiltak for å forebygge helseproblemer og redusert arbeidsevne vil også supplere de økonomiske insentivene i pensjonsreformen på en langt bedre måte.

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The papers

Five papers form the foundation of this PhD thesis. These papers are introduced in this opening section; they are referred to here and throughout the thesis with the numerals I to V.

Paper I

Åsmund Hermansen, and Tove Midtsundstad (2015) Retaining older workers – analysis of company surveys from 2005 and 2010. *Published in: International Journal of Manpower 2015, Vol.36, Issue 8.*

Paper II

Åsmund Hermansen and Tove Midtsundstad (2013) Kjennskap til arbeidsmarkedsbaserte pensjoner i privat sektor (Knowledge of labour-based pensions in the private sector). *Published in: Søkelys på arbeidslivet 2013, No. 1-2, Vol. 30, p. 107–123/ Norwegian Journal of Working Life Studies 2013 No.1-2, vol. 30, p. 107–123.*

Paper III

Åsmund Hermansen (2014) Additional leave as the determinant of retirement timing – Retaining Older Workers in Norway. *Published in: Nordic Journal of Working Life Studies 2014, Vol.4, No.4.*

Paper IV

Åsmund Hermansen (2015) Retaining older workers – The effect of phased retirement on delaying early retirement. *Published in: Nordic Journal of Social Research 2015, Vol.6.*

Paper V

Åsmund Hermansen and Tove Midtsundstad. The effect of retaining bonuses on delaying early retirement financial incentives revisited. Submitted to: Work, Aging and Retirement.

1.0 Introduction

Reducing early retirement and prolonging employees' working lives are goals that feature on social policy agendas across Europe. Active ageing has become the leading social policy response. This thesis is concerned with the Norwegian active-ageing strategy and one aspect of the strategy in particular – the effects of measures at the company level to retain older workers faced with the option of retiring early.

“How work comes to rescue us from old age” (Moulaert & Biggs 2013:24), describes the radical social reorganisation of work and retirement witnessed in Europe in recent decades. In the 1960s, a broad consensus seems to have emerged, at least among industrial economies, concerning the value of developing retirement as a distinct stage in the life course (Phillipson 2013). The emerging welfare states provided an infrastructure which diminished the economic insecurities traditionally associated with this period in the life course. Provisions for old age and particularly public pension systems were a cornerstone in the construction of the welfare state (Phillipson 2013; Walker and Foster 2013). Retirement became a part of the formal age structuring within the life course, in which pension requirements and norms regulated labour market exit in old age (Guillemard 1983).

From the beginning of the 1970s, the basis of retirement was progressively challenged, firstly through the rapid growth in early retirement or ‘early exit’, and subsequently by the arising challenge of financing pensions and other welfare state provisions (Kohli, Rein et al. 1991; Phillipson 2013). The Organisation for Economic Cooperation and Development began to advocate cutbacks in public pension schemes in the late 1980s (OECD 1988a; OECD 1988b), signalling what would later become common ground between international governmental organisations. Instead of adopting a policy perspective portraying an active role for older people, a ‘burden of ageing’ discourse was promoted (Walker and Foster 2013).

‘Active ageing’ achieved widespread currency across Europe from the beginning of the new millennium (Foster 2012). The combination of rising life expectancy and declining fertility means financial crises are looming in public pension systems and has made ‘ageing’ a dominant topic on the policy agenda (Hofäcker 2010; Walker and Maltby 2012; Walker and Foster 2013). The prominent solution being advocated to face the challenges arising with an ageing workforce and people ‘living longer’ is ‘working longer’, which has made ‘active ageing’ the leading policy response (OECD 2006; Phillipson 2013).

Like many European countries, Norway has adopted a twofold active-ageing strategy consisting of ‘passive’ labour market policies and ‘active’ measures aimed at retaining older

workers (Corsi and Samek 2010). The pension reform, implemented from January 1st 2011, represents the ‘passive’ part of Norway’s strategy, and early retirement is discouraged through introducing a pension system based on actuarial neutrality, tightening the link between contributions paid and benefits received, and calculating benefits according to life expectancy.

The second part of the Norwegian strategy, emphasising the use of ‘active’ measures, was formulated in 2001 at the national level with the signing of the Tripartite Agreement on an Inclusive Working Life (the IWL agreement). With the introduction of the IWL agreement, the Norwegian government and the social partners called for employers to assume greater social responsibility for keeping people in employment and preventing older workers from opting for an early exit (Midtsundstad 2011). The agreement signifies that Norway, like many European countries, acknowledges that a significant change in retirement behaviour will come from changing employers’ policies (Vickerstaff, Cox et al. 2003).

1.1 Main research questions

The research literature on retirement behaviour demonstrates the great complexity of the beliefs, desires and opportunities determining older workers’ transition between work and retirement. Retirement behaviour is thus best understood as a multilevel phenomenon (Hedström 2005; Beehr and Bennett 2007; Szinovacz 2013); research focusing on a single level of inquiry, be it society, employers or individuals, does not capture the complexity of different factors and levels shaping older workers’ desires, beliefs and opportunities in the retirement transition phase. Addressing retirement behaviour as a multilevel phenomenon, recognising that desires, beliefs and opportunities are shaped at many levels and are mutually dependent, the overarching research questions addressed in this thesis are: *What are the preconditions for retaining older workers and what are the effects of measures offered by employers to alter early retirement?*

Retaining older workers is arguably a multilevel phenomenon in the sense that employers play a key role in defining the *opportunities* for extending their employees’ working lives and older workers must have the *beliefs* and *desires* that induce them to carry on working. Thus, these efforts precondition a group of older workers with the desires, beliefs and opportunities to extend their working lives. In this thesis I address both the *opportunities* provided by employers for working longer and important aspects of the *beliefs* held by employees in the transition between work and retirement, before investigating the effects of the three most common retention measures in Norway. Thus, I address both the employer’s and employee’s perspective, as well as these perspectives combined through investigating the effect of retention

efforts at the company level. Using the DBO¹ model developed by Hedström (2005) as a heuristic device for structuring the five papers in this thesis, the multilevel nature of the overarching research questions is explored through three sub-research questions:

1. *What are the most common retention measures offered by Norwegian employers and what developments have there been in their retention efforts (Paper I)?*

The ‘active’ part of Norway’s strategy is based on employers’ willingness to make use of retention measures. Companies may adopt policies that strengthen, weaken or have no impact at all on the goals promoted at the national level (Hofäcker 2010). Thus, the individual company is the focal point for age management and adjustments to an ageing workforce, regardless of the actions of policymakers (Walker 2006). According to Walker (2006:81), “*good practice in the employment of older workers remains a minority pursuit ... if older workers policies and practices are emerging in organizations, it is important to know why*”. The first paper (I) in this thesis addresses the employer’s perspective and provides a descriptive picture of what characterises Norwegian companies offering retention measures and the development in retention efforts based on two surveys from 2005 and 2010. It argues that the set of policies adopted by companies influence *the opportunities* older workers have to extend their working lives and offering retention measures signals the employer’s wish for older workers to continue working in the company.

2. *Do workers know their entitlements to early retirement benefits? (Paper II)*

The efficacy of offering retention measures as part of companies’ age-management strategies depends on the individual employee’s ability to make informed choices concerning work and retirement. If employees are not sufficiently informed or are otherwise incapable of making informed choices, offering retention measures may not alter retirement behaviour (Chan and Stevens 2008). What employees know, or at least *believe* they know, concerning their own entitlements to early retirement benefits will most certainly be important for the choices they make regarding retirement or extending their working life. The second paper (II) in this thesis provides a descriptive picture of what characterises employees in the private sector who report

¹ "D" for “desires”, “B” for “beliefs”, and “O” for “opportunities”.

to know their pension entitlements and what characterises those who report that they do not know.

3. *Do the most common retention measures, as identified in paper I, reduce early retirement among older employees? (Papers III, IV, V)*

Papers I and II provide a descriptive picture of the employer's and employee's perspective, addressing opportunities and beliefs in the transition between work and retirement. The main body of this thesis, papers III, IV and V, links in a unique way the employer's and employee's perspective by investigating the effects of the most common retention measures – additional leave, phased retirement and bonuses – on retirement behaviour. These analyses are based on an intention-to-treat design, initial treatment assigned, in the sense that the companies have introduced the respective retention measures (as investigated in paper I) but have not provided information about whether older workers have actually responded to these offers (i.e. if the treatment has actually been received). It is therefore important to consider whether older workers are in fact knowledgeable about these measures upon making the retirement decision and thus able to make informed choices about work and retirement (as discussed in paper II and further discussed in this thesis).

1.2 The Norwegian labour market and early retirement scheme

Since the early 1970s, Europe has experienced a steady decline in employment rates among older people, with Norway being the most significant exception (Hult and Edlund 2008). Norway has one of the highest employment rates among 55- to 64-year-olds in Europe and an employment rate above the OECD average. Furthermore, older women account for a high proportion of the labour force (Midtsundstad 2011; OECD 2013).

An overall low unemployment rate during the last 35 years has prevented policymakers in Norway from being tempted to introduce public early-exit schemes in response to high unemployment. Early-exit opportunities, such as the disability pension and the contractual early retirement scheme, have been created with the purpose of securing disabled or fatigued and ageing people with economic resources after employment. Responding to an ageing workforce and encouraging an extended working life, the policy focus has been on improving working conditions, personnel policy and activation programmes, rather than cutting back on benefits (Solem and Øverbye 2004; Hult and Edlund 2008).

Midtsundstad (2011) accentuates that, compared with the rest of Europe, the labour market situation of older workers in Norway differs due to four conditions. Firstly, compared to other European countries, Norway had, until 2011, a relatively high statutory retirement age (67 for both men and women). Secondly, the possibility of retiring at the age of 62 was first given to Norwegian employees in 1998 through the contractual early retirement scheme (AFP scheme), covering about 80 percent of all older workers (Midtsundstad 2004; Nergaard 2009). Thirdly, from 1997 the contractual pension also allowed individuals to combine part-time work with a partial pension. However, employees wishing to combine part-time work with a partial contractual pension must obtain the agreement of their employer. Fourthly, redundancy regulations in Norway follow the ‘last in, first out’ principle, making dismissal protection in Norway especially strong for older workers with seniority (Midtsundstad 2011).

The contractual pension or contractual early retirement scheme offers older workers the possibility of opting for early retirement between the ages of 62 and 67². Early retirement is available to all public sector workers and private sector workers employed in companies with a collective bargaining agreement (Midtsundstad 2004; Nergaard 2009). In this thesis, early retirement is defined as withdrawing a contractual pension or receiving benefits from the contractual early retirement scheme (AFP scheme).

1.3 The structure of the thesis

The second chapter explores the concept of active ageing in social policy. It starts by presenting the historical development of ageing policy and the introduction of active ageing within a European context; thereafter analysing the Norwegian approach to active ageing and discussing the company level as the focal point for age management and adjustments to an ageing workforce. The chapter ends by specifying the retention measures investigated in this thesis. Chapter three presents theoretical concepts and perspectives on retirement behaviour. The aim of this chapter is not to present a specific theoretical model of analysis, but to present different concepts and theoretical contributions used in the literature looking at early retirement behaviour. Previous research is presented in chapter four. Chapter five presents the methodologies and data that have been applied in the different papers. The three papers (III, IV, V) constituting the main body of this thesis take a difference-in-differences approach, using a combination of survey and register data. The use of a difference-in-differences approach to

² From January 1st 2011, the contractual pension was changed to a flexible lifelong annuity for private sector workers, making the scheme distinctly different from the public sector where it is still designed as an early retirement scheme. However, this regulatory change was implemented after the period investigated in this thesis.

make causal inference is discussed. Chapter six summarises the papers and chapter seven presents an overall discussion of the five papers and some thoughts on future research. Chapter eight presents the conclusions and a discussion of social policy implications.

2.0 The concept of active ageing in social policy

Ageing is a new and emerging social policy area in Europe and the economic and demographic implications of population ageing has only recently become a central focus on the European social policy agenda (Walker 2008). In a European context, Walker and Foster (2013) divide the development of ageing policy into three historical periods. The first period is marked by the “golden age” of welfare state construction following World War II, which established a close relationship between ageing and public policy in Europe. Provisions for old age and particularly public pension systems were a cornerstone in the construction of the welfare state (Walker and Foster 2013). These public policy changes underpinned a social construction of older people as dependent in economic terms and passive recipients of welfare benefits (Townsend 1981; Walker and Foster 2006). Ageist stereotypes of old people as passive recipients of welfare benefits were reinforced by the expectation that older workers would leave the labour market at a fixed age and exchange wages for pensions. Retirement became a part of the formal age structuring within the life course, in which pension requirements and norms regulated labour market exit in old age (Guillemard 1983).

In the beginning of the 1970s, public discourses on ageing underwent profound changes throughout the developed world, marking the second period in the development of ageing policy. During this period Europe witnessed a huge growth in the number of workers making an early exit from the labour market (Kohli and Rein 1991; Walker and Foster 2013). The combination of increased levels of early retirement and increased longevity meant that a rising number of people experienced a transformation of retirement into a period of health and activity, defined in the gerontological literature as the “Third age” (Guillemard and Rein 1993). These socio-demographic developments lead politicians to question the cost of population ageing and raised concerns about the financial sustainability of the pension system. The combination of an ageing workforce with a rise in early exits from the labour market (referred to as the age/employment paradox) created a need for social policy action (Walker 2006). Two reports by the Organisation for Economic Co-operation and Development (OECD) advocating cutbacks in public pension schemes (OECD 1988a; OECD 1988b) signalled what later became a common discourse among international governmental organisations. Instead of adopting a social policy perspective portraying an active role for older people, a “burden of ageing” discourse was promoted (Walker and Foster 2013).

The third period in the development of ageing policy begins at the start of the new millennium, when the concept of active ageing began to gain widespread currency across

Europe. Active ageing has become the leading social policy response to the challenges and opportunities arising from an ageing population. In spite of much positive political rhetoric, the active-ageing framework lacks a precise universally agreed-upon definition and there is considerable uncertainty about what this framework entails in practice. Generally, active ageing put emphasis on the process of maximising health, participation and security to improve quality of life as people age. By delaying exit from the labour market and encouraging employees to remain active and autonomous following retirement, active ageing implies that older people can make a significant contribution to address the challenges of an ageing population (WHO 2002; Foster 2012). Thus, by emphasising the autonomy and continued participation of older people, the concept of active ageing challenges views on old age as characterised by passivity and dependency. According to Walker and Foster (2013), the emerging modern concept of active ageing is in essence a combination of core elements of productive ageing with a strong emphasis on quality of life, mental and physical well-being and broadly defined participation.

The evolution of European social policy discourse has fostered two different approaches to active ageing (Foster 2012). The first is a narrow economic and productivist approach, which focuses predominantly on employment policy and extending working life beyond retirement. This approach to active ageing is advocated by the Organisation for Economic Cooperation and Development (OECD 2006) and the European Commission (EC 2012). The OECD emphasises that an ageing population is “*a tremendous opportunity if longer and healthier lives are matched by longer working lives*” (OECD 2006:3). The reports by the OECD and the EC present active ageing as *productive* ageing, focusing strongly on participation in the labour market (Kildal and Nilssen 2013). The EC argues that “*providing opportunities to work longer than the current age of retirement is one of the most important aspects of the active ageing agenda*” (EC 2012:29).

A more comprehensive and multidimensional approach to active ageing is advocated by the World Health Organization (WHO) in a 2002 report. In this report, active ageing is defined as:

The process of optimizing opportunities for health, participation, and security in order to enhance quality of life as people age. Active ageing applies to both individuals and groups. It allows people to realize their potential for physical, social, and mental well-being throughout their lives and to participate in society according to their needs, desires, and capacities, while providing them with adequate protection, security, and care when they require assistance. (WHO 2002:12)

According to Walker (2008), the WHO's active-ageing policy is the culmination of a long process of deliberation and discussion based on inputs from a variety of scientific and policy perspectives. From a European perspective, this policy has contributed to refocusing active ageing away from a sole focus on employment to considering the different factors that can contribute to well-being. As such, it emphasises the importance of adopting a life-course perspective and highlights that some of the negative aspects of later life can be influenced by individual behaviour and the policy context at earlier stages in the life course (Walker 2008).

Of these two approaches, there is little doubt that the narrow economic and productivist approach has been predominate in the social policy formulation on active ageing, with an emphasis on employment policy and extending working life beyond retirement (Foster 2012; Walker and Maltby 2012; Moulaert and Biggs 2013; Walker and Foster 2013). Walker and Maltby (2012:119) state that *“it is the new emphasis on employment in later life that has been the main reason for the recent interest in active ageing and the fact that it has become a political priority in Europe”*. Moulaert and Biggs (2013:31) observe that *“powerful institutional players such as the OECD, World Bank and EC [European Commission] have increasingly come to see active ageing as a discourse supporting economic productivity with longer working lives increasing labour force supply”*.

Many European countries have adopted a twofold strategy aimed at encouraging older workers to extend their working lives, consisting of ‘passive’ labour market policies and ‘active’ measures. To discourage the use of early retirement schemes, many European countries have reformed their pension system. The most common reform measures consist of actuarial neutrality, tightening the link between contributions paid and benefits received, calculating benefits according to life expectancy and promoting the provision of supplementary individual or occupational pensions. In addition to these ‘passive’ labour market policies, the second part of the strategy is ‘active’ measures aimed at retaining employees and reintegrating older workers (Corsi and Samek 2010).

2.1 Active ageing in Norway – the work approach to social policy

As in the rest of Europe, the narrow economic and productivist approach has played a predominate part in the social policy formulation of active ageing in Norway. The pension reform, implemented from January 1st 2011, represents the ‘passive’ part of Norway’s twofold strategy to increase the labour supply of older workers and secure the sustainability of the national pension system. Flexibility is a cornerstone of the reform; withdrawal of the old age pension from National Insurance was made flexible from the age of 62 for both public and

private sector workers. Previously, the old age pension was first paid from the age of 67. For private sector workers, the contractual pension (AFP) was also changed to a flexible lifelong annuity and is no longer an early retirement scheme. Pension benefits are also adjusted according to life expectancy and income-dependent entitlements are indexed by wage growth only until retirement. Upon retirement, benefits are calculated according to an average of wages and consumer prices in payment (Holmøy and Stensnes 2008).

The second part of the Norwegian strategy, emphasising the use of ‘active’ measures, was formulated in 2001 at the national level with the signing of the Tripartite Agreement on an Inclusive Working Life (the IWL agreement). The social partners and the government defined three main goals in the 2001 agreement: (I) reducing sick leave by at least 20% within 8 years, (II) securing employment for a greater number of people with disabilities and (III) raising the average retirement age by 6 months before 2010. The third goal was achieved and from 2010 there has been a new goal to increase the total years in employment for those over 50 years of age (Haga 2010). With the introduction of the IWL agreement, the Norwegian government and the social partners called for employers to assume greater social responsibility for keeping people in employment and preventing older workers from making an early exit (Midtsundstad 2011). The agreement signifies that Norway, like many European countries, acknowledges that a significant change in retirement behaviour will come from changing employers’ policies (Vickerstaff, Cox et al. 2003). However, signing the IWL agreement and adopting retention measures aimed at extending the working lives of older employees is purely voluntary and relies on companies’ willingness to employ such measures.

According to Midtsundstad (2011), the introduction of the IWL agreement in 2001 marks a shift in Norwegian welfare and labour market policy, with an increased focus on companies’ social responsibility. By renewing and expanding the role of employers in the formulation of welfare and labour market policy, Norway took part in a broad European trend, placing greater emphasis on the actions of employers (Goetschy 2000; Jepsen, Foden et al. 2002; Kvist 2002). All companies in Norway, whether public or private, large or small, are urged to sign the IWL agreement and become an IWL company (Midtsundstad 2011). The majority of Norwegian employers report that they have – and indeed insist on – taking social responsibility for keeping people in employment, however, this is largely limited to their own employees (Midtsundstad 2008).

Instead of being a broad-based policy area, active ageing in Norway consists of programmes directed at employers and employees, narrowly focusing on ‘active’ measures aimed at

prolonging working lives and strengthening the incentives to continue working. This narrow focus of the active-ageing policy may be seen as an extension of the work approach, which has been the dominant paradigm in the formulation of social policy in Norway for the last twenty years (Ervik, Helgøy et al. 2006; Øverbye and Stjernø 2012). To secure their income and participation in society, individuals should find work to be their first and natural choice, rather than claiming social insurance benefits. Thus, Norway has adopted a work-centred approach to active ageing, which coincides with the OECD's (2000) definition. From this perspective a change in attitudes is vital. According to Ervik, Helgøy et al. (2006:577), "*work is presented as the core arena of activity and almost the sole way to happiness for older people*". Thus, it can be argued that the Norwegian approach to active ageing is rooted in a concern about 'worklessness', and emphasises that inclusion is achieved through labour market participation.

2.2 Active ageing at the company level

The voluntary role assigned to Norwegian companies in reaching the goals set in the IWL agreement illustrates that, at the most basic level, companies act as 'mediators' of nation-specific welfare and labour market policies. Companies may adopt policies that strengthen, weaken or have no impact at all on the goals promoted in nation-specific social and labour policies (Hofäcker 2010). Thus, the individual company is the focal point for age management and adjustments to an ageing workforce, regardless of the actions of policymakers (Walker 2006). Working in accordance with the IWL agreement and goal III – increasing the retirement age, Norwegian companies have since 2006 been committed to adopting a life-stage policy in their overall Health, Safety and Environment strategy and their HR policy. Furthermore, the companies are obliged to consider possible measures or incentives aimed at prolonging the working lives of older employees (Ose, Bjerkan et al. 2009).

Actions at the company level aimed at extending the working lives of older workers include all measures initiated to *prevent* early retirement and *retain* or *integrate* older workers within the company. Dividing measures into *prevention*, *retention* and *integration* is both linked to the target group's position in the labour market and their connection to the company (see Table 2.1).

Table 2.1 Classification of active-ageing measures at the company level

	Employees at risk	Employees not yet at risk
Within the company	Retention (internal)	Prevention (internal)
Outside the company	Integration (external)	

(Sonnefeld Jørgensen 2004)

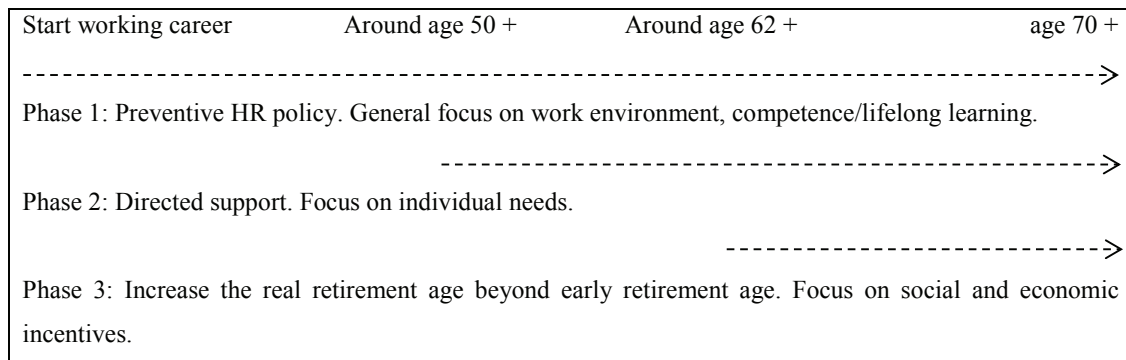
Measures aimed at *preventing* premature retirement include all efforts at the company level intended to safeguard *employees not yet at risk*. This includes long-term efforts to prevent employees from entering a vulnerable position in relation to the labour market. These measures are meant to prevent employees experiencing health problems, loss of work capacity or reduction of work ability (Ilmarinen 2009), not coping with work and/or loss of motivation. Hence these measures are aimed at all employees and not restricted by age to specific groups of employees. In the broader sense, prevention measures include all efforts to create a sustainable work environment throughout an employee's working life, and thus include measures that are part of a life-stage policy (Sonnefeld Jørgensen 2004; Midtsundstad 2007; Midtsundstad 2011).

Integration includes measures targeting individuals outside the company *at risk* or in a vulnerable situation, in the sense that they are experiencing difficulties finding employment. Within an active-ageing framework, this may include measures to recruit or re-employ older workers.

Measures to *retain* also target individuals *at risk* or in a vulnerable situation; however, these measures are limited to individuals within the company. Retention measures are aimed at employees that may be facing the possibility of exclusion or marginalization, or that have access to an early retirement scheme they wish to use. Unlike prevention measures, retention measures will not have the same scope and long-term impact. Hence these measures target defined groups of employees and particular situations (Sonnefeld Jørgensen 2004; Midtsundstad 2007; Midtsundstad 2011).

Delimiting the analytic focus to measures offered to employees within the company, Salomon and Hilsen (2011) have developed a three-phase working career model (see Figure 2.1). The three-phase perspective illustrates at which stages in an employee's working life different measures gain relevance.

Figure 2.1 A three-phase working career model



(Salomon and Hilsen 2011)

Phase one covers the whole working life and starts from the first day at work. Throughout an employee's working life, preventive HR policy, work environment and competence management will influence their future career. Good active-ageing policy is alleged to be nothing more than good ordinary HR policy (Hilsen and Steinum 2006), and according to Salomon and Hilsen (2011)³ this may be true in the early phase of working life.

In the second phase, preventive HR policy is still of crucial importance for work motivation and performance. However, from around the age of 50, the number of employees experiencing health problems increases (Salomon and Hilsen 2011). From this stage in their working lives, some employees will therefore experience the need for more specific support to enable them to continue performing at a satisfactory level (Ilmarinen 1999). Salomon and Hilsen emphasise that phase two is based on the idea of work ability, and hence providing special support for specific groups of employees experiencing a reduction in their work capacity. However, interviews from nine case studies show that older workers have mixed feelings regarding the more specific support provided in this phase. Older workers do not want to be treated differently, but at the same time they do accept having special needs which must be taken into account in companies' active-ageing policies (Salomon and Hilsen 2011). In relation to the previous classification of active-ageing measures at the company level, the efforts in phase one and two are to be classified as prevention measures (Sonnefeld Jørgensen 2004; Midtsundstad 2007; Midtsundstad 2011).

The third phase begins when employees are approaching the date at which they will face the choice of retiring early on the contractual early retirement scheme (AFP scheme) or continuing working. In this phase, the main aim of the active-ageing policy is to extend working life and

³ Salomon and Hilsen (2011) use the Nordic term 'senior policy'.

discourage early retirement. Salomon and Hilsen emphasise that, though still being of relevance, the main focus in the age management shifts from the supportive perspective to the use of retention measures based on economic and social incentives aimed at prolonging working life beyond early retirement age (Midtsundstad 2007; Midtsundstad 2011; Salomon and Hilsen 2011).

The main goal of this thesis is to investigate and discuss the effects of the most common retention measures offered in Norwegian working life in terms of reducing early retirement – additional leave, phased retirement and bonuses. Thus, this thesis has a delimited focus on the third phase in the working career model and offers new insight into the effects of retention efforts made by Norwegian employers.

3.0 Theoretical framework

Theoretical traditions within the research literature on early retirement behaviour present the different factors influencing labour supply in the final phase of working life. Different perceptions of the factors used to explain early retirement stem from differences in the notion of whether the exit is voluntary or involuntary and whether it is mainly affected by labour supply or labour demand (Midtsundstad 2002; Engelhardt 2012; Midtsundstad 2012; Jensen and Øverbye 2013).

The research literature on early retirement has often conceptualized retirement either as ‘decision-making’ or as an ‘adjustment process’ (Wang and Shultz 2010). In the following section I provide a brief overview of these two theoretical conceptualizations of retirement. Thereafter I will present the DBO model and illustrate how the DBO model is used as a heuristic device, linking the different papers of this thesis and providing the basis for the overarching discussion (Hedström 2005).

3.1 Retirement as decision-making

A large part of research into the transition from work to retirement has focused on the retirement decision and been dominated by economic and financial analysis (White 2012). Conceptualizing retirement as decision-making contends that the decision to retire is a motivated choice and employees choose to decrease their commitment to and withdraw from work. This approach assumes that the decision to retire is based on the information older workers possess regarding their own characteristics and their work and non-work environment (Wang and Shultz 2010). When, conceptualizing retirement as decision-making, researchers have typically explained early retirement behaviour as the outcome of an individual and rational decision-making process. This approach assumes that utility-maximising individuals weigh the pros and cons related to work and leisure and try to select the optimal time to retire, through considering financial opportunities and constraints (Gruber and Wise 2002; Wang and Shi 2014). Thus, the retirement decision is the result of strictly financial calculations with consumption as the final aim (Wang and Shultz 2010; Radl 2012).

The economic theory of retirement presents the theoretical mechanisms linking financial opportunities and constraints to the retirement decision, by explicating why these factors are of decisive importance for early retirement behaviour. This theoretical approach to the retirement decision has been one of the most influential theoretical frameworks within the retirement literature (Engelhardt 2012). Payment levels and corresponding tax rates, age restrictions and selection criteria act as factors ‘pulling’ employees out of working life early. Hence the labour

market exit of older workers can be traced back to the financial incentives to retire offered by early retirement pension schemes and other welfare-state programmes (Blöndal and Scarpetta 1999; Gruber and Wise 2002; Gruber and Wise 2007; Gruber and Wise 2010; Hofäcker 2010; Engelhardt 2012).

Conceptualizing retirement as decision-making has been criticised for disregarding other relevant actors and neglecting other explanatory factors which may induce less freedom of choice. In particular, modelling the transition between employment and retirement as a voluntary choice has been criticised. Such a theoretical approach neglects labour-demand factors by exclusively focusing on the individual decision and hence taking a dedicated labour-supply view. This one-sided focus on free individual choice and ‘pull’ factors⁴ does not adequately reflect the early retirement decision made by older workers. The critics of the economic approach emphasise the need to take developments in labour demand into consideration, in addition to incentives affecting the labour supply of older employees. Studies assuming that only labour-supply factors exert a significant effect on older workers’ decisions to retire take too narrow a view of the decision-making process. This type of instrumentalism has resulted in the overestimation of free individual choice (Kohli and Rein 1991; Hofäcker 2010; Engelhardt 2012). Hence, the theoretical utility of conceptualizing retirement as decision-making depends on the extent to which the transition between work and retirement is a result of an unconstrained, rational and free individual choice (Wang and Shultz 2010). Although financial incentives and calculations affect individuals’ motivation to work on a basic level, such incentives have their limits since it is often not up to the ageing person alone to make the decision to continue working (Hult and Edlund 2008).

A significant part of the research literature focuses on involuntary retirement as a result of ‘push’ factors, opposing to the focus on free individual choice and ‘pull’ factors. This includes labour market and company-level push factors such as structural adjustments, rationalization, increased eligibility requirements and other factors that ‘push’ elderly, less productive or less skilled workers out of the labour market (Halvorsen 1977; Midtsundstad 2002; Midtsundstad 2005; Midtsundstad 2007; Dorn and Sousa-Poza 2010). Referred to as ‘individual push factors’, health problems, as well as physical and mental strains related to the job, have proven to increase the likelihood of older workers opting for early retirement (Larsen 2004; Buchholz,

⁴ The terms ‘pull’, ‘push’ and ‘jump’ factors were first used by Gambetta (1987) in analyses of factors predicting entry into the labour force and choice of education.

Hofäcker et al. 2006; Börsch-Supan, Brugiavini et al. 2009; Datta Gupta and Larsen 2010; Engelhardt 2012; Gørtz 2012; Calvo, Sarkisian et al. 2013).

As a moderation of the fundamental economic principle that “if they aren’t paid, people don’t work” (Gruber and Wise, 2002: 1), sociological approaches to early retirement also usually assume that there is an intrinsic value to work. People do not see work merely as a source of income, but as a way of gaining self-realization, social recognition and social contacts (Doherty 2009; Riach and Loretto 2009; Radl 2012). Radl (2012) emphasises that the intrinsic value of work should be reflected in a resistance to leave work prematurely, a hypothesis which is supported by the frequent occurrence of older workers being ‘pushed’ out of work or into involuntary retirement (Midtsundstad 2002; Midtsundstad 2005; Buchholz, Hofäcker et al. 2006; Börsch-Supan, Brugiavini et al. 2009; Engelhardt 2012; Gørtz 2012; Calvo, Sarkisian et al. 2013).

Within the literature on early retirement, ‘pull’ factors have often been related to purely economic incentives and a preference for leisure over work. However, within the field of sociology, these factors have also been given a more social and cultural understanding. From a sociological point of view, early retirement schemes reproduce the culturally-constructed notion of when older workers are expected to retire (Esser 2005; Radl 2012; Jensen and Øverbye 2013). Early retirement schemes are assumed to represent institutional expressions of values, norms and conventions pertaining to when older workers should leave the labour market. Acting upon the signals embedded in early retirement schemes, individuals are ‘pulled’ out of working life early. Hence, these early retirement schemes have underpinned an early-exit regime by influencing when older workers believe they are supposed to retire, exerting an independent normative effect (Esser 2005; Jensen and Øverbye 2013).

The extensive theoretical debate on push versus pull factors in retirement research has not produced a clear winner (Radl 2013). The main distinction between these two approaches is the degree to which the retirement decision can be interpreted as a voluntary choice or forced by external factors outside the control of the individual employee. However, individuals act and are not merely pushed around by social forces (Hedström 2005). Thus, whereas research emphasising ‘pull’ factors can be criticised for overestimating the free individual choice, a pure emphasis on ‘push’ factors can be criticised for disregarding individual behaviour and overestimating the importance of external factors. Today there is little doubt that both ‘pull’ and ‘push’ factors significantly influence retirement timing (Radl 2013).

3.2 Retirement as an adjustment process

In comparison with the decision-making approach, conceptualizing retirement as an adjustment process provides a more comprehensive understanding of the transition between work and retirement. Explaining retirement as an adjustment process implies that people may make the same decision to retire even if the resources associated with the decision and the amount of activity change that will follow may be very different. Conceptualizing retirement as an adjustment process puts emphasis on the complex mechanism of retirement, rather than solely on the decision. Thus, it is not the decision to retire, but the characteristics of the retirement transition process embedded in this decision that are of most importance (Szinovacz 2003; Wang and Shultz 2010).

The life course approach provides a theoretical framework for describing and explaining how individuals make the transition from one life stage to the next; how they change between different statuses; how they link the different dimensions of their lives with their career paths; how earlier experiences condition later behaviour; and how the resources and opportunities available to them develop over time (Kohli 2007). The contemporary life course approach⁵, also known as the political economy of the life course, examines the interaction between structural constraints, institutional regulations and individual behaviour over time. Thus, the life course perspective provides a more comprehensive theoretical framework for explaining the complexity of retirement, then focuses on a single level of inquiry, be it society, employers or individuals (Heinz and Krüger 2001; Hofäcker 2010; Szinovacz 2013).

The life course approach theoretically extends the focus of retirement research to a whole set of life course policies influencing older workers' retirement behaviour (Hofäcker 2010; Engelhardt 2012). Applying theoretical concepts from comparative institutional research to the individual life course, life course theory takes both the labour-demand and labour-supply factors into account when investigating retirement behaviour. Comparative institutional research of the kind represented by Esping-Andersen's (1990; 1999) typology of different welfare regimes and the industrial relations-oriented perspective provided by Soskice (1999), Hall and Soskice (2001) and Ebbinghaus (2006) has benefited the life course sociology (Engelhardt 2012). Engelhardt (2012) underscores that by systematically linking the macro- and micro-level, life course theory shows how country-specific institutional backgrounds

⁵ For a comprehensive review of the development of the life course approach, see Hofäcker, D. (2010). *Older workers in a globalizing world: an international comparison of retirement and late-career patterns in Western industrialized countries*. Cheltenham, England: Edward Elgar Publishing.

differentially influence the structure of the life course in modern societies (DiPrete 2002; Mayer 2004). Thus, investigating country differences in the share of older workers retiring early by focusing on national pension systems alone is not sufficient. Engelhardt (2012) emphasises that in addition to the pension system, which to various degrees supports early retirement, other institutions exert influence on the possibility for older workers to continue working. These institutions include settlement of industrial relations, the flexibility of the education system and occupational structures. However, Engelhardt underlines that the institutional differences causing variation in late careers between countries is minor when controlling for variation across industries and individual characteristics.

Wang and Shultz (2010) assume a more individual-oriented description of the life course approach, emphasising that each individual's experiences of the retirement transition process is contingent on the specific contexts in which the transitions occur. The general premise of the life course perspective is, according to Wang and Schultz, that individuals who have cultivated a flexible approach to dealing with life transitions, are less socially integrated with work and who have the attributes that help facilitate the transition, will presumably be better prepared for the transition, engage in the transition with better timing and achieve better outcomes (George 1993; Settersten 1998; van Solinge and Henkens 2008). Each person's individual history – including job-associated statuses and roles, pre-retirement job attitudes and job characteristics – and individual social context – including their social network, family structure and marital life – exert influence on the retirement transition process (Hank 2004; Reitzes and Mutran 2004; Charles and DeCicca 2007; Wang 2007; Wang, Zhan et al. 2008).

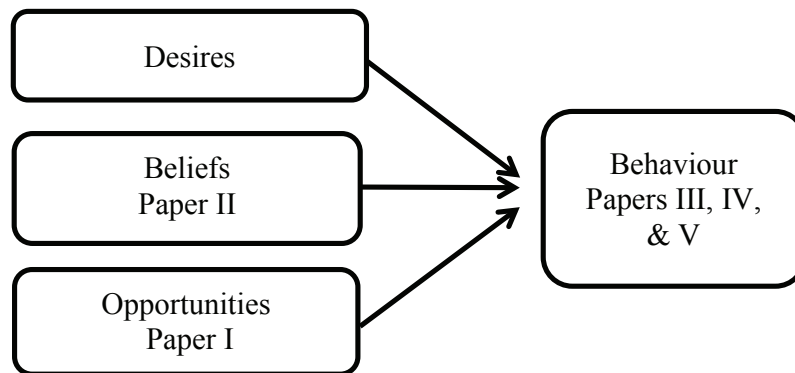
3.3 The DBO model – desires, beliefs and opportunities

Drawing on psychological decision models, sociological perspectives and economic theory (Gruber and Wise 2002; Wang and Shultz 2010; Engelhardt 2012; Wang and Shi 2014), conceptualizations of retirement as decision-making are helpful in predicting the individual's propensity to retire and the voluntariness of their retirement. However, retirement is arguably a longitudinal process that begins long before the actual date of retirement and is not a binary transition experienced by an isolated individual at a specific point in time. Conceptualizing retirement as an adjustment process provides a more comprehensive understanding of the transition between work and retirement and is useful for modelling the longitudinal dynamics of the retirement process. However, such an approach is less effective in capturing the objective predictors of the retirement decision (Löckenhoff 2012).

Both the decision-making approach and the adjustment process approach to retirement presents the individual as the core entity in the social system being analysed, and the behaviour regarding work and retirement of these actors is the core activity. Drawing on the perspectives represented in both these approaches, I argue, as Hedström (2005) does, that the cause of behaviour, such as continuing working instead of retiring early, is broadly speaking a constellation of *desires*, *beliefs* and *opportunities* (Hedström 2005). Desires (D), beliefs (B) and opportunities (O) are presented as the primary theoretical terms in the DBO model, developed by Hedström (2005), for analysing individual behaviour. A ‘belief’ is defined as a proposition of the world held to be true, and a ‘desire’ as a wish or want. ‘Opportunities’ describes the set of behaviour alternatives available to the actor (which exists regardless of the actor’s beliefs concerning these alternatives). The desires and beliefs held by individuals are mental events which cause a behaviour, i.e. an early exit from working life, in the sense that they provide reasons for this behaviour.

As I argue in the first chapter of this thesis, the set of policies adopted by companies influences *the opportunities* older workers have to extend their working life and offering retention measures signals the employer’s wish for older workers to continue working in the company. Thus, paper I is included to offer an insight into the opportunities for late careers provided by Norwegian employers. Furthermore, the efficacy of offering retention measures as part of companies’ age-management strategies depends on the individual employee’s ability to make informed choices concerning work and retirement. Paper II provides a descriptive picture of what characterises employees in the private sector who report to know their entitlements to early retirement benefits. What employees know, or at least *believe* they know, concerning their own entitlements to early retirement benefits will most certainly be important for the choice they make between retiring and extending their working life. Papers III, IV and V combine the employer’s and employee’s perspective by investigating the effects of retention measures on early retirement behaviour. The link between the different papers using the DBO model as a heuristic device is illustrated in Figure 3.1.

Figure 3.1 The use of the DBO model in this thesis



A common thread in retirement research is the recognition that older workers experience a range of work histories, and as such have different expectations of work and retirement (Flynn 2010). Phillipson (2013:148) accentuates that this complexity stems from being “*at the heart of the ‘messy’ reality of people’s lives, cutting across individual and household characteristics, work contexts, and wider economic and sociological forces*”. Given this complexity and the recognition that “*there is not a single ‘older workforce’ who reacts uniformly to programmes meant to encourage longer working life*” (Flynn, 2010:308), the DBO model can be criticised for taking an over-simplified perspective on individual behaviour. Nevertheless, I have chosen to use the DBO model as a heuristic device in this thesis precisely because of the model’s simplification of “*the ‘messy’ reality of people’s lives*” (Phillipson, 2013:148). By offering a simplified perspective on individual behaviour, the DBO model helps to highlight and delimit the focus and contribution of this thesis, providing a link between the different papers and analytical terms for structuring the overarching discussion.

Papers I and II provide descriptive pictures of opportunities for extending working life, in terms of employers using financial and social incentives or offering flexible job arrangements to retain their older staff, and beliefs concerning early pension entitlements. However, the opportunities for late careers are arguably shaped by a range of other factors, extending to retention measures in the form of financial and social incentives or flexible job options. Furthermore, the belief structure in the transition between work and retirement is most certainly complex and extends to beliefs concerning early pension entitlements. Adding to this, older workers will have different desires concerning their late careers and none of the papers in this thesis are based on data directly addressing differences in individual desires. Furthermore, given the data used in this thesis (described in chapter 5) and the research questions addressed in the different papers, retirement is conceptualized as decision-making. However, as

mentioned previously, retirement is arguably a longitudinal process that begins long before the actual date of retirement and is not a binary transition experienced by an isolated individual at a specific point in time. Thus, understanding the lack of effect (paper IV), the effects (papers III and V) and the conditional effects (paper V) of the retention measures investigated in this thesis requires an extended review of the factors influencing early retirement practices, and how these factors interact, based on previous research. The following review of the research literature on early retirement extends to the literature presented in the different papers and provides a backdrop for the discussion in the thesis.

4.0 Early retirement or extending working life – a literature review

Applied to the transition between work and retirement, the DBO model assumes that different combinations of desires, beliefs and opportunities provide the basis for the behaviour of the individual (Hedström 2005). This responds to the fact that there have been numerous attempts by academics and practitioners to group older workers according to shared characteristics which might lead them to respond similarly to public and HR policies aimed at extending working life. Applying the DBO model is an acknowledgement of the fact that ‘one size does not fit all’ and thus that people vary according to their desires, beliefs and opportunities in regard to work and retirement (Hedström 2005; Flynn 2010).

It is beyond the scope of this thesis to provide a complete and comprehensive overview of the research literature on early retirement. However, to highlight the contribution of this thesis to our understanding of the retirement puzzle and how this it contributes to the research on retention measures, this section will provide a short overview of the research investigating important determinates affecting older workers’ late careers. The review draws on systematic reviews performed by Flynn (2010), Wang and Shultz (2010), Solem (2012), van Rijn, Robroek et al. (2014) and Hasselhorn and Wenke (2015).

Based on a multilevel understanding of retirement (Beehr and Bennett 2007; Szinovacz 2013), the following literature review is structured according to three broad categories – society, the employers and the employees. The final part of this section consists of an up-to-date review of the research into the efficacy of different retention measures, not presented in the different papers.

4.1 Society

The opportunity structure of older workers is to a significant degree shaped at the societal level, through the design of the social insurance system and labour market regulations (Mulders and Wadensjö 2015). Szinovacz (2013) underscores that at the society or macro-level, retirement can be conceived as an institution, conditional upon the mode of production, reflecting cultural norms and values and how these are manifested in the diverse societal support systems. The possibilities facing older workers are, among other factors, determined by the accessibility and performance of the various pension schemes available, payment levels and corresponding tax rates and pension age regulations (Blöndal and Scarpetta 1999; Midtsundstad 2002; Duval 2003; Larsen 2004; Midtsundstad 2005; Fischer and Sousa-Poza 2006; Gruber and Wise 2007; Larsen and Pedersen 2008; Dorn and Sousa-Poza 2010; Gruber and Wise 2010; Hofäcker 2010; Engelhardt 2012). Desires and beliefs in the transition between work and retirement are also

potentially influenced by ‘age culture’ and norms about the appropriate time to retire, reflected in early retirement schemes (de Vroom 2004; Jensen and Øverbye 2013).

Dorn and Sousa-Poza (2010) use data from the 1997 International Social Survey Programme (ISSP) to investigate the prevalence of ‘voluntary’ and ‘involuntary’ early retirement in 19 industrialised countries⁶. They argue that countries with generous early retirement provisions from the social security system do not only make ‘voluntary’ early retirement more attractive, but also induce firms to ‘push’ older workers into early retirement, thus increasing ‘involuntary’ retirement. Furthermore, their analysis shows that strict employment protection legislation leads to higher levels of ‘involuntary’ retirement. Dorn and Sousa-Poza argue that such legislation makes firms less likely to hire, which is especially detrimental for older workers who usually find it more difficult than younger workers to find a new job. Older workers who cannot continue working for their present employer have few options other than to retire early.

Drawing on Norwegian register data, Vestad (2013) investigates the labour supply effects of a reduction in the lower age limit for early retirement. Based on the analysis, Vestad argues that the results indicated that more than two out of three pensioners would still be working at the age of 63 had the age limit been 64 rather than 62. Using administrative social security data on Austrian private sector workers, Staubli and Zweimüller (2013) also investigate the labour supply effects of changes in the lower age limit for early retirement. They argue that their empirical analysis suggests that the increase in the early retirement age has significantly delayed retirement pension claims. However, the increase in the age limit caused older workers to claim unemployment benefits instead, thus creating a spill-over effect. The study shows that the spill-over effects to disability and other welfare programmes were smaller by comparison with the effect on unemployment.

Desires and beliefs concerning retirement are potentially shaped at the societal level through the prevalence of institutionalized age norms. Early retirement schemes especially are considered to reproduce the culturally-constructed notion of when older workers should leave the labour market (Midtsundstad 2002; Larsen 2004; Esser 2005; Midtsundstad 2005; Jensen and Øverbye 2013). Hence, early retirement schemes underpinned an ‘early exit’ regime by influencing when older workers believe they are supposed to retire, exerting an independent normative effect (Esser 2005; Jensen and Øverbye 2013). The existence of internalized age

⁶ Canada, Cyprus, Denmark, France, Germany, Great Britain, Hungary, Italy, Japan, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland and the USA.

norms concerning retirement timing is documented in empirical studies across European countries (Esser 2005; Radl 2012).

Reviewing research focusing on factors at the societal level shows that both ‘age culture’ and norms, the accessibility and performance of the various pension schemes, age restrictions and employment policies can all affect the work–retirement transition for older workers. The research shows that the design of the social insurance system and labour market regulations to a significant degree shape the *opportunity* structure of older workers. However, it also provides evidence that ‘age culture’ and norms potentially affect an individual’s *desires* and *beliefs* about the appropriate time to retire.

Factors at the societal level are treated more implicitly than explicitly in the papers included in this thesis. This is due to the fact that only Norwegian data, collected within a defined period of time, is used. Many of the factors at the societal level are, as such, fixed. However, policy at the societal level is an important dimension in all of the papers, in the sense that the overall dimension is the Norwegian active-ageing strategy.

4.2 The employers

Older workers’ opportunities for late careers, and the restrictions they potentially face, are to a large degree shaped by employers’ attitudes and their willingness to retain their older staff and to hire older workers (Larsen and Miiller 2006; Loretto and White 2006; Furunes 2008; Flynn 2010; Conen, Henkens et al. 2011; Midtsundstad 2011; Conen, Henkens et al. 2012; Conen, van Dalen et al. 2012; Jensen and Møberg 2012; Mykletun, Furunes et al. 2012; Hilsen and Midtsundstad 2015; Karpinska, Henkens et al. 2015; Midtsundstad 2015; Mulders and Wadensjö 2015). Henkens and van Dalen (2012:215) accentuate that: *“Employers are key players in defining the opportunities for retirement as well as the opportunities for working longer. As a result, the success of policies aimed at delaying retirement depends to a large extent on the actions and attitudes of employers”*. Thus, companies may adopt policies that strengthen, weaken or have no impact at all on the goals promoted in nation-specific welfare policies (Hofäcker 2010).

As governments are urging employers to actively develop policies for extending working lives, and employers have become more aware of the need to adapt to an ageing workforce, research into employers’ age policies has grown (Taylor and Walker 1994; Taylor and Walker 1998; Vickerstaff, Cox et al. 2003; Henkens 2005; Larsen and Miiller 2006; Ose, Bjerkan et al. 2009; Midtsundstad 2011; Henkens and van Dalen 2012; Midtsundstad 2015). The general pattern emerging from studies of American and European employers (Walker and Taylor 1998;

Chiu, Chan et al. 2001; Henkens 2005; Walker 2006; Midtsundstad 2011; Conen, Henkens et al. 2012; Jensen and Møberg 2012; Karpinska, Henkens et al. 2013; van Dalen, Henkens et al. 2014; Midtsundstad 2015) is a lack of measures at the company level to retain older workers faced with the option of making an early exit from working life. Conen, Henkens et al. (2011) argue that the lack of retention measures reflects an overall absence of a corporate focus on older workers.

A review of the literature investigating the use of different retention measures as part of companies' active-ageing policies shows that much research has focused on the prevalence of phased retirement (Latulippe and Turner 2000; Even and Macpherson 2004; Hutchens and Papps 2005; Hutchens and Grace-Martin 2006; Chung 2007; Chung, Kerkhofs et al. 2007; Midtsundstad 2007; van Dalen, Henkens et al. 2009; Hutchens 2010; van Dalen, Henkens et al. 2010; van Dalen, Henkens et al. 2010; Conen, Henkens et al. 2011; Midtsundstad and Bogen 2011; Conen, Henkens et al. 2012; Jensen and Møberg 2012), the possibilities for lifelong learning (McGregor and Gray 2002; Brooke and Taylor 2005; Henkens 2005; Loretto and White 2006; Midtsundstad 2007; van Dalen, Henkens et al. 2009; Midtsundstad and Bogen 2011; Lazazzara, Karpinska et al. 2013; Karpinska, Henkens et al. 2015) and workplace accommodations, including ergonomic measures, decreased workload and age limits for irregular work or shifts (McMullin and Shuey 2006; Midtsundstad 2007; van Dalen, Henkens et al. 2009; Midtsundstad and Bogen 2011; Jensen and Møberg 2012).

Midtsundstad (2015) argues that previous studies have primarily focused on the preconditions for introducing an active-ageing policy at the company level and the motives, aims and measures comprising their active-ageing strategy (Walker 1997; Ilmarinen 1999; Hilsen and Steinum 2006; Walker 2006; Bogen and Midtsundstad 2007; Midtsundstad and Bogen 2014). Furthermore, a relatively restricted number of studies have investigated the prevalence of an active-ageing policy at the company level and the use of retention measures both in Norway (Midtsundstad 2003; Grambo 2005; Midtsundstad 2005; Midtsundstad 2007; Ose, Bjerkan et al. 2009; Midtsundstad and Bogen 2011; Midtsundstad 2014; Midtsundstad 2015) and internationally (Larsen and Miiller 2006; Metcalf and Meadows 2006; van Dalen, Henkens et al. 2006; Eschtruth, Sass et al. 2007; van Dalen, Henkens et al. 2009; van Oorschot and Jensen 2009; Conen, Henkens et al. 2010; Conen, Henkens et al. 2011; Conen, Henkens et al. 2012; Jensen and Møberg 2012). Midtsundstad (2015) highlights that even fewer studies have analysed what characterises companies with an active-ageing policy and different retention measures in comparison with companies who do not invest in their older workers

and/or do not have an active-ageing policy (Midtsundstad 2005; Eschtruth, Sass et al. 2007; Midtsundstad 2011; Jensen and Møberg 2012).

van Dalen, Henkens et al. (2014) argue that few studies comprehensively investigate how different age-based policies and measures are interrelated at the company level, thus making it less clear to what extent the emerging policies are isolated initiatives or an integrated part of the overall HR policy. They argue that studies which comprehensively deal with age-based policies often rely on qualitative case studies (Timmons, Hall et al. 2011; Frerichs, Lindley et al. 2012; Fuertes, Egdell et al. 2013) or focus groups (Loretto and White 2006), making it difficult to generalize the findings to other organisations, especially when the cases have been selected as so-called 'best-practices'. Furthermore, studies covering a number of different policy measures using employers' surveys (Taylor and Walker 1994; Midtsundstad 2011), are often country specific. Thus, as emphasised by van Dalen, Henkens et al. (2014), these studies provide little insight into the degree to which employers' policies are a result of the given domestic institutions and the existing socioeconomic context. Furthermore, they argue that studies of employers' age-based policies are often of a descriptive nature, providing an overview of the range of different policies and measures, but not uncovering the drivers behind these policies.

Based on a comparative survey of European⁷ employers carried out in 2009, Conen, Henkens et al. (2012) find that only a minority of employers apply measures to recruit or retain older workers, and retaining is more common than hiring older workers. Furthermore, their study reveals that attitudes and behaviours towards older workers do not vary according to type of welfare state regime, but that national contexts are highly relevant. The study shows that employers in Sweden and Denmark, both belonging to the social democratic welfare state regime, exhibit considerable variations in attitudes and behaviours. In Denmark, 26 percent of the employers reported to have initiated extra leave as a retention measure, 24 percent had initiated decreased workload and 34 percent reduction of working time. As for Swedish employers, Conen et al. found that only 8 percent offer extra leave, 12 percent decrease workload and 21 percent reduce working time. Compared with the other countries included in the study, Danish employers were above average for offering these types of retention measures, whereas Swedish employers were below average. The study also showed that a greater share of Danish employers (92 percent) considered incentives to combine work and retirement to be an

⁷ Employers in Denmark, France, Germany, Italy, the Netherlands, Poland and Sweden were surveyed in connection with the European ASAP project (Activating Senior Potential in Ageing Europe).

effective governmental measure for encouraging longer working lives, than the share of Swedish employers (68 percent). Furthermore, whereas 37 percent of Swedish employers expected a strong decline in labour productivity with an ageing personnel structure in their own organisation, only 19 percent of Danish employers expected the same.

A number of surveys among Norwegian employers show that they believe economic incentives to be the best measures to prevent early retirement and that retention measures are offered to all employees at a certain age (Midtsundstad 2007; Furunes 2008; Midtsundstad and Bogen 2011). Based on data from different case studies, Midtsundstad and Bogen (2014) argue that the main reason for selecting economic and universal measures, instead of offering non-economic measures taking individual needs into account, is the strong collectively-held values of sameness and 'equal rights to all' in Norwegian working life. Furthermore, the use of universally-applied measures based on economic incentives was chosen due to organisational constraints, middle managers' lack of time and resources, and economic incentives to prioritise individual needs assessments.

Investigating the impact of managers' age norms and stereotypes, Karpinska, Henkens et al. (2013) find that employers favour early retirement over retention of older workers. Furthermore, the study shows that managers who hold higher age norms about the appropriate time to retire were more inclined to retain older workers. The same applied for managers who perceived that older workers, to a greater extent than younger workers, exhibit more "organisational citizenship behaviour" or soft skills/qualities. Karpinska, Henkens et al. (2013) conclude that the chances for retention depend highly on organisational context and managers' attitudes, even when older workers possess valuable assets for their employers. Adding to this, a study by van Dalen, Henkens et al. (2010), based on a survey among Dutch employers and employees, shows that employers and employees shared many of the prevailing stereotype views on soft and hard qualities. The results show that older workers (aged 50 and above) have a comparative advantage in their soft qualities, such as commitment to the organisation, reliability and social skills. A study among Danish employers also shows that older workers are considered to have a comparative advantage in their soft qualities and, compared to younger workers (aged 35 and below), a disadvantage in their hard qualities, such as flexibility, physical capacity, the willingness to learn and skills for handling new technology (Jensen and Møberg 2012).

Investigating the possible effects of the financial crisis of 2008/2009 on managers' attitudes to older workers, Solem (2012) found that managers' attitudes to retaining older workers were

not significantly affected by the crisis; however the results show that older workers are among the least popular employees to recruit in both rising and falling business cycles. Several studies have documented that managers' attitudes and behaviours are not only of importance for whether older workers are retained within the company (McNair and Flynn 2005; Phillipson and Smith 2005; Furunes 2008; Midsundstad 2011), but also for whether older workers themselves choose to retire or extend their working lives (Huuhtanen and Piispa 1999; Hilsen and Steinum 2006; Midsundstad 2006; Midsundstad and Nielsen 2013).

Vickerstaff, Loretto et al. (2007) underline that the advantages of having a positive approach to older workers are not always obvious to companies and managers, due to the fact that questions of cost will always be decisive. A vignette study among Dutch employers completed by Mulders, van Dalen et al. (2014) supports such a notion, showing that employers are far more likely to rehire older employees if they are willing to accept a significantly lower wage after they reach retirement age. Midsundstad (2011) also found that economic considerations were significant for Norwegian employers' willingness to retain older workers aged 62 and above. The results showed that having an occupational pension scheme decreases the probability of offering measures to retain older workers and being in an industry with low costs associated with early retirement further decreases the probability of a company offering such measures. Midsundstad concludes that this indicates that the cost associated with early retirement affects the companies' willingness to retain older workers. Furthermore, the study shows that companies that have signed the IWL agreement, large companies, companies with a HR manager and companies recognising a social responsibility to combat early retirement and/or who were willing to recruit employees above the age of 55, more often had retention measures. Midsundstad also found that labour shortages increased employers' willingness to retain their older staff. Adding to this, studies from the UK, the Netherlands and Germany show that in countries with a deferred compensation scheme, or where wages increase with age, employers are less inclined to hire older workers, especially in jobs that require specific human capital investments. However, older managers and companies with a greater share of older workers are more likely to hire older applicants (Daniel and Heywood 2007; Heywood, Jirjahn et al. 2010; Deelen, de Graaf-Zijl et al. 2014; Heyma, van der Werff et al. 2014).

Using the same comparative survey of European employers as Conen, Henkens et al. (2012), van Dalen, Henkens et al. (2014) investigate the prevalence of three categories of measures – *exit* measures, *employee development* measures, and *workplace accommodation* measures. *Exit* measures include “part-time retirement” and “early retirement schemes”. *Employee*

development measures include “training programs for older workers”, “promoting internal job mobility” and “continuous career development”. Lastly, *workplace accommodation* measures include “reducing working time before retirement”, “decreasing workload for older workers”, “ergonomic measures” and “age limit for irregular work/shift work”. The results indicate that employers apply a dual approach in the management of older workers. Employers may “sort” some older workers “upwards”, encouraging further training and career development, or “outwards” through the promotion of early retirement packages. Nevertheless, the authors accentuate that if employers are given a straightforward choice between the two alternatives, they have a clear preference for promoting early exit routes.

The research on employers’ attitudes and behaviours highlights the key role companies play in facilitating and promoting *opportunities* for late careers. The policies and behaviours adopted by employers define to a large extent the opportunities older workers are presented with in their late career, such as the opportunity to opt for phased retirement or to access lifelong learning or other workplace accommodations which may be important for continuing working. Furthermore, it seems reasonable to assume that the policies and behaviours adopted by employers will affect the *desires* and *beliefs* older workers possess concerning their late careers. Older workers who feel wanted and needed by their employers will most certainly have a belief in the opportunity for continuing working within the same company and presumably feel a greater desire to do so. If, on the other hand, employers do not provide their older staff with opportunities for extending their working lives, older staff members will most likely not have the belief that doing so is a viable option, at least within the same company, or the desire to carry on working.

The employer’s perspective has received little attention in previous research and as accentuated by van Dalen et al. (2014), few studies comprehensively investigate how different age-based policies and measures are interrelated at the company level. Thus, by addressing the employer’s perspective and investigating how companies facilitate and promote opportunities for late careers, the first paper included in this thesis makes an important contribution to our knowledge of employers’ retention efforts. Furthermore, this paper provides a descriptive picture of how different measures are interrelated at the company level and is the first to report on the developments in Norwegian companies’ retention efforts over time.

4.4 The employees

Extending working life not only requires that older workers possess the desires and beliefs that induce them to prolong their career, but also that an opportunity structure is in place which

makes continuing working a viable option. Radl (2013) shows that only those who are healthy and have a job, or the chance of getting one, can opt for continued work, and only those who have accumulated the necessary pension entitlements or who hold significant assets can afford to retire early. Thus, “*the opportunity structure of older workers is first and foremost a function of their level of employability and pension entitlements*” (Radl 2013:656).

The impact of health on retirement timing has received much attention in the literature on early retirement behaviour and is established as an important determinant for when older workers leave the labour market (Midtsundstad 2002; Midtsundstad 2005; Datta Gupta and Larsen 2007; Börsch-Supan, Brugiavini et al. 2009; Datta Gupta and Larsen 2010; Brown and Vickerstaff 2011; Gørtz 2012; van Rijn, Robroek et al. 2014). In their systematic review, van Rijn, Robroek et al. (2014) found that self-perceived poor health was a risk factor for making an exit from paid employment through a disability pension, unemployment and, to a lesser extent, early retirement. Adding to this, a Norwegian study by Blekesaune and Veenstra (2010) shows that subjective poor health, impaired physical function and depression do not increase the likelihood of early retirement among women. However, among men, subjective poor health impacts the timing of early retirement.

Brown and Vickerstaff (2011) challenge the assumption that health can be treated as an unproblematic independent variable. They found that the subjective experience of health and its effect on decisions concerning work and retirement was strongly evident; however, understanding how similar symptoms of morbidity resulted in widely varying decisions/outcomes required taking the socialized context into account. Their study shows that direct interpersonal experiences shaped by social structures helped explain the prevalence of health pessimism (Brown and Vickerstaff 2011). Thus, the importance of the subjective experience of health on an individual’s desires to continue working and beliefs about being able to do so will potentially vary according to interpersonal experiences and the socialized context. Additionally, van den Heuvel and de Wind (2015) show that many studies put a sole focus on the relationship between subjective health and employment participation. According to van den Heuvel and de Wind, these studies hardly consider the complexity of the relationship or possible interactions, thus they emphasise the need for more research using a multifactorial and interdisciplinary approach.

Among the demographic characteristics included in analyses of retirement patterns, gender appears to be a popular factor for testing; however, Flynn (2010) highlights that its influence is strongly debated. Women have a higher life expectancy than men and are often less able to

afford retirement, thus some studies suggests that women are more disposed to extending their working lives when compared with men (Kanfer, Wanberg et al. 2001; Adams and Rau 2004). An objection towards such an approach is that the impact of gender on retirement behaviour is a doubled-sided coin (Flynn 2010). Often having truncated and interrupted careers, as well as being doubly discriminated for being both older and a woman, can make it difficult for women to secure jobs which allow them to extend their working lives (Gough 2001; Bardasi and Jenkins 2002; Dixon 2003; Flynn 2010).

For the purposes of research, labour market and retirement behaviour are often conceptualized as individual decisions. Nevertheless, Vickerstaff (2015) shows that there is an increasing agreement that individual preferences for extending working life or opting for early retirement are rooted in households and immediate social networks. Hence, the family is an important domain which potentially influences the retirement decision and the late careers pursued by older workers (Szinovacz 2003; Wang and Shultz 2010). Studies show that the spouse's work status, spousal support, and marital and dependent care statuses influence the decision to retire (Henkens 1999; Szinovacz, DeViney et al. 2001; Henkens and Van Solinge 2002; Midtsundstad 2002; Hank 2004; Midtsundstad 2005; Hallberg 2007; Wang, Zhan et al. 2008; Syse, Solem et al. 2014). The 'joint retirement hypothesis' postulates that couples have a tendency to make a joint exit from working life, coordinating their retirement (Hank 2004; Lancee and Radl 2012). However, a study by Wang, Zhan et al. (2008) shows that family-related variables, such as marital status and 'marital quality' were not related to the decision to retire. Furthermore, a study by Syse, Solem et al. (2014) shows that neither the marital quality, spouses' health or care needs predicts early exits. Furthermore, and somewhat surprisingly, the study reveals no differences according to gender.

Flynn (2010) finds that research on the influence of marital status on extending working life has been somewhat contradictory, making the impact of having a spouse less clear-cut. Moreover, Wang and Shultz (2010) emphasise that there have been relatively few studies investigating the importance of martial and family relations for early retirement behaviour, making it too early to conclude. However, after reviewing studies from Norway, the UK, the United States and Australia, Vickerstaff (2015) concludes that having a working partner strongly increases the likelihood of staying employed in older years. Furthermore, the review shows that there is evidence for a gender asymmetry in joint decision-making, in the sense that men's trajectories often exert greater influence on the timing of retirement (Vickerstaff 2015).

The impact of social class on retirement behaviour has received increased recognition since the pioneering work by Titmuss (1958) identifying “two nations of pensioners”. According to Flynn (2010), the study shows that pensioners’ experiences in retirement are shaped by social class, familial types, pension provisions and social networks. Even though Titmuss did not consider the extended working life, Flynn accentuate that the two-nations paradigm highlights the fact that older workers with a higher status job are better educated, enjoy greater income security and also usually enjoy greater freedom in making choices regarding the work–retirement transition (Flynn 2010).

Drawing on a social stratification perspective and analysing social variability in retirement timing, Radl (2013) finds that the impact of occupational class on retirement behaviour is strong and, furthermore, irreducible to other socio-economic variables such as education and job tenure. The analysis shows that the groups of workers who retire the latest are found at the lower and upper ends of the occupational ladder. Routine workers continue working due to low pension entitlements and limited access to company-sponsored retirement plans. The late retirement among individuals in the service class appears to stem from being sheltered from labour market constraints, which often lead to involuntary retirement among the working class (Radl 2013). This corresponds with other studies showing that routine workers often retire due to health problems, heavy professional burdens and long careers, whereas professionals, administrators and officials are more inclined to retire due to loss of motivation and focus on autonomy and psychological stress upon making the retirement decision (Midtsundstad 2002; Midtsundstad 2005; Wang and Shultz 2010). Furthermore, the study by Radl (2013) demonstrates that social class influences retirement timing in virtually the same way for men and woman. Radl emphasises that within the same class both men and woman are apparently subject to very similar constraints in their late careers, but ‘push’ and ‘pull’ factors have a markedly different effect according to class position. Routine workers have a much higher propensity to retire due to health problems and lay-offs, whereas workers in other classes have a much lower risk of being pushed out of the labour market (Radl 2013).

Based on a review of the literature, Waginger (2015) finds evidence that intrinsic factors, such as the meaningfulness of work, autonomy and work enjoyment, have a greater influence on retirement decisions than extrinsic factors, such as health and financial factors. A Dutch study comparing older and younger employees, found that older workers were less concerned with career opportunities but appeared to have had a greater need for intrinsically challenging and fulfilling work to remain motivated (Boumans, de Jong et al. 2011). These results add to

the findings of a large meta-analysis by Kooij, De Lange et al. (2011) that found a significant positive correlation between intrinsic motivators and age. Furthermore, the results from the meta-analysis revealed a negative correlation between age and extrinsic factors (Kooij, De Lange et al. 2011).

Bonsdorff and Ilmarinen (2012) accentuate that low job control, poor work ability and job dissatisfaction have been identified as some of the most central work-related psychological variables associated with retirement decisions. Siegrist, Wahrendorf et al. (2007) used the SHARE⁸ survey to study the importance of working conditions in terms of psychosocial quality of work, effort–reward balance and job control for early retirement preferences among European workers in ten different countries⁹. In spite of major institutional differences between the countries’ pension systems, the study showed that poor quality of work is significantly associated with intended early retirement. Furthermore, the study revealed that the importance of the effort–reward balance was almost non-existent for workers from southern Europe, but of vital importance for workers from Denmark, the Netherlands, France and Germany. Adding to this, Larsen (2008) investigated whether quality of work life affected men and women’s retirement planning differently, using survey data on a sample of Danish workers and retirees born in 1940 and 1945 merged with longitudinal register data. The results show that job demands lower planned retirement age, whereas higher earnings, work hours satisfaction and opportunities to use skills increased planned retirement age. However, Larsen found that the impact of earnings was the largest for men, and only men attached importance to job control and job security. These results suggest, as emphasised by Larsen, that men are more influenced by the quality of work dimension and that an employer-initiated effort directed towards retaining older workers will not necessarily be as effective for female as for male workers.

Alongside the importance of health, the significance of financial status has been an important topic in the research literature on early retirement (Gruber and Wise 1998; Gruber and Wise 2002; Gruber and Wise 2007; Gruber and Wise 2010; Engelhardt 2012). Lain (2015) reviews the literature investigating the importance of financial factors and pension provisions for the employment and retirement behaviour of older people. The review shows that financial incentives do influence employment in older age. However, this influence is complicated by other factors, such as health, gender and household context, as well as the individual’s financial understanding and awareness. Lain (2015) underlines that research needs to consider the

⁸ Survey on Health, Ageing and Retirement in Europe.

⁹ Austria, Germany, Sweden, the Netherlands, Spain, Italy, France, Denmark, Greece and Switzerland.

broader policy context within countries, in addition to the financial factors that lead employees to leave the labour market early.

Level of education is a main criterion for job allocation on the labour market and type of job most definitely has an impact on retirement timing. However, as underscored by Radl (2013), the effect of job type on early retirement behaviour is better captured by class membership. A second way in which educational attainment may influence when older workers opt for an early exit is through biographical pacing; more time spent in education implies later labour market entrance and as a consequence less work experience at a given age. Conversely, a longer working life is related to increased risk of health problems, larger pension entitlements and a possible decrease in work attachment (Radl 2013). Furthermore, the ‘human-capital hypothesis’ assumes that highly skilled and experienced workers acquire new skills more easily, preventing their knowledge becoming obsolete, hence making retention efforts desirable for employers wanting to maintain an experienced workforce (Conen, Henkens et al. 2011). Hence, education may be an important covariate in order to be able to control for individuals’ abilities to adapt to an ever-changing labour market – an ability which brings better chances of continuing working while facing rapidly changing demands to skills and knowledge (Wang and Shultz 2010).

Older employees are the key actors in their own working lives and play the main role in determining their own late careers. Nevertheless, as this literature review illustrates, there is a great complexity of potential impact factors at the individual level, shaping *desires*, *beliefs* and *opportunities* in the transition between work and retirement. It is beyond the scope of this thesis to fully address this complexity; however, for the purpose of the analyses presented, it is necessary to consider, as far as possible, the relative importance of potential impact factors at the individual level. Such consideration is first and foremost related to the fact that the individuals studied in papers III, IV and V represent a selected group of employees, as detailed in the different papers and further elaborated on in the overall discussion in chapter 7 of this thesis.

4.5 Retaining older workers

Despite the substantial body of research into different determinates of retirement timing and the existing research literature on policies and measures adopted by employers, very few studies investigate the significance of different retention measures. Based on a systematic review, Cloostermans, Bekkers et al. (2014) argue that the evidence on effects of interventions to promote longer working lives is both insufficient and limited. Accordingly, they conclude that: “*Additional intervention studies are needed to support evidence-based decision making to*

prolong a healthy and productive working life for ageing workers” (Cloostermans et al. 2014:1). A review of the research literature on HR management and interventions for promoting extended working lives by Hilsen and Midsundstad (2015) also shows that there is a need for more studies on the relationship between type of HR policies and interventions and retirement behaviour.

In their review, Cloostermans, Bekkers et al. (2014) include only randomized controlled trials (RCTs) and quasi-experimental intervention studies published in the period between January 1992 and February 2014. Furthermore, they restricted the study population to workers aged ≥ 40 years and where the measured outcomes were positive indicators of labour force participation, i.e. (early) retirement, work ability and work productivity. After searching five¹⁰ electronic databases for relevant studies using these criteria, they included four papers in their review – Strijk, Proper et al. (2013), de Boer, Burdorf et al. (2007), Goine, Knutsson et al. (2004) and de Boer, van Beek et al. (2004).

Strijk, Proper et al. (2013) investigate a worksite lifestyle intervention among workers aged ≥ 45 years in two academic hospitals in the Netherlands. Using a randomized controlled trial design, 367 workers received a six-month lifestyle intervention¹¹ aimed at improving lifestyle behaviours. The results showed no significant differences in vitality, work engagement, productivity or sick leave between the intervention and control group workers after either a six- or 12-month follow-up.

Using a randomized controlled trial design de Boer, Burdorf et al. (2007) investigated the effectiveness of individual counselling sessions and an education programme on work ability and disability pension withdrawal for employees in the construction industry in the Netherlands. The study was designed as a prospective intervention study with a longitudinal follow-up. The aim of the intervention was to enhance the individual work ability and prevent an early exit on the disability pension. The individual counselling sessions and education programme consisted of educational courses, one-on-one counselling, coaching at the workplace and occupational relocation if needed. The full programme lasted up to six months. The results showed an improvement in the work ability for the intervention group, however, there were no significant differences in the share of employees receiving a disability pension between the intervention and control group following the intervention.

¹⁰ PubMed, EMBASE, PsychINFO, SciSearch and Social SciSearch.

¹¹ The intervention consisted of weekly guided group sessions of yoga and one workout, as well as one weekly aerobic exercise session, without face-to-face instruction, and three individual coach visits aimed at changing workers' lifestyle behaviour with goal-setting, feedback and problem-solving strategies.

Evaluating an occupational health intervention programme in a large international company in the Netherlands, de Boer, van Beek et al. (2004) conclude that the programme proved to be a promising intervention in the prevention of early retirement. The study was completed using a randomized controlled trial design and the intervention consisted of a programme starting with identifying individual predictors for early retirement by focusing on health factors, work-related factors and social/psychological factors. After the identification process, a management plan was developed in which solutions were to be identified and executed by the occupational physician, collaborating with the employee's supervisors and personnel managers. The study included 116 employees divided into an intervention (n = 61) and a control group (n = 55), who were all age 50 or older and had indicated in a baseline questionnaire that they would not be able to work up to their retirement age. The results show that the employees in the intervention group had better work ability, less burnout and better quality of life six months after the intervention. Two years after the intervention no differences were found between the intervention and the control group.

Goine, Knutsson et al. (2004) compared sickness absence and disability retirement at two paper and pulp manufacturing plants in Sweden before (1989-93) and after (1994-98) they had received financial support from the Working Life Fund and implemented vocational rehabilitation activities. Based on the comparison of these two manufacturing plants, Goine et al. conclude that the size of the financial investments in rehabilitation programmes did not impact the level of sick absence or disability pension in Sweden during the early 1990s.

There is little systematic knowledge of whether and to what extent active measures provided by companies for their older workers actually have an effect on older workers' retirement behaviour. The few Norwegian studies that have evaluated the impact of retention measures for older workers on early retirement behaviour show that offering such measures in 2005 did not always help to delay retirement (Midtsundstad, Hermansen et al. 2012; Midtsundstad, Nielsen et al. 2012). However, the aim of these studies was not to evaluate the impact of individual retention measures, such as additional leave, phased retirement or bonuses, but to evaluate the overall effect of being offered retention measures. Furthermore, very few companies had initiated such measures by 2005 compared with the situation in 2010 (Hermansen and Midtsundstad 2015). Thus, the purpose of this thesis is to provide a more finely-graded analysis of the effects of the measures used by companies to retain older workers and to increase understanding of the effect or lack of effect of retention efforts at the company level.

5.0 Data and methods

In order to address the employer's perspective (paper I), the employee's perspective (paper II) and these two perspectives combined (papers III, IV and V) in understanding and explaining the significance of retention efforts in Norwegian working life, this thesis draws on different surveys and a combination of survey and register data. These datasets are analysed using different regression techniques and are described in greater detail below. The current section will also provide a more in-depth discussion of the measurements of the different dependent variables in the five papers constituting this thesis. The final part of this section is devoted to a discussion of methodological issues and limitations of the difference-in-differences approach used in papers III, IV and V.

5.1 The data

The different datasets use in the five papers are described and summarised in Tables 5.1 and 5.2. Paper I is based on two company surveys carried out among representative samples of Norwegian companies in 2005 and 2010 (the surveys are documented in Gravem and Villund (2007) and Midsundstad and Bogen (2011)). The 2005 survey was carried out in collaboration with Statistics Norway (SSB) and the 2010 survey in collaboration with Respons Analyse AS, a Norwegian research firm. Both samples were restricted to companies with ten or more employees and the sample universe was the Register of Business Companies¹² in the respective years. The 2005 survey initially had a sampling restriction requiring that one or more of the employees were 60 years or older. The 2010 survey initially had no such age restrictions, however, to make the two surveys more comparable, we choose only to include companies where one or more of the employees were 55 years or older. Thus, the initial sample of 800 companies was reduced to 723 companies.

In paper II we use a survey carried out among a representative sample of workers in the private sector. A random sample of 3,000 workers was extracted from the Employer's and Employee's register (AA-Registeret) in the summer of 2010 by the Norwegian Labour and Welfare Administration (NAV). The gross sample consisted of 1,823 individuals who were contacted by phone and asked to participate in the survey. A net sample of 913 (50 percent of the gross sample) chose to participate in the survey. The survey was conducted by telephone during the fourth quarter of 2010 by Respons Analyse AS.

¹² The Register of Business Companies is responsible for registering all Norwegian and foreign business companies in Norway.

Papers III, IV and V use a linked employer-employee dataset consisting of the 2010 company survey used in paper I, merged with registry information on all of the companies' employees during the period 2000–2010. The 2010 survey provides information on company characteristics and whether additional leave, phased retirement or bonuses are used as retention measures and, if so, in which year the measures were introduced (Midtsundstad and Bogen 2011).

Statistics Norway (SSB) merged the 2010 survey with register data on individual employees, providing information on working life prior to retirement, retirement behaviour (the usage of the disability pension and the contractual early retirement scheme - AFP), gender, age, level of education, occupation, working hours, income and debts, marital status, spouse retirement behaviour and household information.

	Paper I	Paper II	Paper III
Data sources	Survey	Survey	Survey & register data
Level of measurement	Companies	Individuals	Companies & individuals
Sample universe	The Register of Business Companies	Private sector employees	All 61- and 62-year-olds employed in companies with 10 or more employees
Units	2005: Companies with ten or more employees and at least one employee aged 60 or older 2010: Companies with ten or more employees	Employees in the private sector age 18 to 67	Employees aged 61 and 62 employed in companies with 10 or more employees
N	2005: 713 2010: 723	890	15,231 employed in 361 companies
Initial sample size	2005: 713 2010: 800	917	800 companies
Restrictions	2010: Includes only companies with at least one employee aged 55 or older	Includes only employees aged 18 to 66 and at working at least 25 percent of full-time equivalent	Includes only companies in business between 2000 and 2010 with the AFP scheme
Period	2005 and 2010	2010	2000 to 2010
Data structure	Cross-sectional and pooled cross-sectional	Cross-sectional	Pooled cross-sectional
Documentation	2005 survey: Gravem and Villund (2007); 2010 survey: Midtsundstad and Bogen (2011)	Midtsundstad and Hyggen (2011)	The company survey: Midtsundstad and Bogen (2011)

Of the initial sample of 800 companies that participated in the 2010 survey, only 361 are included in the analyses presented in paper III, 442 in paper IV and 475 in paper V. The main

reason for these reductions is that only companies offering the contractual pension scheme (AFP scheme) are included in the analyses. A total of 215 private sector companies were therefore excluded for not offering the contractual pension scheme. Furthermore, due to the design of the analyses presented in papers III and IV, only companies having introduced the respective retention measures from 2005 were included. However, this only led to the exclusion of 32 companies in paper III and 15 in paper IV. This restriction did not apply to the analyses in paper V, due to a somewhat different set-up of the analysis (the methodological approach is detailed under 5.4 Methods).

	Paper IV	Paper V
Data sources	Survey & register data	Survey & register data
Level of measurement	Companies & individuals	Companies & individuals
Sample universe	All 61- and 62-year-olds employed in companies with 10 or more employees	All 61-year-olds employed in companies with 10 or more employees
Units	Employees aged 61 and 62 employed in companies with 10 or more employees	Employees aged 61 employed in companies with 10 or more employees
N	18,174 employed in 442 companies	12,513 employed in 475 companies
Initial sample size	800 companies	800 companies
Restrictions	Includes only companies with the AFP scheme and in business between 2000 and 2010	Includes only companies with the AFP scheme and in business between 2000 and 2010
Period	2000 to 2010	2000 to 2010
Data structure	Pooled cross-sectional	Pooled short longitudinal
Documentation	The company survey: Midtsundstad and Bogen (2011)	The company survey: Midtsundstad and Bogen (2011)

The sample was further restricted by including only companies with one or more employees aged 61 or 62 and offering the respective retention measures with an entitlement age set at 62 years. Furthermore, some of the companies did not exist during the whole period being studied and were accordingly not included in the analyses. The analyses in papers III and IV were based on pooling repeated cross-sectional datasets on all employees aged 61 or 62, and in paper III a total of 15,231 individuals are included, whereas the analyses in paper IV comprise a total of 18,174 individuals. The analyses in paper V were based on pooling short longitudinal datasets on all employees aged 61 and following these individuals for the two subsequent years, compromising a total of 12,513 individuals.

5.2 Ethical considerations

This PhD is part of the project “Senior Policy for Whom? The Distributional Consequences and Effects of Initiatives to Promote Active Ageing” and the data collection and research conducted within this project has been approved by the Norwegian Data Protection Official for Research (NSD) and The Norwegian Data Protection Authority (Datatilsynet). Thus, the ethical and legal aspects of this research have been thoroughly evaluated. I have to the best of my ability handled, stored and presented the data used in this project, so that no individuals or groups of people can be identified, according to the restrictions set by the Norwegian Data Protection Official for Research and The Norwegian Data Protection Authority. Furthermore, when presenting my results I have avoided using ageist and other inappropriate language and the stereotypical representation of individuals or groups.

5.3 Measurement of the dependent variables

The measurement of the dependent variables in the five papers is summarised in Table 5.3. Paper I investigates what characterises those Norwegian companies offering measures to retain their older workers. The five dependent variables in the paper are based on the responses of the HR manager (in the case of smaller companies, the general manager) in the respective companies to the following questions: “Does the company offer workers of retirement age (62+) specific measures to encourage them to work longer?”, and if “Yes”: “Which types of measures do you offer?”.

	Paper I	Paper II	Paper III	Paper IV	Paper V
Dependent variable/-s	Retention measures	Knowledge of pension entitlements	Withdrawal of a <u>full or partial</u> contractual pension	Withdrawal of a <u>full</u> contractual pension	Withdrawal of a <u>full or partial</u> contractual pension
Scale	0 or 1 0 to 5	0 or 1	0 or 1	0 or 1	0 or 1
Source of information	Survey	Survey	Register data	Register data	Register data

As emphasised in the paper, a possible limitation is the fact that the two surveys were conducted without the collaboration of a second respondent from within the same company, for the validation of the answers provided. Thus, we do not have any other source of information to validate whether the respective companies actually have initiated the retention measures in question. However, as accentuated in the paper, there is no reason to believe that the surveyed

information is contaminated by systematic sampling errors, which might otherwise threaten the overall validity of the results presented in the paper.

Paper II investigates what characterises private sector workers reporting to not know their early pension entitlements or type of occupational pension plan, using two binary dependent variables. The two dependent variables are based on the respondents' responses to the questions: "Which type of occupational pension scheme do you have with your current employer? - defined contribution/defined benefit/not sure" and "Are you entitled to a contractual early retirement pension scheme (AFP) with your current employer? – yes/no/not sure". Those who answered "not sure" were given the value "1", whereas those who answered "Yes" or "No" were given the value "0". The two dependent variables are, as emphasised in the paper, based on questions about facts. We know that all¹³ private sector employees have either a defined contribution or defined benefit pension scheme after the introduction of the mandatory occupational pensions act in 2006. Furthermore, about half of all private sector employees have access to the contractual early retirement scheme (Nergaard 2009). Nevertheless, as emphasised in the paper, it is possible that some of the respondents think they have pension entitlements they do not have, thus the dependent variable is strictly speaking a measurement on a belief that might or might not be true. Furthermore, a relevant objection to measuring knowledge or a belief as a dummy-variable is the fact that we are unable to reveal anything about the extensiveness of the knowledge or intensity in the belief the respondent possesses. However, in this paper we wanted to investigate what characterises those private sector employees that do not know their early pension entitlements and those who report to know. Thus, we found these questions to be sufficient for our analytical purposes.

Retirement behaviour is the dependent variable in papers III, IV and V and is measured as withdrawing a contractual early retirement pension. Thus, in this thesis, retirement is understood as a withdrawal of pension benefits rather than as a withdrawal from employment – the latter being the norm in sociological literature (Radl 2013). In papers III and V, those who withdraw a *full or partial* contractual pension were given the value "1", whereas those who do not withdraw a contractual pension were given the value "0". However, retirement is not necessarily of a binary nature in the sense that a person works full- or part-time and then stops working altogether upon reaching the age of being eligible to retire. Henkens and van Dalen (2012:215) accentuate that: "*Although retirement has traditionally been thought of as a discrete and abrupt discontinuation of work, today's 'retirement' can be characterised as a process that*

¹³ As described in the paper, there are a few exceptions according to number of hours worked per week.

can take multiple forms, offering the option of a gradual transition from full time work to 'full time' retirement". Thus, a person can arguably be more or less 'retired' given the hours of work combined with a partial pension, before being completely 'retired'. This was taken into account when measuring retirement behaviour in paper IV. In paper IV, those who withdraw a *full* contractual pension were given the value "1" on the dependent variable, whereas those who withdraw a partial contractual pension or no contractual pension were given the value "0".

I chose to measure the dependent variable in paper III and V as described due to the fact that in most of the companies using "additional leave" or a "bonus" as a retention measure, a condition on these measures is that the employee does not withdraw any contractual pension benefits. In paper IV, providing a phased retirement is by definition an arrangement to prevent older workers from opting for full-time early retirement. However, as accentuated in this paper, several studies have suggested that flexible working hours can have a positive effect on the labour supply of older workers, providing a more phased transition into retirement and thereby extending the working lives of older employees (Delsen 1996; Bredgaard and Tros 2006; Taylor 2006; Wadensjö 2006; Gielen 2009; Johnson 2011). Thus, a possible alternative dependent variable in paper IV could have been the total numbers of hours worked in combination with a partial pension. Using total numbers of hours worked as a dependent variable would have provided a more finely-graded measure of the labour supply of older workers. The reason I chose not to total number of hours as a dependent variable is that Norwegian register data only contains contractual working hours and not actual working hours. Thus, this information will not capture flexible working-time arrangements which are non-contractual.

5.4 Methods

In paper I of this thesis both multivariate logistic and ordinary least squares (OLS) regression are applied to investigate the three research questions. To investigate what characterises Norwegian companies offering specific retention measures to retain their older workers, we choose to use logistic regression, given the binary nature of the different dependent variables. However, to investigate the intensity in retention efforts we used OLS regression, given that the dependent variable in this analysis was the sum of the retention measures offered, and as such can arguably be treated as a continuous variable. In paper II we investigate knowledge of pension entitlements among private sector workers using binary dependent variables and choose therefore to apply multivariate logistic regression. Both papers are based on cross-sectional data and therefore contribute descriptive analyses of the employer's and the employee's perspectives.

Papers III, IV and V are all based on a difference-in-differences approach and the aim was to investigate the effect of the three most common retention measures offered in Norwegian working life. In paper III and IV I use both logistic regression and a linear probability model (not reported), calculating the treatment effect using within- and between-group-differences (or *variation*). Whereas in paper V we used a linear probability model and the treatment effect was calculated using only within-individual variation, known as individual fixed effects. The following paragraphs elaborate on the similarities and differences using within- between-group-variation and within-individual variation to estimate treatment effects. Furthermore, applying a difference-in-differences approach is based on some fundamental assumptions which warrant a more in-depth discussion of possibilities and limitations. Given the fact that difference-in-differences is the main methodological approach of this thesis, I have devoted space to a more comprehensive description of the difference-in-differences approach and a discussion of assumptions which must be made.

The counterfactual model for causality and difference-in-differences

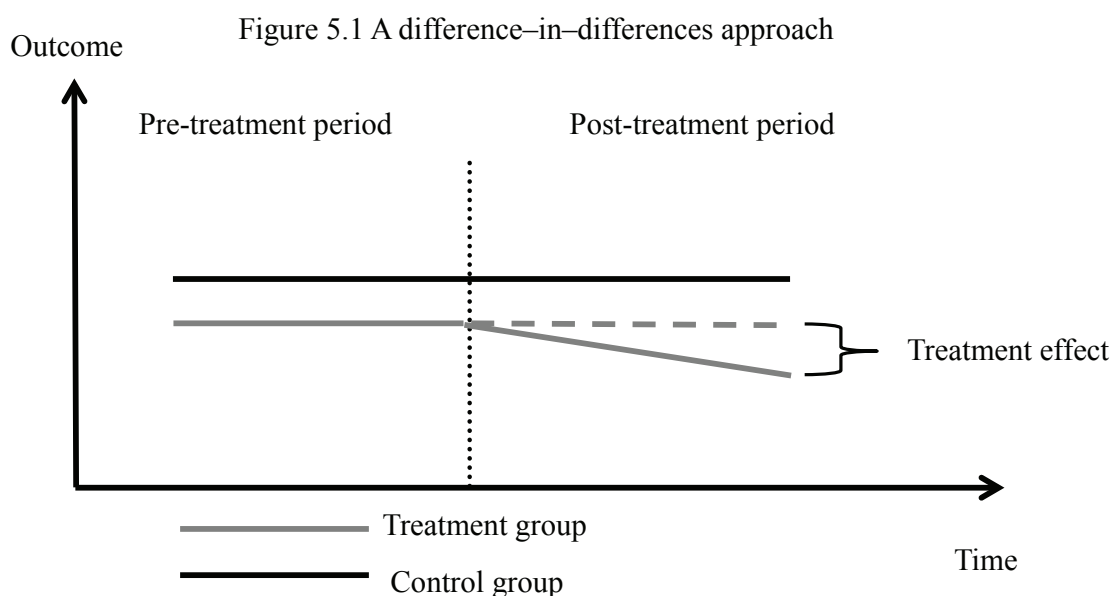
When using observational data to making causal inference, the social sciences are confronted with the fundamental problem of being unable to provide a definite answer to ‘what-if’ questions. The fundamental problem of causal inference stems from the fact that we can only observe one treatment state for each individual, making the counterfactual value on the outcome variable unobservable. *“Simple cause-and-effect questions are the motivation of much empirical work in the social sciences, even though answers to cause-and-effect questions may not always be possible to formulate given the constraints that social scientists face in collecting data”* (Morgan and Winship, 2007:3). Thus, using observable or non-experimental data makes the challenges to justifying causal claims considerable (Morgan and Winship 2007; Finseraas and Kotsadam 2013).

The counterfactual model of causality has become the dominate approach to causality within empirical social research and offers a unified framework for addressing causal questions, bringing experimental language back into observational data analysis (Morgan and Winship 2007; Finseraas and Kotsadam 2013). The counterfactual model of causality addresses the fundamental problem of causal inference by making the key assumption *“that each individual of the population of interest has a potential outcome under each treatment state, even though each individual can be observed in only one treatment state at any point in time”* (Morgan and

Winship 2007:5). This assumption is clearly articulated in the difference-in-differences approach which is the principal methodological strategy of this thesis.

Papers III and IV – using within-between-group variation

For a binary cause, the counterfactual framework of the difference-in-differences approach presupposes two well-defined causal states, labelled as treatment and control, to which all of the individuals in the population of interest could be exposed (Morgan and Winship 2007). When using within-between-group variation to estimate the treatment effect, as in papers III and IV, these two causal states (being offered a retention measure at the age of 62 or not) define the treatment and control groups, and the outcome of interest (early retirement behaviour) is observed for the two groups in two different time periods, labelled the pre- and post-treatment period, as illustrated in Figure 5.1. The treatment group is exposed to a treatment (the retention measure) in the second period, whereas the control group is not exposed during either of the two periods (Lechner 2011).



In papers III and IV the effect of the retention measures was estimated on the basis of calculating a within-group-difference, which is the difference in the relative risk of retiring early from the pre-treatment to the post-treatment period for each group and thereafter comparing these differences, which is the between-group-difference. Under the assumption that the trend in the relative risk of retiring early for the treatment group would have been equal to the trend in the control group in the absence of the retention measure, the between-group-difference is the

calculated causal effect of being offered the retention measure (Angrist and Pischke 2008; Finseraas and Kotsadam 2013). The difference-in-differences estimator using within-between-group variation can be written as follows (Hill, Griffiths et al. 2012):

$$\hat{\delta} = (\bar{Y}_{\text{Treatment, After}} - \bar{Y}_{\text{Control, After}}) - (\bar{Y}_{\text{Treatment, Before}} - \bar{Y}_{\text{Control, Before}})$$

$\bar{Y}_{\text{Control, Before}}$ = sample mean for control group before treatment
 $\bar{Y}_{\text{Treatment, Before}}$ = sample mean for treatment group before treatment
 $\bar{Y}_{\text{Control, After}}$ = sample mean for control group after treatment
 $\bar{Y}_{\text{Treatment, After}}$ = sample mean for treatment group after treatment

The difference-in-differences estimator is then calculated using regression:

$$y_{it} = \beta_1 + \beta_2 TREAT_i + \beta_3 AFTER_t + \delta (TREAT_i \times AFTER_t) + \varepsilon_{it}$$

y_{it} = the observed outcome for individual i in period t

$AFTER_t$ = indicator variable that equals one in the period after treatment ($t = 2$) and zero in the period before treatment ($t = 1$)

$TREAT_i$ = a dummy variable that equals one if individual i is in the treatment group and zero if the individual is in the control group

Paper V – using within-individual variation

In the final paper (V) in this thesis we used within-individual variation to estimate the effect of the investigated retention measure. Estimating the difference-in-differences estimator using only within-individual variation and a linear probability model can be written as follows (Angrist and Pischke 2008):

$$y_{it} = \alpha_i + \lambda_t + \beta x_{it} + \beta_2 TREAT_{it} + \beta_3 AGE62_i + \beta_4 AGE63_i + \varepsilon_{it}$$

where, $i = 1 \dots n$, $t = 1, \dots, T_i$

y_{it} = the observed outcome for individual i in period t

α_i = unobserved constant for each unit (unit fixed effects)

λ_t = unobserved constant for each time period (time fixed effects)

x_{it} = observable time-varying factors

$TREAT_{it}$ = a dummy variable that equals one if individual i is treated at time t (age 62)

$\beta_3 AGE62_i$ = a dummy variable that equals one when individual i turns 62

$\beta_4 AGE63_i$ = a dummy variable that equals one when individual i turns 63

ε_{it} = unobservable time-invariant factors

In this paper we exploited the fact that the data used includes information on when the retention measure was initiated at the company level and that the measure is only offered at age 62. Thus, instead of using within-between-group variation to calculate the effect, we used only within-individual variation and investigated whether 61-year-olds being treated at age 62 ($\beta 2TREAT_{it}$) have a lower probability of retiring early in the next two years of employment. $\beta 2TREAT_{it}$ equals one if the individual is treated at age 62 and is still one for those treated at age 63. $\beta 3AGE62_i$ provides an estimate of the overall probability of retiring at age 62 and $\beta 4AGE63_i$ provides an estimate of the overall probability of retiring at age 63.

Assumptions

Since observational data only makes it possible to observe the potential outcome for each individual in one treatment state at any point in time, it is impossible to observe or directly calculate the causal effect at the individual level. Thus, in the counterfactual modelling tradition, here illustrated by the difference-in-differences approach, the focus is on estimating average treatment effects. However, doing so requires the introduction of defensible assumptions which allow for the estimation of the average unobservable counterfactual values. Morgan and Winship (2007) accentuate that if these assumptions are defensible and suitable methods for constructing an average contrast from the data chosen, an average difference in the values on the outcome variable can be given a causal interpretation.

The key identifying assumption when using within-between-group variation, as in papers III and IV, is that the treatment and control group would experience an equal trend in the outcome being studied in the absence of treatment, known as the equal trend assumption. Thus, the trend in outcome in the control group is expected to represent the counterfactual trend in the treatment group. Entities experiencing no change in their properties or activities are not as such ignored, but constitute the comparison group which enables the determination of the treatment effect for those entities experiencing a change in their properties or activities (Angrist and Pischke 2008).

Assuming an equal trend is considered to be the strongest assumption when using within-between-group variation to estimate the effect of a treatment. Finseraas and Kotsadam (2013) argue that the plausibility of the assumption that the trend in the two groups would be identical in the absence of treatment must be discussed and that the degree of plausibility will vary from study to study. However, they underscore that this is a less restrictive assumption than having to assume the groups, and not the trends, are equal on all unobservable characteristics, which must be assumed if estimates based on cross-sectional data are interpreted causally.

Nevertheless, a challenging factor is that there are no formal statistical tests to investigate whether the equal trend assumption holds true. Only indirect tests for the equal trend assumption are available, tests which may or may not provide support for the assumption, but no definite answer (Angrist and Pischke, 2008, Lechner, 2011). Furthermore, investigating the equal trend assumption presupposes data for multiple periods, which makes it possible to visually compare the trends in the outcome for the treatment and control group, as illustrated in Figure 5.1. If the trends in the outcome of both groups are quite equal in the pre-treatment period, this provides support for the equal trend assumption.

Data from multiple periods also allows for running a ‘placebo difference-in-differences’ test to further investigate the equal trend assumption. With sufficient periods of data, the ‘placebo difference-in-differences’ can be constructed as if the treatment was introduced during the pre-treatment period, when it is known that the treatment group had not been treated. If the ‘placebo difference-in-differences’ test does not yield significant results, this strengthens the assumption that the trends are equal on unobservable covariates. Thus, it seems reasonable to assume that the difference between the control and treatment group is time-invariant and consistent with unobservable group-specific time-invariant heterogeneity (Mora and Reggio 2012).

The equal trend assumption in paper III is investigated by comparing the percentage of 61- and 62-year-olds withdrawing a (full or partial) contractual pension in the next two years of employment, working in companies offering additional leave as a retention measure and the percentage working in companies without such an arrangement for older workers, during the period under consideration. In paper IV the equal trend assumption is also investigated by comparing the retirement behaviour in companies offering phased retirement as a retention measure and companies without such an arrangement. However, the outcome variable in paper IV is restricted to the withdrawal of a full contractual pension in the next two years of employment among employees still working at the age of 61 and 62. In both papers I argue that the descriptive figure provides visual evidence of an equal underlying trend in the pre-treatment period. However, this is of course a discretionary assessment and thus there is no definite answer if and to what degree the equal trend assumption holds in the two analyses. However, to further investigate the equal trend assumption I performed a ‘placebo difference-in-differences’ test and in both papers this test did not yield significant results, providing further support for assuming equal trends.

Studying the levels and trends in the outcome over time for the treatment and control group helps to address a well-known threat to causal inference, namely the possibility of reversed

causation (Finseraas and Kotsadam 2013). In this thesis, a key question is whether companies offering retention measures experience comparably higher levels of early retirement in the period before initiating retention measures, making them relatively more predisposed to retain their older workers than companies without such measures. If so, the level of early retirement in the companies without retention measures is not a credible counterfactual outcome for the treatment group and the comparison may hide a possible effect of offering retention measures. In both paper III and paper IV, the descriptive figures show that there are no significant differences between the treatment and control group in the levels of early retirement in the pre-treatment period. Thus, these figures provide visual evidence for assuming that reversed causality is not a problem in the two analyses.

The analyses in papers III and IV are based on data consisting of repeated cross-sections of 61- and 62-year-olds still working and their retirement behaviour in the following two years of employment. Thus, the analyses do not include the same individuals over time, but compare groups for which the composition may potentially change. Thus, it is essential to discuss to what degree I can assume that the two groups being compared are really comparable over time and that an effect or the absence of an effect is not the result of a change in the composition in the treatment or control group from the pre- to the post treatment period. Ugreninov and Birkelund (2013) underline that the basic principle of a difference-in-differences approach is to eliminate all observable and unobservable differences between the two groups which are constant over time, by calculating the within-group difference over time and subtracting this from the between-group difference over time. Thus, based on the assumption of equal trends, the difference-in-differences approach eliminates all time-invariant differences between the treatment and control group. Furthermore, in both papers the comparability of the two groups is addressed by investigating descriptive statistics for individual and company-level characteristics. The descriptive tables are divided by group and period, allowing for an investigation of between-group differences and differences over time, both within and between the two groups. The comparison shows some differences between the two groups and some changes within the two groups from the pre-treatment to the post-treatment period. To account for these differences, the individual and company characteristics are included as covariates in the analyses. As shown in both paper III and paper IV, there is almost no change in the difference-in-differences estimator when including the different covariates.

The advantage of using individual fixed-effects, as in paper V, is that such models control for all time-independent unobservable heterogeneity that could be correlated with the main

independent variable and thereby produce an over- or under-estimated coefficient. An individual fixed-effects model uses only variation within the same unit (individual) over time and therefore produces reliable estimates on the effects of changes in different independent variables on different outcomes, controlling for all time-invariant explanatory variables and time-independent unobservable heterogeneity which is fixed within the individual. Thus, compared with using within-between-group variation to calculate a treatment effect, the main advantage is that we do not have to make the equal trends assumption or consider the comparability of the treatment or control group over time concerning time-invariant explanatory variables (Finseraas and Kotsadam 2013).

Selection problems

Angrist and Pischke (2008) argue that selection problems are the most serious challenge for empirical social research. This study is not an exception. As argued in papers III, IV and V, offering retention measures is a choice made by each individual company and hence the group of Norwegian companies offering such measures is self-selected. Nevertheless, I assume the distribution of older workers in the treatment and control group to be random, arguing that very few employees change jobs after the age of 60, enabling them to actively seek out companies with retention measures for older workers (Midtsundstad, Hermansen et al. 2012; Lien 2013; OECD 2013). However, the assumption that there is no selection bias is challenged by the possibility that the choices employers make with regard to offering retention measures are dependent on staff characteristics. In which case, employers effectively select workers into the treatment group on the basis of their characteristics. I argue that such a possibility is not very likely, given that the retention measures investigated in this thesis are given to all employees at a certain age, irrespective of characteristics other than age. Thus, employers do not select specific workers to be treated based on their characteristics, but offer all of their staff members these measures when they pass the age threshold (Midtsundstad and Bogen 2011).

Another potential problem for making causal inference based on observational data is the possibility of omitted variable bias, leading to incorrect estimates of the treatment effect. In this thesis the problem arises if there are variables, not included in the analyses, which effect both the introduction of retention measures at the company level and at the same time effect the likelihood of retiring early (Finseraas and Kotsadam 2013). A possibility could be that the models used do not adequately control for the introduction of the IWL agreement and that this agreement has affected both the likelihood of introducing retention measures at the company

level and early retirement behaviour among older workers in these companies. In paper I we find that the “number of years of being an IWL company” was not significantly correlated with the introduction of retention measures in the 2010 survey and conclude that “...*having signed the IW-agreement no longer seems to be a significant characteristic of the companies taking action*” (Hermansen and Midtsundstad 2015:1242). Furthermore, the results in paper III show that, with regard to early retirement behaviour, 61- and 62-year-olds working in companies that signed the IWL agreement in 2001 or between 2002 and 2010 do not differ significantly from 61- and 62-year-olds working in non-IWL companies. On the other hand, in paper IV the results show that 61- and 62-year-olds working in companies that signed the IWL agreement in 2001 or between 2002 and 2010 have a slightly higher likelihood of withdrawing a full contractual pension, compared to those working in non-IWL companies. Considering the omitted variable bias is a discretionary judgement, like in all analyses using observational data, it is not possible for me to be absolutely sure that the “back-door” is completely closed (Morgan and Winship 2007). However, as for the introduction of the IWL agreement, I argue that this variable is sufficiently controlled for in the analyses.

In paper V the omitted variable bias only applies to time-varying factors, given the fact that all time-invariant variables are controlled for when using individual fixed-effects. However, in this analysis we have also included age as an independent variable, thus in addition to controlling for all unit-specific fixed effects, we also control for time-fixed effects and as such control for all time-varying effects which are identical for all of the individuals included in the analyses. The difference-in-differences estimator is calculated by including a dummy variable which equals one if the individual is offered the retention measure at age 62. Thus, a potential threat to the analyses would be that employees in companies being offered the retention measures at age 62 are disproportionately affected by some exogenous shock at the time they receive the offer and that it is this shock and not the retention measure which explains the reduction in the likelihood of retiring early (Finseraas and Kotsadam 2013). However, I have no reason to believe that this is in fact the case and argue that the results presented in paper V are reliable and valid estimates on the effect of the retaining bonus. The analyses in papers III and IV have also been performed as individual fixed-effects models, producing the same results as the estimates presented in these two papers. Thus, these results have been validated using a more conservative and robust approach for calculating the difference-in-differences estimator.

The analyses in papers III, IV and V are based on information about whether the companies have introduced the retention measures in question and not information about whether older

workers have actually received these measures as a ‘treatment’. Thus, the analyses are based on the initial treatment assigned and not on the treatment actually received, known as an ‘intention-to-treat’ analysis. A potential problem with using an ‘intention-to-treat’ design is that if a large share of individuals included in the treatment group did not actually receive the treatment, the early retirement behaviour of these individuals does not indicate anything about the efficacy of being offered the specific retention measures (Gupta 2011). However, as I argue in papers III, IV and V, these measures are available to all employees from the age of 62, thus, I find it quite unlikely that a large proportion of the employees working in companies offering these retention measures have not been offered or not known about these retention measures upon deciding whether or not to retire early on the contractual pension. Furthermore, as shown in paper II, employees approaching retirement age have a higher likelihood of reporting to know their early pension entitlements, which arguably reflects collection of information and that this retirement planning phase also involves the identification of possibilities offered by the employer, such as retention measures.

Concluding remarks

Defending the use of a difference-in-differences approach rests on the researcher’s ability to establish evidence for the fact that treatment actually did take place, to whom and when. The treatment in a difference-in-differences approach often takes the form of an intervention at one point in time (i.e. introducing a retention measure). Establishing this fact or that the event actually did take place is crucial for motivating the use of a difference-in-differences approach. Thus, causation is not derived from analysis of empirical regularities, also referred to as robust dependence, but established through an approach based on experimental methods where the cause or the treatment in some sense must be manipulable (Goldthorpe 2001). Hence, a possible causal effect identified by using a difference-in-differences approach will presumably be a local effect, restricted in time and space. Thus, as emphasised by Goldthorpe (2000:145), “*in non-experimental social research, attempts to determine the effects of causes will lead not to results that ‘never die’ but only to ones that have differing degrees of plausibility*”.

I will argue that the data used in this thesis is well suited for applying a difference-in-differences approach since it allows the possibility of establishing the fact that the treatment actually did take place, to whom and when. However, as previously accentuated, applying a difference-in-differences approach is based on some fundamental assumptions which warrant an in-depth discussion of possibilities and limitations. In this chapter I have described these

assumptions and provided a more in-depth discussion of the choices and measures I have made to address them.

6.0 Summary of the papers

Paper I: Retaining older workers – analysis of company surveys from 2005 and 2010

Authors: Åsmund Hermansen and Tove Midtsundstad

Published in: International Journal of Manpower 2015, Vol.36, Issue 8

Purpose – The purpose of this paper is to shed light on developments in Norwegian companies' active-ageing policies, and hence offer insight into what characterises those Norwegian companies offering measures to retain their older workers.

Design/methodology/approach – The research questions are investigated using data from two surveys carried out among a representative sample of Norwegian companies in 2005 and 2010. The two datasets are analysed both separately and jointly, being merged to obtain a pooled cross-section dataset. Both multivariate logistic and linear regression are applied.

Findings – The proportion of companies offering retention measures, as well as the extensiveness of their retention efforts (the number of different measures offered), has increased considerably from 2005 to 2010. What characterises these companies however is surprisingly similar in 2005 and 2010. The retention efforts of Norwegian companies seem to be part of a holistic approach to active ageing. Offering a number of different retention measures is more common among companies having initiated “measures to facilitate lifelong learning” and “measures to prevent health problems or reduced work capacity”. The financial incentives embedded in the contractual early retirement scheme seem also to have a significant impact on retention efforts.

Originality/value – The employer's perspective has received little attention in previous research and the authors are the first to report on developments in Norwegian companies' retention efforts over time. Knowledge about what characterises employers offering such measures will be important for future efforts to increase employment rates among older workers, which is an aim for most European countries.

Keywords Older workers, Active-ageing policy, Companies, Retention measures

Paper II: Kjennskap til arbeidsmarkedsbaserte pensjoner i privat sektor (Knowledge of labour-based pensions in the private sector)

Authors: Åsmund Hermansen and Tove Midtsundstad

Published in: Søkelys på arbeidslivet 2013, No. 1-2, Vol. 30, p. 107–123/ Norwegian Journal of Working Life Studies 2013 No.1-2, vol. 30, p. 107–123

Som følge av endringene i pensjonssystemet de senere årene har den avtalefestede pensjonen (AFP) og tjenstepensjonsordningene fått økt betydning både for pensjonsnivået og for den enkeltes friheten til å velge avgangstidspunkt. God kunnskap om egne pensjonsrettigheter er derfor blitt langt viktigere enn tidligere. I denne artikkelen belyses befolkningens kunnskap om de arbeidsmarkedsbaserte pensjonsordningene, og særlig dem som ikke kjenner sine tjenstepensjons- og AFP-rettigheter. For å belyse problemstillingen benyttes data fra en surveyundersøkelse blant arbeidstakere i privat sektor fra 2010. Undersøkelsen viser at en av fire ikke vet om de har en innskudds- eller ytelsesordning, og at en av fem arbeidstakere ikke vet om de har rett til AFP-pensjon eller ikke. Om man har kunnskap om sine AFP- og tjenstepensjonsrettigheter er primært knyttet til inntektsnivå. De med høy inntekt har best oversikt. Det kan ha sammenheng med høyt lønnede lenge har hatt tjenstepensjonsordninger, og at tjenstepensjoner tradisjonelt har betydd mest for de med høy lønn. Noe overraskende sett i forhold til tidligere forskning har kjønn og utdanningsnivå ingen betydning for kunnskapsnivået. Det kan ha sammenheng med at ordningene er bedriftsbaserte og at AFP er avtalebasert, slik at alle grupper regelmessig mottar informasjon om ordningene enten fra personalansvarlig, pensjonsleverandør eller fagforening, uten selv å måtte oppsøke tilgjengelige informasjonskilder.

Following the pension reform in Norway, the contractual pension (AFP) and occupational pension schemes hold increased importance for workers both in terms of the pension replacement rate they can expect and when they can choose to withdraw from the labour market. Having good knowledge about one's pension entitlements is therefore even more important than before. In this paper we investigate how many and which workers lack knowledge about their occupational pension scheme and entitlement to the contractual early retirement pension (AFP). The data used in the paper is from a survey carried out among workers in the private sector in 2010. The results show that one in four do not know if they have a defined contribution or a defined benefit occupational pension scheme, and one in five do not know whether they are entitled to an early retirement pension. Knowledge of early retirement entitlements and type of occupational pension is primarily related to age and income – those with high income and

the oldest have the best overview. Given the findings of previous research, it is somewhat surprising that gender and education is uncorrelated with knowledge of pension entitlements. These results may derive from the fact that the occupational pension schemes and the contractual early retirement scheme are company based or based on collective wage agreements. Thus, all employees receive regular information about their pension schemes from their HR manager, insurance company or union without having to actively seek such information.

Paper III: Additional leave as the determinant of retirement timing – Retaining Older Workers in Norway

Author: Åsmund Hermansen

Published in: Nordic Journal of Working Life Studies 2014, Vol.4, No.4.

Faced with a rapidly aging labour force, increasing the labour supply of older workers has become an important goal for European countries. Offering additional leave to older workers with the option of withdrawing a contractual pension (contractual early retirement pension - AFP) has become a widespread retention measure in Norwegian companies. Thus far, no studies documenting the effects of individual retention measures on early retirement behavior have been published. The aim of this paper is to examine whether offering additional leave impacts the relative risk of withdrawal of a contractual pension. The analysis uses a difference-in-differences approach and examines whether offering additional leave to counteract early retirement impacts the retirement decisions of 61- and 62-years-olds within the next two years of their employment, controlling for a range of different individual and company characteristics. This is achieved by comparing changes and differences in the individual relative risk of retiring early on the contractual pension (AFP scheme) in the period 2001-2010 among older workers in companies with and without the retention measure. The analysis shows an overall average increase in the relative risk of a 61- or 62-year-old worker retiring on the contractual pension between 2001 and 2010, however, among older workers employed in companies offering additional leave there has been a decrease in the relative risk. The effect of additional leave is evident both before and after controlling for the selected individual and company characteristics. Thus, the analysis shows that offering additional leave as a retention measure reduces the individual relative risk of withdrawing a contractual pension (AFP) in the next two years of employment among older workers between the age of 61 and 62 years.

Paper IV: Retaining older workers – The effect of phased retirement on delaying early retirement

Author: Åsmund Hermansen

Published in: Nordic Journal of Social Research 2015, Vol.6.

Introduction: Phased retirement involves reducing working time in the final years before retirement. The aim of phased retirement is to extend working careers and retain older workers who would otherwise opt for full early retirement. This paper investigates the effect of offering phased retirement on early retirement behavior in Norway.

Method: The data used in the analysis covers the period between 2000 and 2010 and comprises all employees between 61 and 62 years of age (N= 18 174) who were employed in any of the 442 companies that participated in a 2010 survey carried out by Fafo Institute for Labour and Social Research and Response analyse. I use a difference-in-differences approach and logistic regression, which enables the measurement of changes in the individual relative risk of retiring full-time on the contractual pension (the AFP scheme) before and after the introduction of phased retirement as a retention measure.

Results: The results show that working in a company that offers reduced working hours for older workers does not have an effect on the relative risk of a 61 or 62-year-old withdrawing a full contractual pension in the next two years of their employment. This result is evident both before and after controlling for a range of known individual risk factors, as well as after controlling for company characteristics.

Discussion: In the search for suitable measures for retaining older workers, offering phased retirement may still be part of the answer. Though my analysis does not support the idea that more flexible working hours is a decisive factor for those who choose to opt for full early retirement, a possible next step could be to investigate the impact of offering flexible working hours on the employment duration of those who do remain in employment.

Paper V: The effect of retaining bonuses on delaying early retirement – financial incentives revisited

Author: Åsmund Hermansen and Tove Midtsundstad

Submitted to: Work, Aging and Retirement

In this paper we analyze the effect of the retaining bonus on early retirement behavior using a unique dataset consisting of a Norwegian employer survey from 2010 combined with register

data on all older employees in the period 2000 to 2010. The retaining bonus is one of the most common retention measures offered by Norwegian companies to prevent their older workers from retiring early. The most common arrangement is a lump sum of between 10,000 and 25,000 Norwegian Kroner (between 1,100 and 2,600 Euros), which was less than the mean monthly pay before tax in Norway in 2010. In spite of this modest sum, our analysis shows that retaining bonuses of 20,000 NOK or more do reduce the probability of 61-year-olds retiring in the next two years of employment. However, the effect is more than three times higher for men than for women. Furthermore, when separating according to income group, our results indicate that the retirement decision of older men in the top third of the income distribution may be affected both by the financial incentive and by a “signal effect” embedded in the retaining bonus. For women in the lowest third of the income distribution on the other hand, the effect of the retaining bonus first and foremost seems to derive from the increased financial gains from continuing working.

Keywords: Early retirement, Older workers, Retention measures, Financial incentives

7.0 Discussion

Ageing is a new and emerging social policy area in Europe and active ageing has become the leading policy response to the economic and demographic implications of population ageing (Walker 2008). Instead of being a broad-based policy area, active ageing in Norway consists of programmes directed at employers and employees, narrowly focusing on ‘active’ measures aiming at prolonging working lives and strengthening the incentives to keep on working. This narrow focus of the active-ageing policy may be seen as an extension of the work approach, which has been the dominant paradigm in the formulation of social policy in Norway for the last twenty years (Ervik, Helgøy et al. 2006; Øverbye and Stjernø 2012).

This thesis is concerned with one aspect of the Norwegian active-ageing strategy in particular – the effects of measures at the company level used to retain older workers faced with the option of retiring early. The purpose of this thesis is to address the research questions: *What are the preconditions for retaining older workers and what are the effects of measures offered by employers to alter early retirement?*

As mentioned in the introduction to this thesis, retirement behaviour is best understood as a multilevel phenomenon. Research focusing on a single level of inquiry, be it society, employers or individuals, does not capture the complexity of different factors and levels shaping older workers’ desires, beliefs and opportunities in the retirement transition phase (Hedström 2005; Beehr and Bennett 2007; Szinovacz 2013). The multilevel nature of retention efforts derives from the fact that employers play a key role in defining the *opportunities* for extending the working lives of their employees and older workers must have the *beliefs* and *desires* that induce them to carry on working. Thus, in order to address the multilevel nature of the overarching research questions, I have investigated both the *opportunities* provided by employers for working longer and important aspects of the *beliefs* held by employees in the transition between work and retirement, before investigating the effect of the three most common retention measures in Norwegian working life. The overarching research questions have been explored through three sub-research questions, investigating the employer’s (paper I) and employee’s perspectives (paper II), and these two perspectives combined (papers III, IV and V).

What are the most common retention measures offered by Norwegian employers and what developments have there been in their retention efforts?

The first paper (I) in this thesis addresses the employer's perspective and provides a descriptive picture of what characterises Norwegian companies offering retention measures. Mulders and Wadensjö (2015) accentuate that, adding to the lack of understanding of how employers' attitudes and behaviour affect the labour supply of older workers, there is a need for more longitudinal research on employers' attitudes and behaviour towards older workers. The first paper in this thesis addresses the longitudinal development in employers' retention efforts using two surveys from 2005 and 2010. Previous research on employer's attitudes and actions underscores the key role companies play in facilitating and promoting opportunities for late careers.

The descriptive statistics presented in paper I confirm that also for Norway "*good practice in the employment of older workers remains a minority pursuit*" (Walker, 2006:81). Only a minority of Norwegian employers report that they offer retention measures to induce their older employees to extend their working lives. Furthermore, the paper shows that the most common retention measures offered are "additional leave", "phased retirement" and "bonuses¹⁴". We argue that "phased retirement" is a retention measure that directly targets the work ability or work situation of older workers. "Additional leave" and "bonuses" are, on the other hand, essentially just economic incentives that do not involve any adaptation of the work situation or strengthening of the employee's work ability.

The analysis shows that the characteristics of companies offering retention measures were quite similar in 2005 and in 2010. Generally, offering a number of different retention measures is more common among companies having initiated "measures to facilitate lifelong learning" and "measures to prevent health problems or reduced work capacity". Hence, companies' efforts to retain older workers seem to be an integrated part of a holistic approach to active ageing, focusing on prevention and retention throughout employees' working lives (Taylor 2006). Furthermore, companies with a "contractual pension" and/or operating within "public administration" are more inclined to retain their older workers.

Do workers know their entitlements to early retirement benefits?

¹⁴ In paper I we refer to this retention measure as a "bonus or seniority-based pay increase", however the most common arrangement is a one-time cash reward, thus in the discussion I only refer to this measure as "bonuses" or a "retaining bonus".

All employees in the public sector are covered by the contractual early retirement scheme, however, in the private sector only about 50 percent¹⁵ work in a company covered by a collective wage agreement, which means that they are entitled¹⁶ to a contractual pension. Thus, in this paper we investigated knowledge of pension entitlements among private sector workers. The result indicates that knowledge is correlated with age and income – high income earners and the oldest are more likely to report to know their early pension entitlements. Somewhat surprisingly, given previous research concerning knowledge of pension entitlements, the results do not indicate any differences between men and women or according to type of industry. As we argue in the paper, these results may be due to the fact that the contractual pension is based on collective wage agreements and that employees therefore receive regular information from their HR manager or union representative concerning their early pension entitlements. The analysis also shows that those who report to be concerned about their pension entitlements and/or have used online information services, report to know their entitlements. Furthermore, the descriptive statistics presented in the paper show that a large majority report to know their early pension entitlements; less than twenty percent report that they do not know.

Do the most common retention measures, as identified in paper I, reduce early retirement among older employees?

Paper III investigates whether offering additional leave impacts the relative risk of withdrawing a contractual pension among 61- and 62-year-olds within the next two years of their employment. The analyses show that offering additional leave, usually between 5 and 10 extra days off, reduces the relative risk of retiring early. Thus, in paper III, I conclude that the analyses do provide evidence for additional leave affecting retirement timing among older workers in Norway.

Paper IV is based on the same methodological approach as paper III, and investigates the effect of phased retirement on the withdrawal of a full contractual pension. The results show that working in a company offering reduced working hours does not have an effect on the relative risk of a 61- or 62-year-old withdrawing a full contractual pension in the next two years of their employment. However, as I underline in the paper, in the search for suitable retention measures, offering phased retirement may still be part of the answer. In the paper I have only

¹⁵ The covered percentage differs according to different age groups and is higher among older workers.

¹⁶ To be eligible, individuals must also have worked in a company with a contractual pension for a set number of years.

investigated whether offering reduced working hours affects the relative risk of withdrawing a full contractual pension, thus my analyses do not shed light on the duration of employment of those who continue working. As I propose in the paper, a possible next step could be to investigate the duration of employment of those who remain in employment.

Paper V investigates the effect of the retaining bonus on early retirement, using individual fixed effects in combination with a linear probability model, investigating the overall effect and the effect of the retaining bonus depending on gender and income group. The results show that retaining bonuses of 20,000 NOK or more do reduce the probability of 61-year-olds retiring in the next two years of employment. However, the effect is more than three times higher for men than for woman. Furthermore, when separating according to income groups, we find that only men in the top third and women in the lowest third have a significantly lower probability of retiring early when offered a retaining bonus.

7.1 Synthesizing discussion

The common thread in research on retirement is the recognition that older workers have different work histories and as such have different expectations of work and retirement (Flynn, 2010). Thus, *“there is not a single ‘older workforce’ who reacts uniformly to programmes meant to encourage longer working life”* (Flynn, 2010:308). Furthermore, the heterogeneity of needs, problems and challenges facing different industries and groups of employees will presumably provide different desires and beliefs concerning retirement, and most definitely different opportunities in the retirement transition phase. In spite of this complexity, the most common retention measures used in Norwegian working life and investigated in this thesis are based on a ‘one-size-fits-all’ approach, in the form of standardized retention measures. In each of the three papers investigating the effects of these standardized retention measures, it is argued that retention efforts may prove to be more efficient if targeted according to the heterogeneity of needs, problems and challenges facing different industries and groups of employees. Nevertheless, the question still remains why additional leave and bonuses do affect early retirement behaviour. Furthermore, both additional leave and phased retirement are based on a reduction in working time, but only additional leave proves to have an effect on retirement timing. I will argue that these results must be interpreted and understood based on the time period being investigated in this thesis and the group of employees being offered these measures.

Research shows that both ‘age culture’ and norms, the accessibility and performance of the various pension schemes, age restrictions and employment policies can affect the work–

retirement transition for older workers. Furthermore, there is evidence that ‘age culture’ and norms potentially affect an individual’s desires and beliefs about the appropriate time to retire. Despite the fact that factors at the societal level are treated more implicitly than explicitly in the papers included in this thesis, the profound change in the ageing discourse at the societal level after signing the IWL agreement in 2001 provides the parent frame for interpreting and discussing the results presented. Even if this thesis has a sole focus on Norway, making many of the important factors at the societal level fixed during the period being investigated, I argue that there has been a considerable within-variation concerning the increased focus on extending working life in the period being studied.

The Norwegian ‘age culture’ is, according to de Vroom (2004), the “extreme” case in Europe, in the sense of being work-oriented; it is based upon a broadly accepted and institutionalized norm that older workers have a right and a duty to participate in the labour market. Nevertheless, the signing of the Inclusive Working Life Agreement in 2001 has arguably not only increased awareness among employers of the importance of facilitating longer working lives, but has also contributed to strengthening the work-oriented culture in the population as a whole. The Center for Senior Policy¹⁷ presents each year the so-called ‘Senior Policy barometer’; two questions being asked every year since 2003 are “at what age do you consider people to be old?” and “when do you plan to retire?”. In 2003, and on average, the answer to the first question was age 55 and people wanted to retire when they were 61. Since 2003 the numbers have steadily increased each year and in 2015 the average notion of the age of an old person was 58, whereas people on average wanted to retire when they were 66 (Dalen 2015).

A valid objection to these figures is that there is often a discrepancy between what people desire to do or believe and what they actually end up doing. However, figures from the National Labour and Welfare Administration (NAV) show a strong increase in the expected years remaining in employment for a 50-year-old in the same period. In 2003 the expected years remaining in employment for a 50-year-old was on average 9.7 years, whereas in 2010 it was 10.9, increasing further still to 11.5 in 2014 (Haga 2015). Thus, there has undoubtedly been an upwards trend in the desires, beliefs and opportunities for working longer. A strengthening of the work culture in an already work-oriented society will arguably improve the foundation for the success of active measures aimed at prolonging the working lives of older workers.

¹⁷ The Center for Senior Policy is an NGO which aims to raise awareness of the importance of addressing demographic change and the critical contribution of older workers in the labour market.

The labour market situation does undoubtedly affect the situation for older workers and it must be underscored that Norway has, since the beginning of 2000, enjoyed a period of strong economic expansion. Even during periods of economic downturn for the rest of Europe and strong increases in the unemployment rates, the expected years remaining in employment for a 50-year-old in Norway has been steady or rising (Haga 2015). Therefore, when interpreting the results presented in this thesis, the great within-variation concerning the work orientation, the strengthening of an already work-oriented culture and the favourable labour market situation witnessed in Norway during the period being studied forms an important backdrop.

Preconditions for retaining older workers

The voluntary role assigned to Norwegian companies in reaching the goals set in the IWL agreement illustrates that, at the most basic level, companies act as ‘mediators’ of nation-specific welfare and labour market policies. Policies adopted at the company level may strengthen, weaken or have no impact at all on the goals promoted in nation-specific social and labour policies (Hofäcker 2010). Thus, as previously accentuated, the individual company is the focal point for age management and adjustments to an ageing workforce, regardless of the actions of policymakers (Walker 2006).

The introduction of the IWL agreement in 2001 marks a shift in Norwegian welfare and labour market policy, with an increased focus on companies’ social responsibility (Midtsundstad 2011). The IWL agreement manifested an acknowledgment of the fact that a significant change in early retirement behaviour will derive from changes to employers’ policies (Vickerstaff, Cox et al. 2003). The ‘active’ part of Norway’s active-ageing strategy is based on employers’ willingness to make use of retention measures and, I argue, as Henkens and van Dalen do (2012:215), that: *“Employers are key players in defining the opportunities for retirement as well as the opportunities for working longer. As a result, the success of policies aimed at delaying retirement depends to a large extent on the actions and attitudes of employers”*. Extending working life not only requires that older workers have the desires and beliefs that induce them to prolong their career, but also that an opportunity structure is in place which makes continuing working a viable option. Policies adopted by companies influence the opportunities older workers have to extend their working lives and offering retention measures signals the employer’s wish for older workers to continue working in the company.

Paper I in this thesis underpins a notion of a considerable within-variation in the ageing policy at the company level from 2005 to 2010. We found that when comparing the prevalence

of retention measures in 2005 with the situation in 2010, all of the retention measures investigated in the paper, with the exception of “adaptation of the work situation”, had increased significantly. Furthermore, the results show the retention efforts to be significantly more extensive in 2010 than in 2005, measured as the number of retention measures offered. In the paper we interpreted these results by arguing that it seems reasonable to assume that increased awareness of the need to support the continued labour participation of older workers, advocated by government, employers’ and employees’ organisations and the media, has underpinned this development. The heightened focus on the need to adopt age-management policies created by different advocates, or what I have denoted as within-variation, and the introduction of the IWL agreement, have urged more companies to adopt retention measures. In addition, it seems reasonable to assume that the policies and actions adopted by employers, providing opportunities for late careers, may affect the *desires* and *beliefs* older workers possess concerning the work–retirement transition. Older workers who feel wanted and needed by their employer will most certainly have a *belief* in the opportunity for continuing working within the same company and presumably feel a greater *desire* to do so.

The opportunities for late careers are arguably shaped by a range of other factors, extending to retention measures in the form of financial and social incentives or flexible job options. Health is a key element in determining the opportunity structure for older workers and, as previously emphasised, only those who have a job and are healthy can choose to continue working. Furthermore, the working conditions and working environment within the company are arguably of significant importance for whether older workers desire to keep on working or believe they are able to. As accentuated in papers III, IV and V, the individuals being studied are all above the age of 60 and, since a large proportion of employees retire on the disability pension before they turn 60, can be assumed to be healthier than the population of older workers as a whole. Thus, I cannot rule out the possibility that the effect of additional leave and bonuses as measures for retaining older workers presupposes a target group which constitutes a group of older workers who are relatively healthier and more work able than the population of older workers as a whole. Hence, the effects must be interpreted on the basis that this selected group of employees represents a consolidation of desires, beliefs and opportunities which provide the necessary foundation for these measures to effect the decision to retire. This group of older workers may have a desire to continue working, they believe they are able to keep up and their health provides them with the opportunity to do so; being offered additional leave or a bonus may just be the triggering mechanism for them to stay on.

A limitation of the data I apply in this thesis is the lack of variables controlling for differences in health, working environment and working conditions between the group of older workers being offered retention measures and the older workers that do not receive such offers. However, as I argue in papers III and IV, controlling for “sick absence”, “level of education”, “occupation” and “industry” does presumably capture important differences in health, working environment and working conditions between the group of older workers being offered these retention measures and the older employees not receiving such opportunities. Furthermore, as I have previously accentuated, based on the assumption of equal trends, the difference-in-differences approach eliminates all time-invariant differences between the treatment and control groups. Thus, any non-time varying differences in health, working environment and working conditions between the two groups are eliminated in papers III and IV. In paper V we control for all non-time varying differences in health, working environment and working conditions at the individual level and as such do not have to make the equal trend assumption.

Although we had only limited access to information about working environment and working conditions, the analyses in paper I indicate that companies offering different retention measures not only enhance the opportunities for extending the working lives of older workers, but also make supportive efforts throughout an employee’s working life. The analyses show that companies offering the retention measures investigated in this thesis also to a greater extent offer measures to prevent health problems or reduced work capacity and measures to facilitate lifelong learning. Offering such measures may signify acknowledgement of the fact that earlier stages of a working life may influence the opportunities employees are presented with at later stages. The analyses in paper I indicate that companies offering retention measures are characterised by an HR policy that is supportive overall, which may potentially enhance the opportunities for older workers to extend their working lives in the later stages. Thus, as we emphasised in paper I, the retention efforts in these companies seem to be part of a holistic approach, focusing on prevention and retention throughout employees’ working lives (Taylor 2006). The effect of additional leave and bonuses may therefore to some extent presuppose a holistic approach to active ageing, providing better conditions for ‘ageing’ within the same company, implying that the effect of these measures would have been somewhat smaller in the absence of a holistic approach to active ageing.

The efficacy of offering retention measures as part of companies’ age-management strategies depends on the individual employee’s ability to make informed choices concerning work and retirement. If employees are imperfectly informed or are otherwise incapable of

making informed choices, offering retention measures may not alter retirement behaviour. What employees know, or at least *believe* they know, concerning their own entitlements to early retirement benefits will most certainly be important for the choices they make regarding retirement or extending working life. Those who do not know their early pension entitlements do not have the opportunity to undertake necessary adjustments or the knowledge to make rational and informed choices concerning the work–retirement transition.

The results presented in paper II are arguably not sensational; knowledge, or at least the beliefs concerning early pension entitlements, does not seem to be selected in an alarming way. However, with regards to the active part of Norway’s active-ageing strategy, a skewed distribution of knowledge would be a great challenge given the fact that these measures are based on older employees responding to offers made by their employers. Papers III, IV and V are all based on an intention-to-treat design. Thus, the analyses are based on the fact that the companies have introduced the respective retention measure, initial treatment assigned, and not on information about whether older workers have actually responded to these offers (i.e. if the treatment has actually been received). A potential problem with using an intention-to-treat design is that if a large share of the individuals included in the treatment group did not actually receive the treatment, due to a lack of knowledge, the early retirement behaviour of these individuals does not indicate anything about the efficacy of being offered the specific retention measures (Gupta 2011). Thus, I cannot rule out the possibility that the lack of effect in paper IV results from a lack of knowledge concerning the opportunity to opt for a phased retirement. Nevertheless, as argued in paper IV, I find it doubtful that this is the key explanation for the lack of effect of phased retirement.

If the second paper had revealed a skewed distribution of knowledge or beliefs concerning pension entitlements, there would be reason to assume that the knowledge of the different retention measures intended to delay early retirement would also be unevenly distributed. However, the fact that a large majority, and especially older employees, report to know their pension entitlements, provides support for arguing that workers approaching the time of the retirement decision will be more aware of the opportunities provided by their employers and will make their retirement decision taking these opportunities into account. Furthermore, as underscored in papers III, IV and V, these measures are available to all employees from the age of 62 years, working in companies offering these measures. Thus, it seems unlikely that a large proportion of the older employees working in companies having initiated these measures did not know of these measures upon making the decision to retire or continue working. I find it

reasonable to assume that the results in paper II reflect that information is collected when the day for making the retirement decision approaches and that the retirement planning phase involves the identification of possibilities offered by one's employer, such as phased retirement.

The effects of measures offered by employers to alter early retirement

Salomon and Hilsen (2011) argue that in the third phase of an employee's working life, the question in age management¹⁸ is turned around from "How can my employer support 'poor me' to cope as a senior worker? to "what's in it for me?" (Salomon and Hilsen 2011:87). Thus, I argue that the measures offered in this phase, and investigated in this thesis, are based on a perception of the retirement decision as voluntary and the decision to retire as a motivated choice (Wang and Shultz 2010; Salomon and Hilsen 2011). Hence, the measures target a group of employees who potentially have the desires, beliefs and opportunities for continuing working and will extend their working lives if persuaded to do so.

Papers III, IV and V link in a unique way the employer's and employee's perspective upon investigating the effects of the most common retention measures offered in Norwegian companies. The analyses show that it is measures based on economic incentives which affect the early retirement behaviour of older employees and not measures involving adapting the work situation, in the form of phased retirement. Thus, the measures that have an effect on early retirement behaviour are arguably purely external motivators, aimed at strengthening the desire to work and to a lesser extent enhancing the opportunities for continuing working or employee's belief in their ability to do so, through adapting the work situation. However, Henkens and van Dalen (2012) argue that the widespread use of measures such as additional leave is based on insights that stressful working conditions, heavy workloads and physical demands promote early retirement and that these measures are intended to 'spare' older workers. Adding to this, I argue in paper III that offering additional leave in the final phase of working life may help older workers to reconcile work and the need for more leisure, reducing the burdens which may otherwise 'push' them out of working life early. Nevertheless, given the fact that the most common arrangement is only between 5 and 10 days extra days off, I argue that this measure must be regarded more as an incentive, than as a comprehensive measure to reduce the workload and sufficiently 'spare' older workers. Phased retirement on the other hand would arguably be a more comprehensive measure, if reducing workload were the key to retaining older workers within a physically-demanding industry. However, as I have previously argued, many older

¹⁸ Salomon and Hilsen (2011) use the Nordic term 'senior policy'.

workers retire on the disability pension before they reach the age of eligibility set for being offered these measures. Thus, measures such as phased retirement are too late for enhancing the opportunity structure of these workers and additional leave would probably be both too little and too late.

Several studies emphasise the importance of motivational factors for retirement decisions; a large meta-analysis performed by Kooij, De Lange et al. (2011) shows a significant positive correlation between intrinsic motivators and age and a negative correlation between extrinsic factors (such as financial incentives) and age. Nevertheless, according to Wageinger (2015), the importance of motivational factors appears to be relatively under-researched in comparison to other factors. The data used in this thesis cannot shed light on motivational factors in the work–retirement transition and I am unable to directly investigate whether the motivational aspect of being offered retention measures is of any importance for the retirement decision. Nevertheless, as argued in papers III and V, offering retention measures signals the employer’s wish for older workers to continue working in the company. Offering additional leave or a bonus may motivate older workers to continue working for a few more years by counteracting an ‘early exit’ regime and the culturally-constructed beliefs about when older workers should leave the labour market. Thus, the signal effect may also be of importance when older workers are weighing the pros and cons of continuing working against those of leaving the labour market altogether. As previously argued, if this group of older workers has a desire to continue working, believe they are able to keep up and their health provides them with the opportunity to do so, being offered additional leave or a bonus may just be the triggering mechanism for them to stay on.

The question concerning importance of motivational factors also arises concerning the lack of effect of phased retirement in paper IV. Flynn and McNair (2008) argue that working hours are not the only issue that needs to be taken into consideration when constructing jobs which helps older workers balance home and work responsibilities. They make a distinction between the ‘enthusiasts’ and the ‘detached’. The former have a degree of autonomy over their work content and if they want to reduce their workload they can choose which responsibilities they want to keep and which they would prefer to pass on. The detached on the other hand, find themselves stuck in non-stimulating, low paid work in order to get the part-time work they need. For the enthusiasts, phased retirement might be an appealing alternative if they can pass on the work tasks of their choice and hold onto the tasks they find fulfilling. For the detached,

opting for phased retirement or reduced working hours is obviously not an alternative if they are forced to work part-time to begin with and have a hard time making ends meet.

Hippe, Midtsundstad et al. (2012) has also made a typology of different types of older workers, differentiating between the ‘steadfast’, the ‘forced’, the ‘unaffordable’, the ‘redundant’, the ‘flexible’ and the ‘freedom seekers’ (my translations). Each of these ‘types’ will potentially respond differently to being offered a retention measure. If the effect of additional leave and the retaining bonus is primarily a question of feeling wanted and needed by one’s employer, reducing working hours with the potential of losing out on interesting job tasks and projects may be less desirable than accepting an incentive in the form of a bonus or some extra days off. However, as highlighted in paper V, analyses based on register data provide at best only indirect insight into the desires, beliefs and opportunities faced by older workers in the transition between work and retirement. Thus, I am unable to investigate whether these measures vary according to different ‘types’ of older employees. Furthermore, as I highlight in paper III, explaining *how* additional leave impacts the individual’s decision to continue working is a question for future research requiring additional qualitative methods not used in this study.

As previously emphasised, the heterogeneity of needs, problems, and challenges facing different industries and groups of employees will presumably provide different desires and beliefs concerning retirement, and most definitely different opportunities in the retirement transition phase. Taking this into account, it needs to be emphasised, when interpreting the results from papers III and IV, that these results are average effects and the analyses performed does not provide insight into how the effect of additional leave and phased retirement varies according to different groups of employees or across different industries. Thus, I am unable to reach beyond the ‘one-size-fits-all’ approach and see whether a ‘size’ that might not fit all, such as phased retirement, is an efficient measure for a more select group of older employees.

7.2 Future research

There is limited evidence concerning the effects of measures to promote longer working lives and a lack of research enhancing our understanding of how employers’ attitudes and behaviour affect the labour supply of older workers (Hilsen and Midtsundstad 2015; Mulders and Wadensjö 2015). Thus, there are still wide gaps to be filled by future research on measures to promote longer working lives and to enhance our understanding of the role employer’s attitudes and behaviour play in the work–retirement transition. Further research is needed to investigate variation in the effect of retention measures at the company level across different industries and

groups of older employees, reaching beyond the overall average effects investigated in this thesis. Future research investigating the significance of having a holistic approach to active ageing for the effect of different retention measures on early retirement would enhance our knowledge of the importance of early prevention for retaining older workers.

8.0 Conclusions and social policy implications

In this thesis I have investigated one aspect of the Norwegian active-ageing strategy: the effects of measures at the company level to retain older workers faced with the option of retiring early. However, I argue that both parts of Norway's two-fold active-ageing strategy – 'passive' labour market policies and 'active' measures aimed at retaining older workers – are basically based on reducing the financial incentives for an early exit. The pension reform, implemented from January 1st 2011, and representing the 'passive' part of Norway's strategy, makes this explicit by introducing a pension system based on actuarial neutrality, tightening the link between contributions paid and benefits received, and calculating benefits according to life expectancy. The measures implemented at the company level, comprising the 'active' part of the strategy, also to a significant degree involve using incentives to retain older workers. As shown in paper I, two of the three most common retention measures offered in Norway are additional leave and bonuses, which are essentially just incentives, not affecting the work situation or work ability of older workers.

The retention measures investigated in this thesis, are arguably, like the pension reform, based on a perception of the retirement decision as voluntary and the decision to retire as a motivated choice (Wang and Shultz 2010; Salomon and Hilsen 2011). Hence, both parts of Norway's active-ageing strategy target a group of older workers who potentially have the desires, beliefs and opportunities for extending their working lives if persuaded to do so. Thus, I argue, as Midtsundstad (2015) does, that the retention measures offered in Norway are not complementary to the pension reform, in the sense that they mainly benefit healthy and able older workers. The retention measures at the company level in Norway have thus far assumed the nature of 'senior benefits', instead of targeted measures to prevent an early exit from working life (Midtsundstad 2015).

Looking ahead, there is reason to question whether the retention measures or 'senior benefits' investigated in this thesis will prevail in a future filled with more economic insecurity and increased demands for adjustments. The Norwegian economy has been hit hard by the dramatic fall in oil prices, leading social policymakers to underline the need to adjust to a reality without the large revenues from Norwegian oil production. Furthermore, there is an ongoing demand for increasing productivity and cost efficiency to face competition on the global market. The Productivity Commission, appointed by the Norwegian government to review policy adjustments and initiatives to increase productivity for securing the future sustainability of the Norwegian economy, recommends that the retention measures investigated in this thesis are

abolished. They argue that abolishing these measures will reduce costs for employers with an older staff and that the pension reform provides the necessary incentives for older workers to continue working (NOU 2016).

As an alternative or an addition to the emphasis on ‘senior benefits’, I argue, as Midtsundstad (2015) does, for the importance of a broader approach to active ageing in Norway, in which more emphasis is placed on the prevention of health problems and reduced work capacity from an earlier age. A broader focus to active ageing, also emphasising the prevention of health problems and reduced work capacity, will arguably be more complementary to the incentives embedded in the pension reform, potentially enhancing the opportunity structure of the less healthy and work-able older workers. Along similar lines, Larsen (2008) argues for improving older workers’ quality of work, as a complementary strategy for reversing the tendency towards earlier withdrawal from the labour market. Reducing health impairment, by improving working conditions and focusing on early prevention, may not only provide older workers with the opportunity to continue working, but also be an incentive to continue working by enhancing the desire to work longer and the belief in one’s ability to do so (Larsen 2008; Midtsundstad 2015).

In his literature review “*Who would delay retirement? Typologies of older workers*”, Flynn (2010) accentuates that experiences of and, thereby, attitudes towards, work have a tendency to become more diverse as people age. This has important public and HR policy implications, given that incentives and measures must be targeted towards specific groups of workers in order to promote longer working lives. “*Policymakers cannot, therefore, take a ‘one size fits all’ approach to designing incentives for delaying retirement ... the diversity of older workers necessitates a variety of policy instruments for encouraging extended working life*” (Flynn 2010:320). This recognition seems especially warranted for social policymakers and other stakeholders involved in the development of active ageing in Norway, given the emphasis on a ‘one-size-fits-all’ approach and the predominance of incentive-based measures at the company level. As accentuated in this thesis and argued by other Norwegian researchers (Midtsundstad and Bogen 2011; Hilsen and Midtsundstad 2014; Midtsundstad 2015), having made the same observations as Flynn (2010), retention efforts may prove to be more efficient if targeted according to the heterogeneity of needs, problems and challenges facing different industries and groups of employees. However, developing more targeted retention measures will, according to Hilsen and Midtsundstad (2014), imply a broad collaboration between policymakers, employers’ and employees’ organisations and researchers in the field. Based on

extensive research, Hilsen and Midsundstad (2014) provide a thorough discussion of how such a broad collaboration can be brought about.

Radl (2013) underscores that only those who are healthy and have a job or the chance of getting one can opt for continued work and only those who have accumulated the necessary pension entitlements or who hold significant assets can afford to retire early. Thus, “*the opportunity structure of older workers is first and foremost a function of their level of employability and pension entitlements*” (Radl 2013:656). The retention measures investigated in this thesis presuppose a group of older workers who possess this opportunity structure, have the pension entitlements enabling them to choose and furthermore are able to make an informed choice concerning the work–retirement transition. Instead of offering additional leave or a retaining bonus, which are essentially just incentives rather than measures affecting the work situation or work ability of older workers, one might argue, as Paullin and Whetzel (2012) do, that the easiest and least costly retention strategy may simply be to *ask* these older workers to continue working and strive to make them feel valued.

9.0 Bibliography

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Paper I

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Paper II

Åsmund Hermansen and Tove Midtsundstad (2013) Kjennskap til arbeidsmarkedsbaserte pensjoner i privat sektor (Knowledge of labour-based pensions in the private sector).

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Kjennskap til arbeidsmarkedsbaserte pensjoner i privat sektor

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Med pensjonsreformen har den avtalefestede pensjonsordningen (AFP) og tjenstepensjonsordningene fått økt betydning for såvel pensjonsnivå som valg av avgangstidspunkt. Å ha god kunnskap om egne pensjonsrettigheter er derfor viktigere enn før. I denne artikkelen ser vi på hvor mange og hvem som mangler kunnskap om sin tjenstepensjon og sine AFP-rettigheter. Data er hentet fra en surveyundersøkelse blant arbeidstakere i privat sektor fra 2010. Ifølge undersøkelsen er det én av fire som ikke vet om de har en innskudds- eller ytelsesordning, og én av fem som ikke vet om de har rett til AFP-pensjon. Kunnskap om AFP- og tjenstepensjonsrettigheter er primært knyttet til alder og inntektsnivå: de med høy inntekt og de eldste har best oversikt. Gitt tidligere forskning er det noe overraskende at kjønn og utdanningsnivå har lite å si for kunnskapsnivået. Det kan ha sammenheng med at tjenstepensjonsordningene og AFP er bedrifts- eller avtalebaserte. Alle ansatte får dermed regelmessig informasjon om pensjonsordningene fra personalansvarlig, pensjonsleverandør eller fagforening, uten selv å måtte innhente denne.

Det norske pensjonssystemet har gjennomgått store endringer de senere årene. Det gjelder både folketrygden, den avtalefestede pensjonsordningen (AFP) og tjenstepensjonene i privat sektor. Endringer i folketrygdens opptjeningskrav og uttaksregler har fått økt betydning både for når man har rett til å ta ut pensjon og for hva man kan vente å få utbetalt. Det samme gjelder tilgangen til AFP og en god tjenstepensjonsordning (Hippe og Lillevold 2010). God kunnskap om egne pensjonsrettigheter har, med andre ord, blitt langt viktigere for beslutningen om når man skal ta ut pensjon, og om man skal jobbe etter fylte 62 år.

I følge Chan and Stevens (2008) responderer velinformerte individer langt mer på økonomiske pensjonsinsentiver enn gjennomsnittsbefolkningen, mens personer som mangler eller har feil kunnskap om pensjonssystemet, gjerne også handler i forhold til sine egne misoppfatninger. Om pensjonsreformen og dens

insentiver skal ha den ønskede virkning på folks adferd, er det derfor avgjørende at befolkningen ikke bare kjenner til folketrygdens ordninger, men alle sine pensjonsrettigheter.

I denne artikkelen belyses befolkningens kunnskap om de arbeidsmarkedsbaserte pensjonsordningene, og vi spør: *Har arbeidstakere i privat sektor kunnskap om egne tjenestepensjons- og AFP-rettigheter? Hvem mangler kunnskap, og hva kan påvirke kunnskapsnivået?* Hensikten er ikke å kartlegge om de kjenner de ulike pensjonsreglene i detalj. Målet er å avdekke hvor mange i privat sektor som ikke vet hva slags tjenestepensjon de har, og om de har rett til AFP, og undersøke nærmere hvem disse er. Vi ønsker å finne ut om det er de tradisjonelle gruppene som mangler tilstrekkelig pensjonskunnskap – som kvinner, og de med lav utdanning og inntekt – eller om mønsteret er annerledes for arbeidsmarkedsbaserte pensjoner i privat sektor enn for kunnskapen om pensjon generelt – og hva som i så fall kan forklare det.

Spørsmålene belyses ved hjelp av data fra en surveyundersøkelse Fafo gjennomførte i 2010 blant et representativt utvalg av arbeidstakere i alderen 20–67 år i privat sektor; trukket fra AA-registeret. Før funnene presenteres og drøftes, redegjøres det kort for tidligere forskning, data og metode.

Tidligere forskning

I 2010, før pensjonsreformen trådte i kraft, gjennomførte Arbeids- og velferdsetaten (NAV) en omfattende informasjonskampanje om pensjonsreformen. NAV har også jevnlig kartlagt befolkningens kunnskap om pensjon (NAV 2011). Undersøkelsene avdekker at befolkningen har en relativt lav generell kunnskap om pensjonssystemet og virkningen av pensjonsreformen. Det gjelder særlig i de yngste aldersgruppene (Ibid.). At de eldste vet mer om pensjonsreglene enn de yngste er ikke så overraskende, da de nærmer seg pensjonsalderen og snart må treffe beslutningen om når de skal ta ut pensjon; og om, hvor mye og hvor lenge de eventuelt skal jobbe etter fylte 62 år. Luchak og Gunderson (2002) fant at selv om kunnskapsnivået om pensjon var relativt lavt blant arbeidstakere generelt, var det ganske godt hos dem som måtte treffe aktive valg i forhold til sin pensjonering. Svenske kvalitative undersøkelser viser også en tydelig alderssegregering (Premiepensjonsmyndighetene 2009). Mens arbeidstakere under 30 mener at det er altfor tidlig å engasjere seg i pensjonsspørsmål, mener arbeidstakere i aldersgruppen 31 til 49 år at de ikke har tid til å sette seg inn i pensjonsspørsmål, mens de eldre opplever at det er for sent å begynne å engasjere seg. Budskapet fra de aller eldste i undersøkelsen er derfor tydelig: «Oppmuntre de yngre til engasjement!».

I tillegg til at yngre har lavt kunnskapsnivå, viser nasjonal og internasjonal forskning at kvinner, personer med lav inntekt og lavt utdanningsnivå, har mindre kunnskap om pensjon enn menn, og personer med høy utdanning og inntekt

(Mitchell 1988; Midtsundstad 2002; Gustman og Steinmeier 2004; Sundén 2006; Gustman mfl. 2007; Lien og Grambo 2007).

NAV's undersøkelse, nevnt over, viser at befolkningens kunnskap er best når det gjelder reglene for opptjening, men betydelig lavere når det gjelder faktorer og elementer som påvirker pensjonens størrelse, for eksempel reglene for levealdersjustering og for reguleringen av løpende pensjoner. Kunnskapen om uttaksreglene for pensjon og hvordan disse påvirker ytelsesnivået, er også betydelig lavere enn kunnskapen om opptjeningsreglene. Dette er alle elementer som vil være sentrale når den enkelte skal ta beslutninger om eget pensjonsuttak og arbeid i alderdommen. Svenske undersøkelser viser også at de aller fleste i befolkningen har en generell kunnskap om pensjonssystemet, slik at de kan skille de ulike delene fra hverandre, men at de har for lite kunnskap til å håndtere for eksempel investeringsvalgene knyttet til den nye premiepensjonssparingen. Dette er tilfellet til tross for et massivt informasjonsarbeid fra svenske myndigheter på området. Svenskenes konklusjon er derfor at innsatsen har vært vellykket med hensyn til å få folk til å ta et valg, men mindre vellykket som utgangspunkt for den enkeltes beslutningstaking (Premiepensionsmyndigheten 2009). Noe av det samme mønsteret avdekkes av Starr og Sundén (1999), som i sin studie blant amerikanske husholdninger fant at respondentene ofte kunne gi korrekte opplysninger om de generelle forhold knyttet til egne pensjonsordninger, men at de manglet kunnskap om detaljene.

Data og analyseopplegg

Problemstillingen belyses ved hjelp av data fra en surveyundersøkelse Fafo gjennomførte blant et representativt utvalg av arbeidstakere i privat sektor i 2010 (Midtsundstad og Hyggen 2011). Et utvalg på 3000 arbeidstakere ble trukket av NAV, fra arbeidsgiver- og arbeidstakerregisteret (AA-registeret) sommeren 2010. Av disse fikk 1823 (bruttoutvalg) en henvendelse, hvorav 913, eller 50 prosent, valgte å delta. Undersøkelsen ble gjennomført som telefonsurvey i løpet av fjerde kvartal 2010 av Respons Analyse AS.

Analysene er basert på de to følgende spørsmålene fra surveyundersøkelsen: 1. «Hvilke tjenstepensjonsordning har du i din nåværende jobb?» og 2. «Har du rett til avtalefestet pensjon (AFP) på din arbeidsplass?». Da vi i analysene primært er opptatt av hvem som ikke kjenner sine grunnleggende pensjonsrettigheter, har vi i analysen av *arbeidstakernes kunnskap om egen tjenstepensjonsordning* sammenlignet andelen som svarer «ikke sikker» (=1), med andelen som oppgir at de enten har en innskudds- eller ytelsesordning (referansekategori=0). Tilsvarende har vi i analysen av *kunnskapen om egne AFP-rettigheter* sammenholdt andelen som svarer «ikke sikker» (=1), med dem som mener de vet om de har eller ikke har en slik ordning, og derfor svarer enten «ja» eller «nei» på spørsmål 2 (referansekategori=0).

Selv om de avhengige variablene i analysen baseres på faktspørsmål, og vi vet at alle arbeidstakere i privat sektor (med visse unntak)¹ har hatt en tjenstepensjonsordning etter innføringen av Lov om obligatorisk tjenstepensjon (OTP) i 2006 og snaut halvparten har rett til en AFP-ordning (Nergaard 2009), er det likevel ikke mulig å vite om svarene til alle respondentene er korrekte. Enkelte kan tro de har pensjonsrettigheter de ikke har, mens andre kan tro at de mangler rettigheter de faktisk har. Andelen som faktisk ikke kjenner sine rettigheter, kan derfor være noe høyere enn svarene viser.

Når det gjelder AFP-ordningen er ikke den obligatorisk, men avtalebestemt. Ordningen omfatter derfor kun de om lag 50 prosentene av de ansatte i privat sektor som jobber innen tariffavtaledekkede områder (Nergaard 2009). Ordningen er minst utbredt i bransjer med lav avtaledekning, som hotell- og restaurant, varehandelen og bygg og anlegg. Mens det motsatte er situasjonen innen næringer som industri og olje, gass og bergverk (ibid.).

Tabell 1. Deskriptiv statistikk avhengige variabler

Avhengige variabler	Antall	Andel
Hvilken tjenstepensjonsordning har du i din nåværende jobb? – Ikke sikker	203	22,80
Hvilken tjenstepensjonsordning har du i din nåværende jobb? – Innskudd/ytelse	687	77,19
Hvorav innskudd	516	57,97
Hvorav ytelse	171	19,21
Har du rett til avtalefestet pensjon (AFP) på din arbeidsplass? – Ikke sikker	172	19,32
Har du rett til avtalefestet pensjon (AFP) på din arbeidsplass? – Ja/Nei	718	80,67
Hvorav ja	467	52,47
Hvorav nei	251	28,20
N	890	100

Tabell 1 gir en oversikt over fordelingene på de to avhengige variablene. Som tabellen viser, oppgir nærmere 23 prosent i utvalget; en av fire, at de ikke er sikre på hva slags tjenstepensjonsordning de har, mens 77 prosent kjenner sin ordning, hvorav 58 prosent sier de har en innskuddspensjon og 19 prosent en ytelsesordning. Tilsvarende er det 19,7 prosent, en av fem, som oppgir at de ikke vet om de har rett til avtalefestet pensjon (AFP) eller ikke, mens 52,5 prosent sier de de har en AFP ordning og 28 prosent at de ikke har det. Samlet er det nærmere 8 prosent som oppgir at de verken vet hvilken tjenstepensjonsordning de har, eller om de har rett til AFP.

For å finne ut mer om hvem det er som ikke kjenner sine tjenstepensjons- og

AFP-rettigheter, har vi gjennomført en regresjonsanalyse hvor vi undersøker hvilke forhold som korrelerer med manglende kunnskap om type tjenestepensjon og AFP-rett, når det samtidig kontrolleres for andre relevante forhold.

Med utgangspunkt i funn fra tidligere forskning inkluderes følgende uavhengige variabler i analysene: *kjønn* (menn=0; kvinner=1), *alder*: 18–29 år (ref.), 29–39 år, 40–50 år, 51–61 år og 62 år og eldre; *utdanningsnivå*: grunnskole (ref.), videregående utdanning, kort universitets- eller høyskoleutdanning (under 4 år) og lang universitets- eller høyskoleutdanning (4 år eller mer); *inntekt*, som måler egenoppgett bruttoinntekt: under 300' (ref.), 300' til 449', 450' til 599' og 600' eller mer; *næring*: (inndelt i åtte grupper), hhv. forretningsmessig tjenesteyting; samferdsel; industri, olje og gass; hotell og restaurant; bygg og anlegg; IKT; varehandel; finans tjenester (ref.) og andre næringer².

Kunnskap om egne pensjonsrettigheter vil også kunne være påvirket av hvor mye man er på arbeidsplassen, og dermed eksponeres for informasjon som gis der. Personer som jobber deltid, kan derfor bli mindre eksponert for personalinformasjon enn de som jobber heltid, noe som kan ha betydning for deres kunnskap om bedriftens pensjonsordninger. Det kontrolleres derfor for *arbeidstid*; heltid, lang deltid (mellom 50 og 99 prosent stilling) og kort deltid (under 50 prosent stilling).³

Det er også inkludert en holdnings- og to adferdsvariabler i modellen, henholdsvis *hvor opptatt IO er av sine pensjonsrettigheter* (1= «svært opptatt» og «nokså opptatt»; 0=«nokså lite», «svært lite opptatt» eller «ikke sikker»); *om IO har søkt informasjon om sin pensjon via ulike pensjonsnettsider* (1=ja; 0=nei eller «ikke sikker») og *om IO har en privat pensjonssparing - IPS* (1=ja; 0=nei og «ikke sikker»). Hvorvidt en arbeidstaker faktisk er opptatt av egne pensjonsrettigheter vil opplagt ha betydning for den enkeltes kunnskapsnivå. Det samme gjelder om de faktisk har innhentet informasjon ved å benytte seg av nettbaserte tjenester. *Individuell pensjonssparing (IPS)*⁴, på sin side, er tatt med fordi det er en viktig del av pensjonssparingen for mange. Man kan derfor anta at de som har IPS også har et mer bevisst forhold til egne pensjonsrettigheter.

I tabell 2 gis en oversikt over fordelingen på de ulike uavhengige variablene kjønn, alder, utdanning, inntekt, arbeidstid og næring. Som tabellen viser, består utvalget av flere menn enn kvinner, noe som samsvarer med kjønnsfordelingen blant arbeidstakere i privat sektor. Gjennomsnittsalderen i utvalget er på 45 år. Den største gruppen i utvalget har videregående skole som høyeste fullført utdanning, mens den nest største gruppen har kort høgskole-/universitetsutdanning. Den gjennomsnittlige bruttoinntekten i utvalget er 460 000 kroner og medianinntekten er på 420 000 kroner, noe som om lag tilsvarte gjennomsnittsinntekten i privat sektor Norge i 2010, som var 448 200. Når det gjelder inntekt tjener den største gruppen i utvalget mellom 300 tusen og 499 tusen kroner, mens den nest største gruppen tjener mellom 450 tusen og 599 tusen kroner. Hele 84,8 prosent

jobber heltid, mens 14,3 prosent av utvalget jobber lang deltid. Fordelingen på næring viser at de fleste i utvalget jobber innen industri, olje og gass, mens den nest største gruppen jobber innen forretningsmessig tjenesteyting.

Tabell 2. Deskriptiv statistikk uavhengige variabler

Uavhengige variabler	Antall	Andel
Kvinner	318	35,7
Menn	572	64,3
Gjennomsnittlig alder (s.d.)	45 (11,7)	
Grunnskole	70	7,9
Videregående skole	427	55,8
Kort høyskole/universitet (til og med 4 år)	275	30,9
Lang høyskole/universitet (mer enn 4 år)	118	13,3
Brutto inntekt		
under 300'	168	18,8
300' til 449'	322	36,2
450' til 599'	205	23,0
600' eller mer	195	21,9
Heltid	755	84,8
Lang deltid	127	14,3
Kort deltid	8	0,9
Næring		
Forretningsmessig tjenesteyting	173	19,4
Samferdsel	56	6,3
Industri, olje og gass	200	22,5
Hotell og restaurant	23	2,6
Bygg og anlegg	122	13,7
IKT	55	6,2
Varehandel	112	12,6
Andre næringer	93	10,4
N	890	100,0

I tabell 3 gis en oversikt over hvordan holdnings- og adferdsvariablene fordeler seg i utvalget. Som tallene viser, oppgir hele 61,9 prosent at de er svært eller nokså opptatt av egne pensjonsrettigheter. Likevel er det bare 26,4 prosent som har benyttet nettbaserte tjenester for å finne ut mer om egne pensjonsrettigheter. Likeledes er det kun 16,1 prosent som oppgir at de har en individuell pensjonsspareordning (IPS).

Tabell 3. Deskriptiv statistikk uavhengige variabler

Uavhengige variabler	Antall	Andel
Opptatt av egne pensjonsrettigheter – svært opptatt eller nokså opptatt	551	61,9
Opptatt av egne pensjonsrettigheter – nokså lite, svært lite opptatt eller ikke sikker	339	38,1
Benyttet nettbaserte tjenester – ja	235	26,4
Benyttet nettbaserte tjenester – nei eller usikker	655	73,6
Har individuell pensjonsspareordning (IPS) – ja	143	16,1
Har individuell pensjonsspareordning (IPS) – nei eller usikker	747	83,9
N	890	100,0

Da vi har dikotome avhengige variabler, benyttes multippel logistisk regresjonsanalyse når vi undersøker om arbeidstakernes kjønn, alder, utdanningsnivå, inntektsnivå, arbeidstid og næring har betydning for kunnskapsnivået. Videre analyseres det om disse bakgrunnsvariablenes korrelasjon med kunnskapsnivået endrer seg, når det samtidig kontrolleres for arbeidstakernes grad av interesse for pensjon, bruk av ulike informasjonskanaler og deres pensjonssparing.

Resultater

I tabell 4 under analyseres først sammenhengene mellom hver av de avhengige variablene og bakgrunnsvariablene, kjønn, alder, utdannings- og inntektsnivå er inkludert (TP 1 og AFP 1), så en modell hvor også de arbeidsrelaterte variablene, arbeidstid og næring, inngår (TP 2 og AFP 2), før det i de siste modellene også kontrolleres for de tre pensjonsrelaterte holdnings- og adferdsvariablene (TP 3 og AFP 3).

Tabell 4. Analyse av kunnskap om egen tjenstepensjonsordning^a og analyse av kunnskap om rett til AFP^b. Avhengig variabler: «Hvilken type tjenstepensjonsordning (TP) har du i din nåværende jobb? 1= Ikke sikker, 0 = Innskudd/ytelse» og «har du rett til AFP på din arbeidsplass? 1= Ikke sikker, 0 = Ja/Nei»

	TP 1 OR	TP 2 OR	TP 3 OR	AFP 1 OR	AFP 2 OR	AFP 3 OR
Kjønn (Kvinner)	.911	.948	.943	.964	.984	.984
Alder (29–39 år)	.483*	.493*	.514*	.550*	.528*	.574
Alder (40–50 år)	.349**	.333**	.371**	.211**	.209**	.245**
Alder (51–61 år)	.293**	.308**	.372**	.071**	.074**	.090**
Alder (62 år og eldre)	.497	.488	.659			
Høgskole/universitet (mer enn 4 år)	.831	.814	.845	1.457	1.745	1.991
Høgskole/universitet (til og med 4 år)	.825	.806	.798	1.355	1.463	1.518
Videregående skole	.635	.629	.621	.710	.772	.767
Inntekt (600' eller mer)	.218**	.268**	.300**	.238**	.211**	.224**
Inntekt (450' til 599')	.407**	.456**	.498*	.348**	.344**	.362**
Inntekt (300' til 449')	.506**	.517**	.540*	.535*	.540*	.557*
Lang deltid (50-99 prosent)	1.007	.973	.889	1.688	1.886*	1.692
Kort deltid (under 50 prosent)	2.157	1.524	1.538	.540	.412	.322
Forretningsmessig tjenesteyting		1.623	1.522		.681	.581
Samferdsel		2.724	2.372		.721	.561
Industri, olje og gass		1.340	1.185		.761	.608
Hotell og restaurant		4.108*	3.472		1.821	1.410
Bygg og anlegg		1.726	1.373		1.275	.954
IKT		.888	.820		2.392	1.988
Varehandel		1.737	1.541		1.569	1.240
Andre næringer		2.575*	2.215		1.136	.852
Opptatt av pensjonsrettigheter – svært eller nokså			.508**			.603*
Benyttet nettbaserte tjenester			.735			.551*
Har IPS			1.118			.727
Pseudo R2	.08	.09	.11	.18	.20	.22
N	886	886	886	820	820	820

^a De som er 67 år og eldre, er ikke inkludert i analysen.

^b De som er 62 år og eldre, er ikke inkludert i analysen.

*: $p \leq 0,05$, **: $p \leq 0,01$

Kjennetegn ved de som ikke vet om de har en innskuddspensjon eller en ytelsespensjon

Som analysene over viser, faller sannsynligheten for å svare at man ikke er sikker på hvilken tjenstepensjonsordning man har med økende «alder». Usikkerheten er, med andre ord, størst blant de yngste. Dette støtter antakelsen om at pensjon og pensjonsrettigheter er en mer aktuell problemstilling for dem som nærmer seg pensjonsalder enn for de yngre.

Sannsynligheten for å oppgi at man ikke vet hva slags TP-ordning man har synker også med økende inntektsnivå. Arbeidstakere med høy inntekt har mer kunnskap om egen ordning enn de med lav inntekt: de som tjener 600 tusen eller mer, har 78 prosent lavere sannsynlighet for å svare at de er usikre på hvilken tjenstepensjonsordning de har, enn de som tjener under 300 tusen. Selv om høy inntekt gjerne går sammen med høy utdanning, er ikke det hovedforklaringen her, da det kontrolleres for utdanningsnivå. En mer sannsynlig forklaring på inntekts-effekten er at mange høyt lønnede har hatt tjenstepensjon lenge, da tjenstepensjoner historisk vært lang mer utbredt i høytlønns- enn i lavtlønnsbransjer i privat sektor (se f.eks. Midtsundstad & Hippe 2005). En stor andel høyt lønnede har derfor hatt en tjenstepensjonsordning over mange år, og vært eksponert for bedriftens, leverandørens og/eller fagforeningens informasjon om ordningen over lengre tid – noe man må anta gjør at flere også kjenner sin TP-ordning. I tillegg har ytelses fra tjenstepensjonsordninger større betydning for de høyt enn for de lavt lønnedes samlede pensjon, da de får dekket en langt mindre andel av sin tidligere inntekt av alderspensjonen fra folketrygden enn lavt lønnede (se f.eks. Hippe & Lillevold 2010). I tillegg kan høyt lønnede normalt vente seg svært ulike ytelsesnivåer fra henholdsvis en innskuddsbasert og en ytelsesbasert ordning (ibid.). Det er derfor viktigere for dem enn for de lavere lønnede å vite eksakt hva slags TP-ordning de har.

Tidligere undersøkelser har vist at kvinner har mindre kunnskap om sine pensjonsrettigheter enn menn. Det er også flere kvinner enn menn blant de ansatte i privat sektor som ikke vet om de har en innskudds- eller en ytelsesordning. Når vi i analysene kontrollerer for alle bakgrunnsvariablene (modell TP 1) ser vi imidlertid at det kun er «alder» og «inntekt» som har betydning for kunnskapsnivået, ikke kjønn eller utdanningsnivå. Det vil si at forskjellen i menn og kvinners kunnskapsnivå i stor grad kan forklares av forskjeller i alder- og/eller inntektsnivå. En mulig forklaring på kvinners lavere kunnskapsnivå kan derfor være at en høyere andel av kvinnene enn mennene som jobber i privat sektor, er yngre, og yngre har som nevnt mindre kunnskap om pensjonene sine enn eldre. Separate analyser gir imidlertid ikke støtte til en slik antakelse⁵. Kjønnforskjellen som framkom i de bivariate analysene, skyldes derfor trolig inntektsforskjellen mellom kjønnene; det faktum at kvinnene har lavere inntektsnivå enn menn, og at personer med lav inn-

tekt vet mindre om sin tjenstepensjonsordning enn de høyere lønnede, uavhengig av kjønn.

I utgangspunktet synes det logisk å anta at utdanningsnivå er viktig for den enkeltes evne til å tilegne seg kunnskap, og at det også gjelder pensjonsrettigheter. Analysene støtter imidlertid ikke denne antakelsen. En mulig forklaring kan være at andelen arbeidstakere som har høyskole- og universitetsutdanning, er høyere blant de yngre enn de eldre i privat sektor, mens sammenhengen mellom alder og kunnskap om pensjon, som nevnt er motsatt. Det kan derfor tenkes at utdanningsnivået har betydning for eldres kunnskapsnivå, men ikke for yngres. Separate analyser for ulike aldersgrupper gir imidlertid ikke støtte til en slik antakelse.⁶ På den annen side er evnen til å tilegne seg ny kunnskap, som man må anta øker med økende utdanningsnivå, langt fra synonymt med det å faktisk søke etter ny kunnskap. Om utdanning skal være en ressurs i den forstand, må man faktisk benytte seg av den – noe separate analyser viser at man ikke nødvendigvis gjør: høyere utdannede benytter seg for eksempel ikke mer av nettbaserte informasjonstjenester om pensjon enn lavere utdannede⁷.

Ser vi bare på de bivarierte sammenhengene har de som jobber innen industri, olje og gass eller IKT, bedre oversikt over sine TP-ordninger enn ansatte i andre næringer. Noe av denne forskjellen har sammenheng med at ansatte i ulike næringer er svært forskjellige med hensyn til kjønn, alder, inntekt, utdanningsnivå og arbeidstid, slik modell TP 2 viser. Når det kontrolleres for disse bakgrunnsvariablene ser vi at det bare er ansatte innen hotell og restaurantnæringen og en samleggruppe av andre næringer som skiller seg ut ved å ha en høyere sannsynlighet for ikke å vite hvilken tjenstepensjonsordning de har. Det igjen kan skyldes at ansatte i disse næringene er mindre interessert i pensjonsspørsmål i utgangspunktet, da sammenhengen forvitrer når det kontrolleres for nettopp det, samtidig som modell TP 3 viser at interesse for pensjon i sterk grad korrelerer med kunnskapsnivået. Det igjen kan ha sammenheng med at de som jobber innen for eksempel hotell og restaurantnæringen, oftere er unge, kvinner og har en annen etnisk opprinnelse, i tillegg til at de har hatt tjenstepensjonsordning over relativt få år. Gjennomsnittsalderen i hotell og restaurant er f.eks. 35 år mot 45 år i hele utvalget.

Antakelsen om at deltidsansatte i langt mindre grad enn heltidsansatte kjenner sin TP-ordning får ingen støtte i analysene, og dermed heller ikke antakelsen om at en mindre tett tilknytning til arbeidsplassen gir mindre eksponering for pensjonsinformasjon, og dermed større sannsynlighet for ikke å kjenne til hvilken TP-ordning arbeidsplassen har. At det ikke forholder seg slik kan ha sammenheng med at alle arbeidstakere, uansett arbeidstid (over et visst nivå), vil få den samme informasjonen om sin TP-ordning fra pensjonsleverandøren (eller bedriften) årlig.

I tråd med vår hypotese har arbeidstaker som er opptatt av egne pensjonsrettigheter, mer kunnskap om egen tjenstepensjonsordning enn dem som ikke deler denne interessen. Et mer direkte mål på ens interesse for pensjon, er om man

selv har innhentet informasjon om pensjonssystemet og egne pensjonsrettigheter gjennom nettbaserte tjenester. Noe overraskende har det likevel ingen signifikant effekt på kunnskapsnivået om egen TP-ordning: de som har benyttet seg av nettbaserte tjenester, er ikke mer sikre på hvilke tjenestepensjonsordning bedriften har enn dem som ikke har vært «på nett». En forklaring kan være at NAVs pensjonsnettside for eksempel ikke opplyser om man har en innskudds- eller ytelsesbasert pensjon, man får bare vite hvor mye man kan forvente å få utbetalt fra sin TP-ordning. Hvorvidt den enkelte arbeidstaker sparer i individuell pensjonssparing (IPS) korrelerer heller ikke med kunnskapsnivået. De som har IPS synes ikke å ha et mer bevisst forhold til sine pensjonsrettigheter enn andre arbeidstakere.

At bare 16 prosent sparer i IPS illustrerer at ordningen har fått en relativt liten utbredelse (jfr. tabell 3). Gitt uenigheten om hvor gunstig IPS-ordningen er rent skattemessig (Midtsundstad og Hyggen 2010), kan det være at de som ikke har valgt å benytte seg av IPS-ordningen, likevel har foretatt bevisste valg i forhold til egen langsiktig sparing til alderdommen – noe som kan forklare hvorfor det ikke er noen forskjell i kunnskapsnivå mellom de som har valgt å spare i IPS og de som ikke har gjort det. En annen mulig fortolkning er at mange av dem som sparer i IPS i utgangspunktet, lot seg overbevise av markedsføringen av ordningen når den først ble innført, og slik sett valgte å gå inn i ordningen uten at det nødvendigvis innebar noen større bevissthet rundt behovet for å supplere egne pensjonsordninger, som sådan. Det kan også være at IPS mer er et uttrykk for at man har råd til å spare enn at man har behov for å spare, og at det derfor, naturlig nok, har liten sammenheng med ens kunnskap om egen TP-ordning.

Kjennetegn ved dem som ikke kjenner sine AFP-rettigheter

Det er flere kvinner enn menn, flere yngre enn eldre, og flere med lav enn høy inntekt som ikke vet om de har rett til AFP. Det samme gjelder de på deltid og personer som jobber innen hotell og restaurant, varehandel og IKT.

Når vi i modell AFP 1 kontrollerer for effekten av alle bakgrunnsvariablene samtidig, kjønn, alder, inntekt og utdanningsnivå, er det likevel bare «alder» og «inntektsnivå» som korrelerer med det å ha kunnskap om egen AFP-rett. Eldre arbeidstakere har større sannsynlighet for å kjenne sin AFP-rett enn yngre arbeidstakere. Videre har de med lavest inntektsnivå (under 300 000 kr) størst sannsynlighet for å svare at de ikke vet om de har rett på AFP, mens de med høyest inntektsnivå (600 000 kr eller mer) har laveste sannsynlighet for å svare det samme. Det innebærer at forskjellene i kunnskapsnivå mellom menn og kvinner i privat sektor i stor grad skyldes at kvinnelige ansatte i gjennomsnitt er yngre enn mannlige arbeidstakere i privat sektor, og i tillegg tjener mindre, samtidig som yngre og personer med lav inntekt har mindre oversikt over sine AFP-rettigheter enn eldre og høytlønnede.

Som for kunnskap om egen tjenestepensjonsordning, øker sannsynligheten for at man vet om man har rett til AFP med økende inntekt. Det er også i samsvar med funn fra tidligere forskning (Mitchell 1988; Midtsundstad 2002; Gustman og Steinmeier 2004; Sundén 2006; Gustman mfl. 2007; Lien og Grambo 2007). Det er de som tjener 600 tusen eller mer, som har den laveste sannsynligheten for å svare at de er usikre. Alt annet likt har disse 77 prosent lavere sannsynlighet for å svare at de er usikre eller ikke vet, enn de som tjener under 300 tusen. Som med tjenestepensjonsordningen kan det skyldes at AFP-ordningen de senere årene har blitt viktigere også for hva høyt utdannede kan vente seg i framtidig pensjon, da alle som jobber i en AFP-bedrift nå vil motta AFP-pensjon, uavhengig av om de går av før fylte 67 år eller ikke. AFP er i dag i privat sektor omgjort til en slags supplerende tjenestepensjon, om enn uten de samme garantiene, da man mister retten til AFP-pensjonen om man slutter i en AFP-bedrift.

Det er ikke opplagt at inntekt er et indirekte mål på interessen for å innhente relevant informasjon. Det virker likevel rimelig å hevde ut fra analyseresultatene, at inntekt ikke kun måler økonomisk evne, men også kan si noe om den enkeltes opptatthet av personlig økonomi i sin alminnelighet, herunder de økonomiske utsiktene i alderdommen. Det igjen kan øke interessen for pensjonsspørsmål, og dermed også påvirker sannsynligheten for å innhente relevant informasjon om egne pensjonsordninger.

Noe overraskende har utdanningsnivå ikke noe å si for arbeidstakernes kunnskap om egen AFP-rett. De med utdanning fra høyskole/universitet er like sikre eller usikre på om de har en AFP-ordning som de grunnskoleutdannede. En årsak kan være at utbredelsen av AFP i privat sektor faktisk er høyere blant arbeidstakere som kun har grunnskole eller videregående skole, enn blant høyere utdannede. Det er omtrent 10 prosent flere som har rett til AFP blant de med lav utdanning som blant dem med høy utdanning (Nergaard 2009). Videre kan resultatet ha sammenheng med at AFP-ordningen tradisjonelt har vært viktigere for personer med grunnskoleutdanning enn for universitets- og høyskoleutdannede, da de tradisjonelt har hatt større behov for å gå av tidlig som følge av blant annet lengre yrkeskarrierer, mer belastende yrker og derav oftere også redusert helse (jf. Midtsundstad 2002, 2005).

I utgangspunktet har heltidsansatte bedre oversikt over sine AFP-rettigheter enn deltidsansatte. Forskjellen i kunnskapsnivå synes imidlertid å forklares av forskjeller i alder og inntekt mellom heltids- og deltidsansatte. Arbeidstid har derfor ingen direkte betydning for ens kunnskap om egne AFP-rettigheter. Deltidsansatte synes med andre ord ikke å være noe mindre eksponert for pensjonsinformasjon på arbeidsplassen enn heltidsansatte, slik at de av den grunn har mindre kunnskap om ordningene. Som for kjønn og alder kan den massive informasjonen som ble gitt i forbindelse med omleggingen av AFP-ordningen i privat sektor og den etterfølgende uravstemningen i 2008, ha hatt betydning. I tillegg er kravene til

å ha rett til AFP-pensjon ikke avhengig av arbeidstid på samme måten som retten til tjenstepensjon. Selv personer med relativt lav inntekt og kort ukentlig arbeidstid ble omfattet av ordningen før 2011, og omfattes av ordningen også i dag.

Det er heller ingen signifikant sammenheng mellom næringstilknytning i seg selv og det å vite om man har rett til AFP. I utgangspunktet vet likevel arbeidstakere innen IKT, varehandel, hotell og restaurant mindre om sin AFP-rett enn ansatte i andre næringer (de bivariate sammenhengene). Det kan ha sammenheng med at de sjeldnere har rett til AFP enn ansatte i andre næringer, og derfor også har mindre kunnskap om ordningen. I så fall er det bekymringsfullt, da ansatte innen særlig varehandel og hotell og restaurant kan vente seg relativt lave pensjoner i framtida grunnet lav dekningsgrad for AFP, og TP-ordninger på minimumsnivå (Hippe og Lillevold 2010). Mange innen disse næringene vil derfor ikke ha mulighet til å ta ut pensjon tidlig om de ønsker det, og kan i tillegg vente seg relativt lave pensjoner når de først har rett til å ta dem ut. Det er derfor særlig viktig at de kjenner sine rettigheter, slik at de kan sikre seg en bedre pensjon ved eventuelt å skifte til en arbeidsplass med AFP og god TP-ordning, eller jobbe for en bedre tjenstepensjonsordning og/eller rett til AFP på sin arbeidsplass. Når det kontrolleres for kjønn, alder, utdanning og inntekt skiller imidlertid ikke de som jobber i varehandel, hotell og restaurant seg lenger fra ansatte i øvrige næringer. At de i utgangspunktet hadde større sannsynlighet for å si at de ikke visste om de hadde rett til AFP, synes derfor primært å henge sammen med lavt alders- og lønnsnivå i disse næringene, og som tidligere vist, vet de yngste og de lavest lønnede minst om sine eventuelle AFP-rettigheter.

At arbeidstaker som er opptatt av egne pensjonsrettigheter innehar mer kunnskap om sine AFP-rettigheter enn arbeidstakere som ikke deler denne interessen, får støtte av funnene. Videre har arbeidstakere som har benyttet nettbaserte tjenester for å orientere seg om egen pensjon, en signifikant lavere sannsynlighet for å svare at de ikke vet om de har rett til AFP enn dem som ikke har logget seg inn på slike nettsider.

Om man har individuell pensjonssparing (IPS) har derimot ingen betydning for om man vet om man har rett til AFP eller ikke. En forklaring på dette kan, som nevnt, være at det er et like bevisst valg å ikke benytte seg av denne spareformen som å gjøre det, gitt at det er uenighet om lønnsomheten ved ordningen (Midtsundstad og Hyggen 2011). Slik sett trenger ikke det å ha IPS i seg selv nødvendigvis være et tegn på at man har en større bevissthet rundt pensjonssparing og egne pensjonsordninger, slik hypotesen var.

Konklusjon

Etter pensjonsreformen og endringene i så vel folketrygdens alderspensjon, som AFP-ordningen og tjenstepensjonsordningene, er det viktigere enn noen gang å ha god kunnskap om egne pensjonsrettigheter, da egen adferd og egne rettigheter

i større grad enn tidligere vil påvirke så vel eget inntektsnivå som handlingsrom i eldre år. Retten til en avtalefestet pensjon og til en tjenstepensjonsordning med gode ytelser, vil ikke bare ha betydning for hva den enkelte kan vente å få utbetalt i pensjon, men vil også bestemme om man kan ta ut pensjon fra fylte 62 år, og dermed slutte i jobben, om man har behov for eller ønsker det.

Artikkelen undersøker hvor mange og hvem det er i privat sektor som ikke kjenner sine AFP-rett og sin tjenstepensjonsordning, og dermed ikke vet hva de kan vente seg i samlet pensjon, og derfor heller ikke har mulighet til å foreta nødvendige tilpasninger i dag, eller forutsetninger for å foreta rasjonelle og veloverveide valg om pensjonsuttak og arbeid i framtiden. Dataene som benyttes er hentet fra en representativ undersøkelse blant arbeidstakere i privat sektor fra 2010.

Undersøkelsen viser at nærmere en av fire arbeidstakere i privat sektor ikke vet hvilken tjenstepensjonsordning de har, at en av fem er usikre på eller ikke vet om de har rett til AFP, og at kun en av fire har vært inne på en av pensjonsportalene for å undersøke hva de har av pensjonsrettigheter. Det som kjennetegner de som ikke vet om de har en innskudds- eller ytelsesordning, er at de er unge, har lav inntekt og/eller liten interesse for pensjonsspørsmål. Mens det som kjennetegner de som ikke vet om de har rett til AFP, er at de er unge, har lav inntekt, liten interesse for pensjonsspørsmål og heller ikke har sjekket hva de har av pensjonsrettigheter på en av de tilgjengelige nettsidene.

At høyest lønnede oftere vet om de har rett til AFP enn de lavest lønnede, er kanskje det mest overraskende, da ordningen historisk har vært mest utbredt og mest brukt av personer i mannsdominerte næringer, med manuelt arbeid, og ofte lavere lønnsnivå. På den annen side er avtaledækningen, og dermed utbredelsen av AFP, svært lav i mange kvinnedominerte bransjer i privat sektor, hvor både utdanningsnivået, lønna og dels gjennomsnittsalderen er lav.

At inntektsnivået betyr så mye for kunnskapen om egen tjenstepensjonsordning har trolig sammenheng med at de historisk har betydd langt mer for høyt lønnedes samlede pensjon enn for lavt lønnedes pensjon. Dette er imidlertid ikke tilfelle i dag, da arbeidsmarkedsbaserte pensjoner nå har fått økt betydning for hva de fleste vil få utbetalt i pensjon, gitt at ytelsene fra folketrygden reduseres gjennom blant annet levealdersjusteringen, og alle nå har rett til tjenstepensjon.

Mest interessant, sett i forhold til tidligere forskning, er det likevel at kvinner i gjennomsnitt har like god oversikt over sin tjenstepensjon og sin AFP-rett som menn, om de har samme inntekt, utdanningsnivå og alder, og at lavt utdannede har samme oversikt som høyt utdannede. En forklaring, særlig på sistnevnte, kan være at AFP-ordningen er avtalebasert og at informasjon om ordningen derfor når ut til alle i en bedrift gjennom de lokale klubbene og de lokale tillitsvalgte. I tillegg har det vært mye oppmerksomhet og debatt om ordningene, i media og i fagforeningene, og trolig også på arbeidsplassene, de senere årene – for eksempel i tilknytning til tariffoppgjøret i 2008. Ordningen er også nær den enkelte, ved at

ansatte på arbeidsplasser med AFP før 2011 alltid møtte en eller flere kollegaer årlig som gikk av med AFP. Fagforeningene og de tillitsvalgte synes med andre ord å være viktige kanaler for å spre informasjon om pensjonsordninger, slik at de når ut til alle grupper av arbeidstakere – uavhengig av kjønn og utdanningsnivå.

At de unge ikke kjenner sine tjenstepensjonsrettigheter virker i utgangspunktet ikke så bekymringsfullt, da det er lenge til de skal ta ut pensjon. De har dermed god tid til å orientere seg. På den annen side kan det være gunstig selv i ung alder å vite hva slags tilleggsytelser man opparbeider seg i arbeidslivet, slik at man kan ta hensyn til det når man søker jobb eller vurderer å bytte arbeidsplass. Det har også betydning når man skal vurdere om man eventuelt skal spare med tanke på alderdommen, da slik sparing gjerne bør starte tidlig om kapitalen skal kunne utgjøre et tilstrekkelig supplement til folketrygdpensjonen og de arbeidsmarkedsbaserte pensjonene.

At interessen for pensjonsspørsmål også har betydning for kunnskapsnivået er ikke oppsiktsvekkende, men likevel alvorlig, da det kan bety at man ikke har klart å gjøre informasjonen om pensjonsspørsmålene interessant nok, eller har klart å få fram hvor viktig det er å ikke bare kjenne til folketrygdens ytelser, men også hva man har krav på av arbeidsmarkedsbaserte pensjoner.

Noter

- 1 Unntaket er midlertidig ansatte eller personer som har lav avtalt arbeidstid. Disse er derfor ikke inkludert i analysene.
- 2 Andre næringer omfatter helse, ideelle organisasjoner, utdanning, kultur, jordbruk og media.
- 3 De som jobber mindre enn kravet for å omfattes av en tjenstepensjonsordning, er utelatt fra analysene.
- 4 IPS, individuell pensjonssparing, er en ordning hvor man kan spare 15 000 kroner skattefritt i året. Det er mulig å spare mer, men man får ikke skattefritak for det overskytende.
- 5 For å undersøke hvorvidt det er samspill mellom alder og kjønn, ble det gjennomført en separat analyse med samspillsvariabler. Imidlertid var ingen av disse samspillsvariablene signifikante.
- 6 For å undersøke hvorvidt det er et samspill mellom høyere utdanning og alder, ble det gjennomført en separat analyse med samspillsvariabler mellom de ulike utdanningskategoriene og alder. Imidlertid var ingen av disse samspillsvariablene signifikante. Dermed er det heller ikke grunnlag for å hevde at eldre med utdanning utover grunnskolenivå, og spesielt de med kort eller lang høyskole- og universitetsutdanning, har større kunnskap om egen TP-ordning.
- 7 For å undersøke hvorvidt det er et samspill mellom det å ha høyere utdanning og det å innhente informasjon om pensjonsrettigheten gjennom nettbaserte tjenester, ble det

gjennomført en separat analyse med samspillsvariabler mellom de ulike utdanningskategoriene og bruk av nettbaserte tjenester. Imidlertid var ingen av disse samspillsvariablene signifikante. Dermed er det heller ikke grunnlag for å hevde at de med utdanning utover grunnskolenivå, og spesielt de med kort eller lang høyskole- og universitetsutdanning, i større utstrekning innhenter relevant informasjon, om enn via nettbaserte løsninger.

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**Paper II
Translated**

Knowledge of labour-based pensions in the private sector

Abstract

Following the pension reform in Norway, the contractual pension (AFP) and occupational pension schemes hold increased importance for workers both in terms of the pension replacement rate they can expect and when they can choose to withdraw from the labour market. Having good knowledge about one's pension entitlements is therefore even more important than before. In this article we investigate how many and which workers lack knowledge about their occupational pension scheme and entitlement to the contractual early retirement pension (AFP). The data used in the article is from a survey carried out among workers in the private sector in 2010. The results show that one in four do not know if they have a defined contribution or a defined benefit occupational pension scheme, and one in five do not know whether they are entitled to an early retirement pension. Knowledge on early retirement entitlements and types of occupational pension is primarily related to age and income – those with high income and the oldest have the best overview. Given the findings of previous research, it is somewhat surprising that gender and education is uncorrelated with knowledge on pension entitlements. These results may derive from the fact that the occupational pension schemes and the contractual early retirement scheme are company based or based on collective wage agreements. Thus, all employees receive regular information about their pension schemes from their HR manager, insurance company or union without having to actively seek such information.

Introduction

The Norwegian pension system has undergone major changes in recent years; the National Insurance old age pension, the contractual early retirement pension scheme (AFP) and occupational pension schemes in the private sector have all been reformed. Changes to vesting requirements in the National Insurance pension and rules for the withdrawal of pension benefits generally have implications both for when a worker has the right to withdraw a pension and the level of the benefits they can expect to receive. The right to withdraw a pension and the benefit level are also now largely determined by whether or not the worker has access to the contractual early retirement pension and the type of occupational pension scheme they are entitled to (Hippe & Lillevold 2010). Knowledge of one's pension entitlements has, therefore, become far more important for deciding when to withdraw a pension, and whether to continue working after the age of 62.

Well-informed individuals respond more to financial retirement incentives than the average population (Chan & Stevens 2008), while people lacking knowledge or with incorrect information about the pension system often act according to their own misconceptions. If the pension reform and the incentives imbedded in the reform are to have the desired effect on people's behaviour, it is crucial that the population is not only familiar with the National Insurance old age pension, but also with their labour-based pension entitlements.

In this article we investigate knowledge of labour-based pension entitlements in the private sector. We ask – do workers in the private sector hold knowledge about their occupational pension scheme and whether or not they are entitled to the contractual early retirement pension? Who is lacking this knowledge, and what determines the level of knowledge? The purpose is not to investigate whether they recognise the different pension rules in detail; the aim, rather, is to find out how many private sector workers lack knowledge about what kind of occupational pension scheme is available to them and whether they are entitled to early retirement benefits. Furthermore, our aim is to investigate what characterises this group of employees who do not know their pension entitlements. We want to find out whether it is the traditional groups who lack adequate pension knowledge – women and those with low education and/or income – or if the pattern is different for the labour-based pensions in the private sector than for knowledge of pensions in general, and if so, what explains this difference.

The research questions are investigated using data from a survey conducted by Fafo in 2010 among a representative sample of private sector workers between the ages of 20 and 67, drawn from the Employer's and Employee's register (AA-registeret). Before we present the results of our analysis and discuss these findings, we provide a brief outline of previous research, the data and the methodology.

Previous research

In 2010, before the pension reform came into force, the Norwegian Labour and Welfare Administration (NAV) conducted an extensive information campaign explaining the reform. NAV has also regularly surveyed the population's knowledge on pensions (NAV 2011). These surveys revealed that the population has a relatively low general knowledge about the pension system and the impact of the pension reform. This is particularly true for the youngest age groups (*ibid.*). That older people know more about pension rules than younger people is not surprising, as they are approaching retirement age and must soon decide whether they want to withdraw pension benefits and how much, if at all, they want to work after the age of 62. Luchak & Gunderson (2002) found that although the level of knowledge on pensions was relatively low among workers in general, it was quite high among those who had decisions to make about their own retirement. Swedish qualitative research also reveals clear age segregation (Premiepensionsmyndigheten 2009). Workers under 30 years of age believe that it is too early to engage with pension issues, while workers between 31 and 49 years believe that they do not have time to address pension issues and the oldest feel that it is too late to become engaged. The message from the oldest workers was therefore clear – "Encourage the younger to be more committed!".

In addition to young people having low levels of knowledge, national and international research shows that women, people with low income and people with low levels of education have less knowledge about pensions than men, those with higher incomes and those with higher levels of education (Mitchell 1988; Midsundstad 2002; Gustman & Steinmeier 2004; Sundén 2006; Gustman et.al. 2007; Lien & Grambo 2007).

The surveys conducted by NAV, mentioned above, show that the population's knowledge is best concerning rules on pension benefits earnings, but considerably lower in terms of factors affecting the replacement rate, such as rules surrounding longevity adjustments and the regulation of current pensions. Knowledge on rules concerning the withdrawal of pensions and how the timing of pension withdrawal affects the replacement rate is also significantly

lower than knowledge on the accumulation of pension benefits. These are all key factors when it comes to making decisions about retirement and work in old age. Swedish surveys also show that the vast majority of the population has a general knowledge about the pension system, to the extent that they are able to separate the various components from one another, but they have too little knowledge to handle investment decisions related to the new premium pension savings. This is in spite of a major information campaign by the Swedish authorities. The Swedish conclusion is therefore that the efforts made have been successful with regards to getting people to make a choice, but less successful as a basis for the individual decision-making (Premium Pension Authority 2009). A similar pattern is revealed by Starr & Sundén (1999) who, in a study of American households, found that respondents often provide correct information on general matters relating to their pension plans, but that they lack knowledge of the details.

Data and method

The research questions in this article are investigated using data from a survey conducted by Fafo among a representative sample of workers in the private sector in 2010 (Midtsundstad & Hyggen 2011). A sample of 3,000 workers was drawn by NAV from the Employer's and Employee's Register (AA Register) in the summer of 2010. A gross sample of 1,823 individuals received the survey, of which 913, or 50 per cent, chose to participate. The survey was conducted by telephone during the fourth quarter of 2010 by Respons Analyse AS, a Norwegian research firm.

The analyses are based on the following two questions from the survey – 1. "What occupational pension scheme do you have in your current job?" and 2. "Are you entitled to a contractual early retirement pension (AFP) with your current employer?". Since in the subsequent analyses we are primarily concerned with those who do not know their basic pension entitlements, we compared the share of private sector workers who answered "not sure" (= 1), with the share who said either that they have a defined contribution or defined benefit occupational pension scheme (reference category = 0). Likewise, in the analysis of knowledge on entitlements to early retirement benefits, we compared the share who answered "not sure" (= 1), with those who believe they know whether they are entitled or not entitled to the contractual early retirement pension, and therefore answered either "yes" or "no" in response to question 2 (reference category = 0).

Although the dependent variables in the analyses are based on questions of facts, and we know that all workers in the private sector (with certain exceptions)ⁱ have an occupational pension following the passing of the act on mandatory occupational pension schemes (OTP) in 2006, and about half of all private sector workers are entitled to the contractual early retirement scheme (Nergaard 2009), it is still not possible to know if the answers provided by the respondents are correct. Some may believe that they are entitled to benefits they are not entitled to, whereas others may think that they lack entitlements they actually have. The share of workers who do not actually know their pension entitlements may therefore be slightly higher than the answers to these questions suggest.

With regards to the contractual early retirement pension (AFP), this pension scheme is not mandatory, but contractual. The scheme therefore includes only about 50 per cent of private sector employees, working in companies with a collective wage agreement (Nergaard 2009). The scheme has the lowest coverage in industries where collective wage agreements are less prevalent, such as hotels and restaurants, retail trade and construction and highest coverage in industries such as manufacturing, oil, gas and mining (*ibid.*).

Table 1. Descriptive statistics dependent variables

Dependent variables	Number of respondents	Share of respondents
What occupational pension scheme do you have in your current job? – not sure	203	22.80
What occupational pension scheme do you have in your current job? – defined contribution scheme /defined benefit scheme	687	77.19
– defined contribution scheme	516	57.97
– defined benefit scheme	171	19.21
Are you entitled to a contractual early retirement pension (AFP) with your current employer? – not sure	172	19.32
Are you entitled to a contractual early retirement pension (AFP) with your current employer? – yes/no	718	80.67
– yes	467	52.47
– no	251	28.20
N	890	100

Table 1 provides an overview of distributions on the two dependent variables. As shown, approximately one in four are not sure what kind of occupational pension scheme they have. The majority of the remaining 77 per cent of workers say they have a defined contribution scheme (57 per cent), with only 19 of all respondents answering that they have a defined benefit scheme. The distribution of respondents is similar in response to the second question; almost one in five (19 per cent) state that they do not know whether or not they are entitled to

the contractual early retirement pension (AFP) and of those who do know, the majority say that they are entitled to a contractual early retirement pension – 52 per cent answer ‘Yes’ compared to 28 per cent of all respondents answering that they are not entitled to early retirement benefits. Overall, nearly 8 per cent respond that they know neither which type of occupational pension they have nor whether they are entitled to the contractual early retirement pension or not.

To find out more about what characterises those who do not know their type of occupational pension scheme or whether or not they are entitled to the contractual early retirement pension, we conducted a regression analysis examining which factors correlate with lack of knowledge about the type of occupational pension scheme and early retirement entitlements, simultaneously controlling for other relevant factors.

Based on findings from earlier research, we included the following independent variables in analyses: gender (men = 0, women = 1), age: 18-29 years (ref.), 29-39 years, 40-50 years, 51-61 years and 62 years and older; education: primary/secondary school (ref.), high school, short university or college (up to 4 years) and long university or college (more than 4 years); income (which measures self-reported gross income): under 300,000 NOK (ref.), 300,000-449,000 NOK, 450,000-599,000 NOK and 600,000 NOK or more; industry: (divided into eight groups) business services, transport, manufacturing, oil and gas, hotels and restaurants, construction, ICT, retail trade, financial services (ref.) and other industriesⁱⁱ.

Knowledge of pension entitlements can also depend on how much time employees spend at work, and thus how much they are exposed to the information provided at their workplace. Individuals working part-time may be less exposed to HR-information than those who work full-time, which can impact their knowledge about the company’s pension schemes. To investigate the importance of time spent at the work for the level of knowledge, we included working hours in the analysis: full-time, long part-time (between 50 and 99 per cent) and short part-time (less than 50 per cent)ⁱⁱⁱ.

The analysis also includes one attitudinal variable and two behavioural variables, respectively *how concerned are the respondents about their pension entitlements* (1 = "very concerned" and "quite concerned"; 0 = "quite little", "very little" or "not sure"), *whether the respondents have searched for information concerning their pensions entitlements using different pension*

information websites (1 = “yes”; 0 = “no” or “not sure”) and *whether the respondent has an individual private pension savings account (IPS)* (1 = “yes”; 0 = “no” and “not sure”). Whether a worker is actually concerned about their own pension entitlements will obviously have a bearing on their level of knowledge. The same applies if they have gathered information by searching for information using pension information websites. Having an individual pension savings account (IPS)^{iv} is included because this is an important part of pension savings for many employees. It seems therefore reasonable to assume that workers with an individual pension savings account are more aware of their own pension entitlements.

Table 2 provides an overview of the distribution of the various independent variables – gender, age, education, income, working hours and industry. As shown in the table, the sample consists of more men than women, which corresponds to the gender distribution among workers in the private sector. The average age in the sample is 45 years. The largest group in the sample has high school as their education level, while the second largest group has short college/university education. The average gross income in the sample is 460,000 NOK and the median income is 420,000 NOK, which is roughly equivalent to the average income in the private sector Norway in 2010 (448,200 NOK). As for income, the largest group in the sample earns between 300,000 and 499,000 NOK, while the second largest group earns between 450,000 and 599,000 NOK. The vast majority (84.8 per cent) work full-time, while 14.3 per cent of the sample works long part-time. The distribution by industry shows the largest group of respondents work in manufacturing, oil and gas, while the second largest group work in business services.

Table 2. Descriptive statistics independent variables

Independent variables	Number of respondents	Share of respondents
Women	318	35.7
Men	572	64.3
Mean age (s.d.)	45 (11.7)	
Primary/secondary school	70	7.9
High school	427	55.8
Short university or college (up to 4 years)	275	30.9
Long university or college (more than 4 years)	118	13.3
Gross income		
under 300,000 NOK	168	18.8
300,000-449,000 NOK	322	36.2
450,000-599,000 NOK	205	23.0
600,000 NOK or more	195	21.9

Full-time	755	84.8
Long part-time	127	14.3
Short part-time	8	0.9
Industry		
Business services	173	19.4
Transport	56	6.3
Manufacturing, oil and gas	200	22.5
Hotels and restaurants	23	2.6
Construction	122	13.7
ICT	55	6.2
Retail trade	112	12.6
Other industries	93	10.4
N	890	100

Table 3 below provides an overview of the distribution on the one attitudinal and the two behavioural independent variables. As the table shows, 61.9 per cent said they are very or quite concerned about their pension entitlements, yet only 26.4 per cent have used online services to find out more about their pension entitlements and only 16.1 per cent state that they have an individual retirement savings account (IPS).

Table 3. Descriptive statistics independent variables

Independent variables	Number of respondents	Share of respondents
Concerned about own pension entitlements – very concerned and quite concerned	551	61.9
Concerned about own pension entitlements – quite little, very little or not sure	339	38.1
Used pension information websites – yes	235	26.4
Used pension information websites – no or not sure	655	73.6
Have an individual private pension savings account (IPS) – yes	143	16.1
Have an individual private pension savings account (IPS) – no or not sure	747	83.9
N	890	100

Given the fact that the dependent variables are dichotomous, we used multiple logistic regression analysis to investigate the significance of the workers' gender, age, level of education, income, working hours and type of industry for knowledge on pension entitlements. We also analysed whether there was any change in the correlations between these variables and the level of knowledge when controlling for how concerned the respondents are about their own pension entitlements, whether they have used websites to search for pension information and whether they have an individual private pension savings account.

Results

Table 4 presents the first analysis of the correlation between each of the dependent variables and the independent variables – gender, age, education and income levels (OP 1 and AFP 1), the second model also includes the work-related variables, working time and industry (OP 2 and AFP 2), whereas the third model investigates the significance of the three attitudinal/behavioural independent variables (OP 3 and AFP 3).

Table 4. Analysis of knowledge on type of occupational pension scheme^a and analysis of knowledge on entitlement to the contractual early retirement pension (AFP)^b. Dependent variables: "What occupational pension scheme do you have in your current job? 1 = Not sure, and 0 = Defined contribution/Defined benefit" and "are you entitled to a contractual early retirement pension (AFP) with your current employer? 1 = Not sure, 0 = Yes / No".

	OP 1 OR	OP 2 OR	OP 3 OR	AFP 1 OR	AFP 2 OR	AFP 3 OR
Gender (Woman)	.911	.948	.943	.964	.984	.984
Age (29-39 years)	.483*	.493*	.514*	.550*	.528*	.574
Age (40-50 years)	.349**	.333**	.371**	.211**	.209**	.245**
Age (51-61 years)	.293**	.308**	.372**	.071**	.074**	.090**
Age (62 years and older)	.497	.488	.659			
Long university or college (more than 4 years)	.831	.814	.845	1.457	1.745	1.991
Short university or college (up to 4 years)	.825	.806	.798	1.355	1.463	1.518
High school	.635	.629	.621	.710	.772	.767
Income (600,000 NOK or more)	.218**	.268**	.300**	.238**	.211**	.224**
Income (450,000-599,000 NOK)	.407**	.456**	.498*	.348**	.344**	.362**
Income (300,000-449,000 NOK)	.506**	.517**	.540*	.535*	.540*	.557*
Long part-time (between 50 and 99 per cent)	1.007	.973	.889	1.688	1.886*	1.692
Short part-time (less than 50 per cent)	2.157	1.524	1.538	.540	.412	.322
Business services		1.623	1.522		.681	.581
Transport		2.724	2.372		.721	.561
Manufacturing, oil and gas		1.340	1.185		.761	.608
Hotels and restaurants		4.108*	3.472		1.821	1.410
Construction		1.726	1.373		1.275	.954
ICT		.888	.820		2.392	1.988
Retail trade		1.737	1.541		1.569	1.240
Other industries		2.575*	2.215		1.136	.852
Concerned about own pension entitlements – very concerned and quite concerned			.508**			.603*
Used different pension information websites – yes			.735			.551*
Have an individual private pension savings account (IPS) – yes			1.118			.727
	.08	.09	.11	.18	.20	.22
	886	886	886	820	820	820
Pseudo R ²	.08	.09	.11	.18	.20	.22
N	886	886	886	820	820	820

^a Respondents aged 67 years or older are not included in the analysis.

^b Respondents ages 62 years or older are not included in the analysis.

*: $p \leq 0,05$, **: $p \leq 0,01$

Characteristics of those who do not know if they have a defined contribution or a defined benefit occupational pension scheme

The analysis above shows that the probability of a respondent answering ‘not sure’ when asked which occupational pension scheme they are covered by decreases with “age”. Uncertainty is, in other words, greatest among the youngest. This supports the assumption that pension entitlements is a more relevant issue for those approaching retirement than for the younger age groups.

The probability of answering ‘not sure’ also decreases with higher levels of income. Employees with high income have more knowledge about the type of occupational pension scheme they are entitled to than those with low income; those who earn 600,000 NOK or more are 78 per cent less likely to respond that they are unsure what type occupational pension scheme they have than those who earn less than 300,000 NOK. Although high income often goes along with high education, level of education cannot be used to explain this result, since we are controlling for education. A more likely explanation for the income effect is that many highly paid workers have had occupational pension schemes for a longer period of time, since these schemes historically have been far more prevalent in industries in the private sector with higher wage levels (Midtsundstad & Hippe 2005). Thus, a large proportion of employees in the higher income groups have therefore had an occupational for many years and been exposed to information from the company, insurance firms and/or trade unions for an extended period of time – something which presumably will have made them more knowledgeable about the type of occupational pension scheme they are entitled to. In addition, benefits from occupational pension schemes are more significant for high income earners than for low income earners in terms of the gross pension replacement rate, since the National Insurance old age pension pays out a far lower percentage of previous income for higher income groups than those with lower incomes (Hippe & Lillevold 2010). In addition, employees with high income will normally expect very different replacement rates with a defined contribution than with a defined benefit plan (*ibid.*). It is therefore more important for them than for lower paid employees to know exactly what kind of occupational pension scheme they have.

Previous studies have shown that women have less knowledge about their pension entitlements than men. There is also a larger share of women than men among the employees in the private sector who do not know if they have a defined contribution or a defined benefit

plan. When we control for all background variables (model OP 1), we see that only "age" and "income" are significant for the level of knowledge, not gender or level of education. Thus, the difference in men's and women's knowledge level is explained by differences in age and/or income. One possible explanation for women's lower level of knowledge may be that a higher proportion of women than men in the private sector are younger – as shown above younger employees are less knowledgeable about their pensions than older employees. However, separate analyses do not support such a notion^v. The gender difference emerging in the bivariate analysis is therefore probably due to differences in income between the sexes; women have lower income than men and people with low income know less about their occupational pension than higher paid employees, regardless of gender.

It seems logical to assume that education is important for the individual's ability to acquire knowledge, and that this also applies to knowledge on pension entitlements. The analysis does not, however, support this assumption. One possible explanation may be that the proportion of workers who have college/university education are higher among younger than older employees in the private sector, while the correlation between age and knowledge of pensions is the opposite. It is therefore conceivable that level of education is significant for older employee's level of knowledge, but not for younger age groups. However, separate analyses for different age groups do not support this^{vi}. On the other hand, the ability to acquire new knowledge, which can be assumed to increase with education level, is far from synonymous with actually searching for new knowledge. Education can be an advantage, but only if the employee makes use of the advantage, which the separate analysis indicate is not the case. Workers with higher education levels do not make more use of online pension information services than those with lower education levels^{vii}.

If we look only at the bivariate correlations, those who work in manufacturing, oil and gas or ICT have a better overview of their occupational pension schemes than employees in other industries. This in part reflects the fact that there are great differences in terms of gender, age, income, education and working hours between the different industries, as shown in model OP 2. When controlling for these background variables, we see that only employees in the hotels and restaurants industry and other industries stand out by having a higher probability of not knowing what type of occupational pension scheme they have. This again may derive from the fact that employees in these industries are less interested in pension-related matters, given the fact that the correlations are no longer significant when controlling for how concerned the

respondents are about their own pension entitlements. Furthermore, the results in model OP 3 show a strong and significant correlation between being concerned about pension entitlements and level of knowledge. That may again be because those who work in the hotels and restaurants industry are often, young, female and of different ethnicities, in addition to the fact that they have had an occupational pension for only a few years. The average age in the hotels and restaurants industry is 35 years compared to 45 years in the sample as a whole.

The assumption that part-time workers have far less knowledge about their occupational pension scheme than full-time workers is not supported by the analysis. Thus, our assumption that employees who spend less time at the workplace and are less exposed to pension information are less likely to know what type of occupational pension scheme they have, is not supported. This may be due to the fact that all workers, regardless of working hours (above a certain level), receive annual information concerning their occupational pension scheme from the insurance company administering the scheme (or the company they work for).

In line with our hypothesis, we find that employees who are concerned about their pension entitlements have more knowledge about their occupational pension scheme than those who do not share this concern. A more direct measure of one's interest in pension-related issues is whether the respondents have gathered information about the pension system and their own pension entitlements through online information services. However, somewhat surprisingly, having used online information services has no significant effect on the worker's knowledge about the occupational pension scheme they are entitled to. Those who have used online information services are not more knowledgeable about which occupational pension scheme they are entitled to than those who have not been "online". One explanation may be that the pension information website developed by the Norwegian Labour and Welfare Administration (NAV), for example, does not offer information about whether your occupational pension scheme is a defined contribution or defined benefit plan, just about how much you can expect to receive in pension benefits. The results show that saving in an individual pension savings account (IPS) does not correlate with level of knowledge. Those who have an individual pension savings account do not seem to be more knowledgeable about their pension entitlements than other workers.

Only 16 per cent have an individual pension savings account (ref. Table 3), reflecting low uptake among workers generally. There is considerable disagreement about how beneficial the tax deduction of the individual pension savings account scheme really is (Midtsundstad & Hyggen 2010). Thus, it may be that those who have not chosen to invest in an individual pension savings account have also made conscious decisions in relation to their own long-term savings for old age. This may explain why we find no difference in the level of knowledge between those who have chosen to make such savings and those who have not. Another possible interpretation is that many of those who save in an individual pension savings account were initially persuaded by the marketing when it was first introduced, and thus chose to invest without necessarily having any greater awareness of the need to supplement their occupational pension plans. It may also be that having an individual pension savings account reflects more the fact that you can afford to save, than that you need to save, and is therefore not correlated with knowledge about your type of occupational pension scheme.

Characteristics of those who do not know their early retirement pension entitlements

There is a higher share of women, younger workers and workers with low income that do not know whether they are entitled to the contractual early retirement pension or not. This also applies to part-time workers and people who work in hotels and restaurants, retail trade and ICT. In model AFP 1 we control for the effect of all background variables simultaneously – gender, age, income and education, and find that only "age" and "income" are correlated with having knowledge on entitlements to early retirement benefits. Older workers are more likely to know their early pension entitlements than younger workers. Moreover, those with the lowest income (below 300,000 NOK) are the most likely to respond that they are ‘not sure’ whether they are entitled to early retirement benefits, while those with the highest income (600,000 NOK or more) have the lowest probability of answering ‘not sure’. This implies that the differences in the level of knowledge between men and women in the private sector is largely due to female employees being on average younger than male employees in the private sector, and in addition, that they earn less. At the same time, younger people and workers with low incomes have less knowledge about their early retirement entitlements than older and high-income earners.

As with knowledge concerning the type of occupational pension scheme they are entitled to, the likelihood of a worker knowing whether they are entitled to an early retirement pension

increases with income. This result is consistent with findings from previous research (Mitchell 1988; Midsundstad 2002; Gustman & Steinmeier 2004; Sundén 2006; Gustman et. al. 2007; Lien & Grambo 2007). Those who earn 600,000 NOK or more have the lowest probability of answering that they are 'not sure'. Workers in this income group are 77 per cent less likely to respond that they are 'not sure' than workers all else equal who earn less than 300,000 NOK. As with knowledge on type of occupational pension scheme, this may be due to the fact the early retirement pension scheme has increased in importance in terms of what high-income earners can expect in future pension benefits. All employees working in a private sector company with the early retirement pension scheme will now receive early retirement pension benefits, regardless of whether they retire before the age of 67 or not. The current early retirement pension scheme in the private sector has been changed into a supplementary occupational pension scheme, however without the same guarantees, since workers who quit working in a company with the early retirement pension scheme, lose their entitlement to this scheme.

It is not obvious that income is an indirect measure of interest in obtaining relevant information. Nevertheless, it seems reasonable to argue, based on the results from the analysis, that income not only measures financial ability, but also says something about preoccupation with personal finances in general, including financial prospects in old age. This could increase interest in pension issues, and thus affect the likelihood of an individual obtaining relevant information about their pension plan.

Somewhat surprisingly, level of education is not correlated with private sector workers knowledge on early retirement entitlements. Those with an education from a university college/university are not more knowledgeable about their entitlement to the early retirement pension than those who only have primary school. One reason may be that the early retirement pension scheme entitlement in the private sector is more prevalent among workers who only have primary/secondary or high school than among higher educated workers. The share of entitled workers is about 10 per cent higher among those with low education compared to higher educated workers (Nergaard 2009). Furthermore, this result may derive from the fact that the early retirement scheme has traditionally been more important for people with primary education, than for those with higher education levels, given that they have traditionally had a greater need for retiring early, resulting from longer working careers,

more stressful occupations and thus often having health issues/reduced health (Midtsundstad 2002, 2005).

Generally, full-time employees have a better overview of their pension entitlements than part-time employees. The difference in the level of knowledge seems to be explained by differences in age and income between full-time and part-time employees. Working hours therefore has no direct bearing on one's knowledge on entitlements to the early retirement pension. Part-time employees seem not to be less exposed to pension information at the workplace than full-time employees, and as such have less knowledge about their early pension entitlements. The massive information campaign launched in connection with the reorganisation of the contractual early retirement scheme in the private sector and the subsequent referendum in 2008 may help to explain this result. In addition, entitlement to an early retirement pension does not depend on number of working hours as it does with an occupational pension scheme. People with relatively low income and short weekly working hours were covered by the early retirement scheme before 2011 and continue to be covered by the scheme today.

There is also no significant correlation between industry and knowing whether one is entitled to the contractual early retirement pension. Initially, workers in ICT, retail, hotels and restaurants know less about their early pension entitlements than employees in other industries (the bivariate correlations). This may be because they are less likely to be entitled to early retirement benefits than employees in other industries. Lack of knowledge among employees in retail trade and hotels and restaurants in particular would be worrying, since these employees are likely not to be entitled to an early retirement pension and to have made minimal contributions to an occupational pension (Hippe & Lillevold 2010). Many within these industries will therefore not have the opportunity to withdraw a pension early if they wish to do so and can expect a relatively low replacement rate once they are eligible to withdraw their pension. It is therefore particularly important that they know their entitlements so they can take this into consideration when changing jobs. A knowledgeable worker may seek access to a more generous occupational pension scheme and/or the early retirement pension when changing jobs. However, when we control for gender, age, education and income, those who work in retail and hotels and restaurants are not less knowledgeable than employees in other industries. That they initially were more likely to say they were 'not sure' whether they were entitled to early retirement benefits or not seems primarily to be related to

the low age and levels of income among employees in these industries; as previously shown, the youngest and lowest-paid know the least about their early retirement entitlements.

The results show that workers who are more concerned about their pension entitlements possess more knowledge about their early retirement benefits than workers who do not share this concern. Furthermore, workers who have used online information services to access information about their pension entitlements have a significantly lower probability of responding that they are 'not sure' if they are entitled to early retirement benefits than those who have not visited such websites.

Having an individual pension savings account (IPS) is not of significant importance for knowledge on early retirement entitlements. One explanation for this may be, as previously mentioned, that individuals may equally make a conscious choice *not* to invest in such an arrangement, given that the profitability of such an investment is disputed (Midtsundstad & Hyggen 2011). As such, having an individual pension savings account does not necessarily indicate greater knowledge about pension savings and pension schemes.

Conclusion

Following the pension reform and resulting changes in the National Insurance old age pension, the contractual early retirement scheme and occupational pension schemes, it is now more important than ever to have good knowledge about one's pension entitlements. Labour market behaviour and pension entitlements will now determine one's level of income and freedom of choice in older age to an even greater degree than before. Being entitled to a contractual early retirement pension and a generous occupational pension scheme will not only have a bearing on what workers can expect to receive in pension benefits, but will also determine whether they can receive a pension from the age of 62, and thus if they can retire early, should they need to or want to.

The article examines how many and which groups of employees in the private sector do not know if they are entitled to the contractual early retirement pension and do not know which type of occupational pension scheme they are covered by. Lacking this knowledge means these workers do not know what they can expect their pension benefits to be, and therefore cannot make necessary adjustments or rational and informed choices concerning pension

withdrawal and future work. The data used in this article was obtained from a representative survey among workers in the private sector from 2010.

The survey shows that nearly one in four workers in the private sector do not know what type of occupational pension scheme they have, and one in five are unsure if they are entitled to early retirement benefits. Furthermore, only one in four have used online information services to examine their pension entitlements. What characterises those who do not know if they have a defined contribution or a defined benefit occupational pension scheme is that they are young, have low income and/or are not concerned about their pension entitlements. Furthermore, those who do not know if they are entitled to the contractual early retirement pension are young, have a low income, lack concern about their pension entitlements and have not checked their pension entitlements using an online information service.

The fact that employees with high income are more likely than low-income earners to know if they are entitled to the contractual early retirement scheme is perhaps the most surprising result, since the scheme has historically been the most prevalent in male-dominated industries with manual labour and often low pay. However, the coverage of collective wage agreements and thus the prevalence of the contractual early retirement scheme is very low in many female-dominated industries in the private sector, where the level of education, wages and the average age are low.

The finding that high-income earners are more knowledgeable about their occupational pension scheme probably relates to the fact that these schemes historically have meant far more for the pension replacement rate of high-income earners than for those with low-paid jobs. However, this is not case today. Labour-based pensions now hold greater importance for the level of pension benefits all employees will receive, given the fact that the National Insurance old age pension is adjusted according to increases in life expectancy, and everyone is covered by an occupational pension scheme. Most interestingly, in relation to previous research, is the finding that on average women have an equally good overview of their occupational pensions and their early retirement pension benefits as men (if they have the same income, level of education and age), and that workers with a low education level have the same level of knowledge as highly educated workers. One possible explanation, particularly for this last finding, is that the early retirement pension scheme is contractual/based on collective wage agreements and that information about the scheme

therefore reaches everyone in a company through the local union and local union representative. In addition, the schemes have been the subject of much attention and debate in the media and among the unions, and probably also in the workplace, in recent years (for example during the collective wage settlement in 2008). The early retirement scheme is also, in a sense, something that is close to the individual, since employees working in companies with a contractual early retirement scheme before 2011 are likely to have seen one or more colleagues a year retiring early on this scheme. Trade unions and employee representatives seem to be important information channels in that they make information available to all groups of employees, regardless of gender and education.

On one hand, the fact that younger employees do not know which type of occupational pension scheme they are covered by is not particularly a cause for concern, given that their retirement is a long way off, meaning they have plenty of time to acquire knowledge. On the other hand, it may be beneficial even at a young age for workers to know what kind of additional benefits can be accrued in the workplace, so that they can take this into consideration when seeking jobs or considering switching workplaces. It is also important when considering whether to make additional savings, since workers may need to start saving early in order to be able to accumulate an adequate supplement to the National Insurance old age pension and labour-based pensions. The finding that being concerned about one's pension entitlements also has an impact on the level of knowledge, while perhaps not surprising, is important nonetheless, as it may mean that information produced about pension issues is not interesting enough and/or does not successfully underscore how important it is to not only know about National Insurance pension benefits, but also what labour-based pensions you are entitled to.

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ⁱ The exception is for temporary workers or people who have short contractual working hours. These are therefore not included in the analyses.

ⁱⁱ Other industries include health, nonprofit organisations, education, culture, agriculture and media.

ⁱⁱⁱ Those who work less than is required in order to be covered by an occupational pension scheme are excluded from the analyses.

^{iv} IPS (individual pension savings account) is an arrangement allowing individuals to save 15,000 NOK a year with tax deductions. It is possible to save more, but only the first 15,000 NOK is tax free.

^v To investigate whether there was an interaction between age and gender, we performed separate analysis including these interactions. However, none of these interaction terms was significant.

^{vi} To investigate whether there is an interaction between higher education and age, we conducted a separate analysis with interaction variables between the different education categories and age. However, none of these interaction variables was significant. Thus, we cannot claim that elderly people with education beyond primary school level, and especially those with short or long college and university education, have greater knowledge of their occupational pension scheme.

^{vii} To investigate whether there is an interaction between having higher education and obtaining information about the pension entitlements through online services, we conducted a separate analysis with interaction variables between the different education categories and using online services. However, none of these interaction variables was significant. Thus, we cannot claim that that those with education beyond primary school level, and particularly those with short or long college and university education, collect relevant information via online solutions more than others.

Paper III

Åsmund Hermansen (2014) Additional leave as the determinant of retirement timing – Retaining Older Workers in Norway. *Published in: Nordic Journal of Working Life Studies 2014, Vol.4, No.4.*



Additional Leave as the Determinant of Retirement Timing—Retaining Older Workers in Norway

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ABSTRACT

Faced with a rapidly aging labor force, increasing the labor supply of older workers has become an important goal for European countries. Offering additional leave to older workers with the option of withdrawing a contractual pension (contractual early retirement pension AFP) has become a widespread retention measure in Norwegian companies. Thus far, no studies documenting the effects of individual retention measures on early retirement behavior have been published. The aim of this article is to examine whether offering additional leave impacts the relative risk of withdrawal of a contractual pension. The analysis uses a difference-in-differences approach and examines whether offering additional leave to counteract early retirement impacts the retirement decisions of 61- and 62-year-olds within the next two years of their employment, controlling for a range of different individual and company characteristics. This is achieved by comparing changes and differences in the individual relative risk of retiring early on the contractual pension (AFP scheme) in the period 2001–2010 among older workers in companies with and without the retention measure. The analysis shows an overall average increase in the relative risk of a 61- or 62-year-old worker retiring on the contractual pension between 2001 and 2010; however, among older workers employed in companies offering additional leave there has been a decrease in the relative risk. The effect of additional leave is evident both before and after controlling for the selected individual and company characteristics. Thus, the analysis shows that offering additional leave as a retention measure reduces the individual relative risk of withdrawing a contractual pension (AFP) in the next two years of employment among older workers between the age of 61 and 62 years.

KEYWORDS

Additional leave / early retirement / older workers / retention measures

Introduction and research question

Many European countries are facing a demographic change that makes increasing the labor supply of older workers an important goal. The effects of an aging population on the sustainability of the welfare state in general and on social security systems in particular have been extensively studied and discussed in the research literature (Disney, 1996, Esping-Andersen, 2000, Meier and Werding, 2010). With the aim of reducing early retirement and increasing the length of employees' working lives, several European governments have implemented policies supporting age management strategies at the company level (Taylor, 2006). In the EU, the so-called Lisbon Strategy led to the "Barcelona target" in 2002, demanding that every EU member state sought

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an increase in average retirement age of about five years by 2010. Reaching macroeconomic targets of this kind is unlikely to be met without the active support of employers (Conen et al., 2011, Hofäcker, 2010). Both in the EU and Norway the heightened focus on age management strategies has fostered a growing interest in retention measures for counteracting early retirement (Kooij et al., 2013). Offering additional leave to workers from the age of 62 years who have the option to withdraw a contractual pension (the contractual early retirement scheme AFP) has become a widespread retention measure in Norwegian companies. All Norwegian employees are by law entitled to one additional week of leave from the age of 60 years. Thus, additional leave in this article refers to extra days off beyond the statutory “senior week”¹ offered on a voluntary basis by Norwegian companies. In 2010 more than 20% of companies with ten or more employees offered their older workers additional leave (Midtsundstad and Bogen, 2011).

The research literature on retirement behavior demonstrates the great complexity of the beliefs, desires, and opportunities determining older workers’ transition between work and retirement. The common thread in this research is the recognition that older workers have different work histories and as such have different expectations of work and retirement (Flynn, 2010, Hedström, 2005). The effect of additional leave presupposes that more leisure time is a motivating factor to continue working for employees who would otherwise retire on the contractual pension. The question of whether or not offering additional leave is effective in preventing older workers making an early exit has thus far remained unanswered (Midtsundstad et al., 2012a). *The aim of this article is to examine whether offering additional leave has an effect on the relative risk of withdrawal of a contractual pension.*

Theoretical framework

Understanding the transition from work to retirement and the role played by additional leave as a retention measure rests on our ability to recognize the variety of factors influencing early retirement practices. Theoretical traditions within the research literature on early retirement behavior present the different factors influencing labor supply in the final phase of working life. Different perceptions of the factors used to explain early retirement stem from differences in the notion of whether the exit is voluntary or involuntary and whether it is mainly affected by labor supply or labor demand (Engelhardt, 2012, Hedström, 2005, Jensen and Øverbye, 2013, Midtsundstad et al., 2012a). These competing theoretical traditions provide the basis for explaining how additional leave may function as a retention measure by emphasizing features which coincide with the theoretical tradition at hand.

Working on the assumptions that individuals desire to maximize their lifetime earnings and that the exit of older workers from the labor market is voluntary, the economic theory of retirement has been the most influential theoretical approach in academic debates on early retirement (Engelhardt, 2012). This theoretical approach explains early retirement as the outcome of an individual and rational decision-making process, where each individual weighs the pros and cons related to work and leisure. Desiring leisure over work, utility-maximizing workers select the time they believe is optimal to retire, taking into consideration financial opportunities and constraints (Engelhardt, 2012). The opportunities for different action alternatives are determined by the accessibility

and performance of the various pension schemes available, which are decisive in making the choice between work and leisure. Payment levels and corresponding tax rates, age restrictions, and selection criteria act as factors “pulling” employees out of working life early. Hence the labor market exit of older workers can be traced back to the financial incentives to retire offered by early retirement pension schemes and other welfare-state programs (Engelhardt, 2012, Gambetta, 1987, Gruber and Wise, 2007, 2010, Hernæs et al., 2002). For an individual desiring to maximize lifetime earnings as well as more leisure time, being offered additional leave represents a new opportunity to gain more leisure while continuing paid employment. Thus, from this theoretical viewpoint, additional leave adds to the pros for continuing working, motivating the choice of later exit over early retirement against other factors “pulling” older workers out of work.

Within the literature on early retirement, “pull factors” have often been related to purely economic incentives and a preference for leisure over work. However, within the field of sociology these factors have also been given a more social and cultural understanding. From a sociological point of view, early retirement schemes also reproduce the culturally constructed notion of when older workers should leave the labor market (Jensen and Øverbye, 2013). Thus, early retirement schemes are assumed to represent institutional expressions of values, norms, and conventions pertaining to when older workers should leave the labor market. Acting upon the signals embedded in early retirement schemes, individuals are “pulled” out of working life early. Hence, these early retirement schemes have underpinned an “early exit” regime through influencing when older workers believe they are supposed to retire (Jensen and Øverbye, 2013). From this sociological perspective, offering additional leave may help counteract these culturally constructed notions of when older workers should leave the labor market. Besides, offering older workers more leisure time, such a measure also signals the employer’s wish for older workers to continue working in the company. Hence, offering additional leave may motivate older workers to continue working for a few more years by counteracting an “early exit” regime and the culturally constructed beliefs about when older workers should leave the labor market. Thus, the signal effect may also be of importance when older workers are weighing the pros and cons of continuing working against those of leaving the labor market altogether.

The economic theory of retirement has been criticized for modeling the transition between employment and retirement as a voluntary choice (Engelhardt, 2012). The approach neglects the labor demand side, focusing exclusively on the individual decision and hence taking a singular labor supply view. In response to this one-sided focus on free individual choice and “pull factors,” a growing research literature is focusing on involuntary retirement as a result of “push factors.” This includes “labor market and company-level push factors” such as structural adjustments, rationalization, increased eligibility requirements, and other factors that “push” elderly, less productive, or less skilled labor out of the labor market (Dorn and Sousa-Poza, 2010, Gambetta, 1987, Halvorsen, 1977, Midtsundstad, 2007). Referred to as “individual push factors,” health problems, as well as physical and mental strains related to the job, have proven to increase the likelihood of older workers opting for early retirement (Buchholz et al., 2006, Börsch-Supan et al., 2009, Calvo et al., 2013, Engelhardt, 2012, Gørtz, 2012, Midtsundstad, 2006). Offering additional leave in the final phase of working life may help older workers to reconcile work and the need for more leisure, reducing the burdens which may otherwise “push” them out of working life early.



As a retention measure, additional leave may counteract “push” as well as “pull factors,” extending the working life of older workers with the option of withdrawing a contractual pension. However, analyses explaining the factors of early retirement practices which emphasize only “pull” or “push factors” have proven to be inadequate. Both sets of factors are relevant as there may be a variety of factors influencing early retirement behavior. Thus, analyses of early retirement behavior must include a model which sufficiently recognizes the variety of factors influencing early retirement practices.

The aim of this study is to investigate whether additional leave works as a retention measure on the whole, counteracting either “pull” or “push factors,” or a combination of both. The role played by additional leave as a retention measure and which factors are decisive in the decision to prolong working life will vary between individuals according to differences in beliefs, desires, and opportunities. Retirement practices may also vary according to experiences outside the workplace, such as family situation and spouse retirement behavior (Hallberg, 2007, Hank, 2004, Hauge and Årethun, 2008, Oude Hengel et al., 2012). Thus, an analysis of early retirement behavior must also include variables accounting for such characteristics. In order to be able to investigate the effect of additional leave on the withdrawal of a contractual pension, the analysis will include a range of independent variables accounting for “pull and push factors” which previous research has shown to affect early retirement behavior.

Previous research

Studies show that offering additional leave is a widespread retention measure among employers in many European countries (Conen et al., 2011, 2012, Van Dalen et al., 2009, 2010). In a study of Dutch employers, Van Dalen et al. (2010) found additional leave for older workers to be the most common retention measure; the second and third most common measures were ergonomic measures and partial retirement, respectively. A study by Conen et al. (2011) shows that the number of Dutch employers offering additional leave decreased between 2000 and 2009. In 2000, 53% of employers offered additional leave as a retention measure and in 2009 the figure had dropped to 44%. Nevertheless, offering additional leave was still the most common retention measure used by Dutch employers.

In a study of Norwegian employers conducted in 2005, Midtsundstad (2007) found that only 2% used additional leave as a retention measure. Providing alternative work tasks (11%) and different facilitation/ergonomic measures (21%) were the most common measures for retaining older workers. Nevertheless, a vast majority of employers offering measures providing greater flexibility, such as additional leave, meant that these measures helped delay retirement. Accordingly, in a study of older workers in the government sector, Reichborn-Kjennerud et al. (2011) found that older workers emphasize additional leave as an important incentive for continuing working beyond the age of 62 years, which is the age at which employees are entitled to withdraw the contractual pension. In another Norwegian study of older workers in the municipal sector, Midtsundstad and Nielsen (2013) also found that a large number of older workers emphasized additional leave as an incentive for continuing working. Thus, studies among both employers and employees show that both groups deem additional leave an effective retention measure.

The study carried out by Reichborn-Kjennerud et al. (2011) was based on a heavily biased sample given the fact that the survey population consisted exclusively of older workers aged 60 years and above, who were all still working. Workers aged 60 years and above can be assumed to be more healthy and motivated to work than the population of older workers as a whole, since a large proportion of employees retire on the disability pension before they turn 60 years (Midtsundstad et al., 2012a). Taking this into account, Reichborn-Kjennerud et al. (2011) acknowledged that their findings may not be valid in other sectors with greater physical and mental strains. They stress the fact that the older workers emphasizing additional leave as a decisive factor in the decision to continue working were mostly highly educated and reported to be of good health.

Surveys show that many early retirees justify opting for early retirement on the basis of a need for more leisure time, thus additional leave may provide older workers with the necessary flexibility and leisure to continue working a few years more (Midtsundstad, 2007, 2009, Midtsundstad and Nielsen, 2013). Using the first three waves of the Health and Retirement Study (1992 to 1996), Charles and DeCicca (2007) discovered that older American workers who were not free to lower their usual working hours, workers who are hours-constrained or overemployed, are much more likely to retire than workers who are free to adjust their hours of work. These findings hold true for both sexes, but the lack of flexibility had the greatest effect on men. Studying the presence of hours' constraints in the UK labor market, Gielen (2009) supports these findings, showing that some overemployed woman in the UK, especially those working full-time, left the labor market early due to lack of gradual retirement opportunities with their current employer.

A review of previous research on measures for retaining older workers in Midtsundstad et al. (2012a, 2012b) shows that few policies and facilitation programs for older workers have been evaluated, and that the correlation between the supply of labor and facilitation for older workers, such as additional leave, is ambiguous. The few Norwegian studies that have evaluated the impact of retention measures for older workers on early retirement behavior showed that offering such measures in 2005 did not always help to delay retirement (Midtsundstad et al., 2012a, 2012b). However, the aim of these studies was not to evaluate the impact of individual retaining measure, such as additional leave, but to evaluate the overall effect of being offered retention measures. Furthermore, very few companies had initiated such measures by 2005 compared with the 2010 situation (Midtsundstad et al., 2012a, 2012b). Hence, further analysis of the effects of the measures used by companies to retain older workers is needed.

The labor market in Norway

Norway has one of the highest employment rates among 55- to 64-year-olds in Europe and an employment rate above the OECD average (OECD, 2013). This can be explained by four factors. Firstly, compared to other European countries, Norway had until 2011 a relatively high statutory retirement age (67 years for both men and women). Secondly, the possibility of retiring at the age of 62 years was first given to Norwegian employees in 1998 through the contractual pension (AFP scheme), covering about 80% of all older workers (Midtsundstad, 2004, Nergaard, 2009).² Thirdly, from 1997 the contractual pension also allowed individuals to combine part-time work with a partial pension.



However, employees wishing to combine part-time work with a part-time contractual pension must obtain the agreement of their employer. Fourthly, redundancy regulations in Norway follow the “last in, first out” principle, making dismissal protection in Norway especially strong for older workers with seniority (Midtsundstad, 2011).

The increased attention to the aging part of the workforce in Norway is manifested by the Inclusive Working Life Agreement (IWLA), which set out to increase the average retirement age between 2001 and 2010 and from 2010 to increase the total years in employment. With the signing of the IWLA in 2001, the government called for employers to take greater social responsibility for keeping people in employment until they reach pensionable age. The majority of Norwegian employers do indeed admit that they have—and also insist on taking—social responsibility for keeping people in employment, a responsibility largely limited to their own employees (Midtsundstad, 2008). In addition to signing the IWLA, in 2010 nine out of ten IWLA companies had implemented active aging or life-stage policies aimed at retaining their older workers (Midtsundstad and Bogen, 2011). The average retirement age in Norway has increased since 2001 and the introduction of the IWLA (Haga, 2010). Nevertheless, whether the reduction in the rate of early retirement is a direct effect of the measures aimed at retaining older workers remains unclear (Midtsundstad et al., 2012a).

The contractual pension scheme and additional leave as a measure for retaining older workers

The contractual pension or contractual early retirement scheme (AFP scheme) offers older workers the possibility of opting for early retirement between the ages of 62 and 66 years. From January 1, 2011, the contractual pension was changed to a flexible lifelong annuity for private sector workers, making the scheme distinctly different from the public sector where it is still designed as an early retirement scheme. Nevertheless, this regulatory change was implemented after the timespan investigated in this article. Early retirement was available to all public sector workers and about 40% of private sector workers (the scheme was optional for private sector companies) (Midtsundstad, 2004, Nergaard, 2009).

The financing of the contractual pension is organized as a common redistribution system and employers pay a pension premium for their employees. However, from 2004 employers in municipality sector could choose to opt out of the common redistribution system and carry 50% or 100% of the total cost when employees retire on the contractual pension. In the private sector the scheme was also arranged as a common redistribution system (until 2011). The private sector scheme was partially paid by the state (one-third) and partially paid by pension premiums from the employers (two-thirds). Besides the pension premium, the most common arrangement was that private sector employers carried 25% of the total cost when their own employees retired on the contractual pension. In the state sector, the employers only pay a pension premium into the common redistribution system and do not bear any additional cost when employees retire. Thus, those municipalities which have opted out of the common redistribution system have a financial incentive to retain their older workers. In addition, private sector employees with a contractual pension did also have a financial incentive to retain workers from retiring early (until 2011).

The most common entitlement age for retention measures used by Norwegian companies is 62 years. This is the age at which 74% of the 61- and 62-year-olds working

in companies offering additional leave as a retention measure became eligible for the additional leave in 2010. The most common arrangement was five days or more additional leave, the amount available to 87% of the 61- and 62-year-olds working in companies using the retention measure. Furthermore, the number of companies offering additional leave as a retention measure was quite low prior to 2005, with only 4% of companies offering additional leave. Additional leave gained greater popularity from 2005; by 2006 almost 10% of Norwegian companies with ten or more employees offered additional leave as a retention measure, with that number increasing to 21.5% by 2010 (Midtsundstad and Bogen, 2011).

Data

The data used in the analysis cover the period 2000 to 2010 and comprise all employees between 61 and 62 years of age ($N = 15,231$) who were employed in any of the 361 companies that participated in a 2010 survey. The sample was representative for all Norwegian companies with ten or more employees in 2010 and one or more employees between 61 and 62 years of age. The survey was conducted by the Fafo Institute for Labor and Social Research and Respons Analyse in the period August to September 2010 and yielded a response rate of 60%. The companies were contacted by telephone and the interviewers asked initially for the HR manager (in the case of smaller companies, the general manager). The sample universe was The Register of Business Companies³ in August 2010. The survey provides information on company characteristics and whether additional leave is used as a retention measure on early retirement and, if so, in which year the measure was introduced (Midtsundstad and Bogen, 2011). All information on individual employees has been provided by Statistics Norway (SSB) and is drawn from administrative registers. In the private sector only employees working in a company which offers the contractual pension (AFP) are included in the analysis. In the public sector all employees have access to the contractual pension and are accordingly included in the analysis. Of the 361 companies that participated in the 2010 survey, 100 are in the public sector and 261 in the private sector.

Method

The analysis uses a difference-in-differences approach which enables the measurement of changes in the individual relative risk of retiring on the contractual pension before and after the introduction of additional leave. These differences in average change are also referred to as a Difference-in-Differences estimator (Angrist and Pischke, 2008, Wooldridge, 2009). This is a standard method for measuring the effects of interventions and regulatory changes. The method consists of comparing two groups, where one group experiences a policy change—in this analysis additional leave—during the period under consideration (Angrist and Pischke, 2008, Wooldridge, 2005, 2009). The survey provides information on which companies have introduced additional leave, in which year the measure was introduced, and details relating to the additional leave offered.

The analysis investigates whether working in a company offering additional leave affects the relative risk of workers aged 61 and 62 years, in the period 2000 to 2008,



retiring on the contractual pension in the next two years of their employment. A company is identified as offering additional leave as a retention measure on the basis of the HR manager/executive director of the company in August–September of 2010 having reported to have made this measure available to older workers with the purpose of encouraging them to continue working (Midtsundstad and Bogen, 2011). Among the companies having introduced additional leave as a retention measure, only those having introduced the measure from 2005 and with an entitlement age set at 62 years are included in the analysis. In addition, only those companies offering five days or more additional leave are included. Thus, the analysis investigates the relative risk of 61- and 62-year-olds retiring in the next two years of their employment during a period when none of the companies in the data had initiated this retention measure, compared with the relative risk of the workers retiring during a period when a known selection of the companies had introduced the measure. The first period is referred to as the pretreatment period, 2001/2002 to 2004/2005, the second period, 2005/2006 to 2009/2010, is referred to as the posttreatment period. The argument for choosing to exclude companies that introduced additional leave as a retention measure before 2005 is to provide a clearer delimitation between the pre- and posttreatment period. Furthermore, delimiting the treatment group to those who work in companies where the entitlement age is set at 62 years and who are offered five days or more additional leave enables the analysis to investigate the effect of measures offered on similar grounds. The control group includes workers aged 61 and 62 years employed in companies which did not introduce additional leave as a retaining measure during the period under consideration.

All analyses were performed using Stata, version 12. Given that the dependent variable is binary categorical, logistic regression has been employed in the analysis and odds ratios are reported. The two models, presented in Table 2, have also been estimated as linear probability models, yielding substantially similar results (not shown). Model 1 investigates the total effect of offering additional leave. This is done by including the retention measure as a dummy variable, a dummy for separating the pretreatment period (0) and posttreatment period (1), measuring the overall change and the interaction between the change and the retention measure (Difference-in-Differences estimator). Thus, model 1 provides an estimate of the gross effect of offering additional leave.

Offering additional leave is a choice made by each individual company and hence the group of Norwegian companies offering this retention measure is self-selected. However, the distribution of older workers in the intervention group and the control group can be assumed to be random, given the fact that very few change jobs after the age of 60 years, enabling them to actively seek out companies with such retention measures for older workers (Lien, 2013, Midtsundstad et al., 2012a, OECD, 2013). However, in order to be able to measure the true effect of providing additional leave, the two groups are assumed to be comparable over time. Such an assumption is not very likely, thus model 2 includes controls for various individual and company characteristics.

Model

To account for possible differences in the early retirement behavior between women and men, “woman” is included in the analysis (“male” ref.). The analysis also included “living in a one-person household” (not living in a one-person household ref.), controlling

for household status, and a possible desire to spend more time with family, making older workers “jump” into retirement.

One of the limitations of the data applied in the analysis is the lack of variables controlling for differences in health, working environment, and working conditions between the intervention and control group. However, controlling for “sick absence” and “level of education” does presumably capture important differences in health, working environment, and working conditions between the intervention and the control group. Thus, the analysis includes “sick absence” (“sickness absence” certified by a physician and lasting for more than 16 days, “no sick absences” ref.) and level of education divided into “elementary school” (ref.), “high school,” “undergraduate from university/college,” and “postgraduate from university/college.” As illustrated in Table 1, the intervention group has a slightly lower proportion of employees with “elementary school” as their highest level of education and a higher proportion with “high school,” hence level of education is also included to control for this difference.

To account for the effect of financial incentives presumably “pulling” older workers into early retirement, “income percentile” (net income after tax divided into percentiles), “spouse income percentile” (spouse income after tax divided into percentiles), and “household debts percentile” (household debts divided into percentiles) are included in the analysis.

Research on the relationship between marital status and economic activity—or “coupled retirement”—shows that many couples “coordinate” their retirement. The tendency for couples to make a joint exit from working life is known as “the joint retirement hypothesis” (Charles and DeCicca, 2007, Hank, 2004, Lancee and Radl, 2012). To control for the possibility that couples “coordinate” their retirement, the analysis includes “spouse retired on the contractual pension” and “spouse retired on disability pension.” Working hours have also shown to affect when older workers leave the labor market, especially those working part-time has a higher relative risk of being disabled (Midtsundstad et al., 2012a, 2012b). To account for the effect of working hours, contractual working hours, that is, “full-time” (ref.), “long part-time” (from 50% to 80% full-time equivalent), and “short part-time” (less than 50% full-time equivalent), are included in the analysis.

Research shows that “workers” and “routine nonmanual employees” often retire due to health problems, heavy professional burdens, and long careers, whereas “professionals, administrators, or officials” are more inclined to retire due to loss of interest and motivation (Midtsundstad, 2002, 2005). To account for differences in early retirement behavior among employees in different occupations and the fact that the intervention group has a higher proportion of “workers,” occupation is included in the analysis. In addition to “sick absence” and level of education, controlling for occupation may account for possible differences in health, working environment, and working conditions between the intervention and control group. The classification of the different occupations is based on the Erikson-Goldthorpe social class schema using the International Standard Classification of Occupations (ISCO88) which distinguishes between “workers,” “routine nonmanual employees,” and “professionals, administrators, and officials” (ref.) (Leiulfstrud et al., 2005).

Studies show that companies in which work is allocated to teams, making employees mutually dependent on each other to perform their tasks, are less inclined to offer older workers flexible working time arrangements (Hutchens, 2010, Latulippe and Turner,

**Table I** Distribution by independent variables

	2001/2002–2004/2005		2005/2006–2009/2010	
	Intervention group	Control group	Intervention group	Control group
Woman	62.7	64.6	61.2	61.6
Living in a one-person household	18.4	20.3	17	22.1
Sick absence	19	17.1	12	13.3
Elementary school	22.4	25.3	15.2	18.6
High school	47.5	41.2	49.2	40.4
Undergraduate from university/college	22.4	26.8	26.7	31.2
Postgraduate from university/college	7.7	6.7	8.9	9.8
Income percentile, mean (s.d.)	48.8 (29.4)	49 (29)	47.9 (29.4)	51.4 (29)
Spouse income percentile, mean (s.d.)	43.3 (29.7)	42.7 (31.6)	45.7 (30.1)	44.8 (33)
Household debts percentile, mean (s.d.)	36.6 (29.8)	39.4 (29.5)	40.9 (29)	44 (29.2)
Spouse retired on AFP retirement scheme	7.5	6.8	6.6	5.9
Spouse retired on disability pension	16.9	16.2	16.4	13.5
Full-time 30 hours or more	66.8	67.2	71	73
Part-time 20–29 hours	15.7	15.1	13.3	12.4
Part-time <20 hours	17.5	17.7	15.7	14.7
Worker	58.8	48	58	35.2
Routine nonmanual employee	13.4	36.7	20.6	40
Professional, administrator, or official	27.8	15.3	21.4	24.8
100 or more employees	93	77.4	92.2	84.7
Human resources manager	98.6	92	96.8	92.7
Public administration	26.3	5.6	30.8	3.2
Other industries	7.9	12.5	9.6	17.3
Teaching	34.9	32.6	16.2	34.5
Health and social services	22.8	24.4	28.7	21.6
Manufacturing	2.8	11.3	5	9.6
Construction	2.9	3.4	1.8	1.6
Hotels and restaurants	0.1	3.2	0.5	4.2
Wholesale and retail trade	2.2	7.3	7.3	8
Not IWLA company	33.3	38.6	35.1	57.8
IWLA company 2001	7.7	8.4	12.2	6.4
IWLA company 2002–2010	59	53	52.7	35.8
Number of other retention measures, mean (s.d.)	1.4 (0.8)	0.5 (0.8)	1.5 (0.8)	0.3 (0.5)
N	4,077	2,521	6,259	2,374

2000, Midtsundstad and Bogen, 2011). However, the possibility of offering retention measures facilitating more flexibility, such as additional leave, can be expected to increase with the size of the company even if work is allocated to teams. A larger workforce allows more leeway for adjusting production to a reduction in working hours among the older workers. As illustrated in Table 1, the intervention group has a higher proportion of employees working in companies with “100 or more employees.” To control for number of employees and the difference between the intervention and control group, “100 or more employees” is included in the analysis (“less than 100 employees” ref.).

The “human resources manager” holds an important role in facilitating working conditions which safeguard the needs of employees and advocating adaptations to account for these needs. Thus, a “human resources manager” may play an important role in adjusting working conditions in accordance with the needs of older workers, providing them with the possibility of extending their working life. As illustrated in Table 1, the intervention group has a slightly higher proportion of employees working in companies with a “human resources manager.” “Human resources manager” is included in the analysis as a dummy variable (“No human resources manager” ref.).

The type of industry has proven to influence whether older workers make an early exit from working life. Traditional industries such as “manufacturing” experience global technological changes and the growing international division of work, which in turn has led to higher rates of older workers opting for early retirement. Working in industries such as “manufacturing” and “construction” will presumably involve more heavy manual labor than working in “public administration,” thus controlling for industry may account for some of the possible differences in working environment and working conditions between the intervention and control group (Buchholz et al., 2006, Midtsundstad et al., 2012a, 2012b). As illustrated in Table 1, the intervention group has a higher proportion of workers employed in “public administration” and a lower proportion employed in “manufacturing.” To control for type of industry and the differences between the intervention and control group, the analysis includes “public administration” (ref.), “other industries,” “teaching,” “health and social services,” “manufacturing,” “construction,” “hotels and restaurants,” and “wholesale and retail trade.”

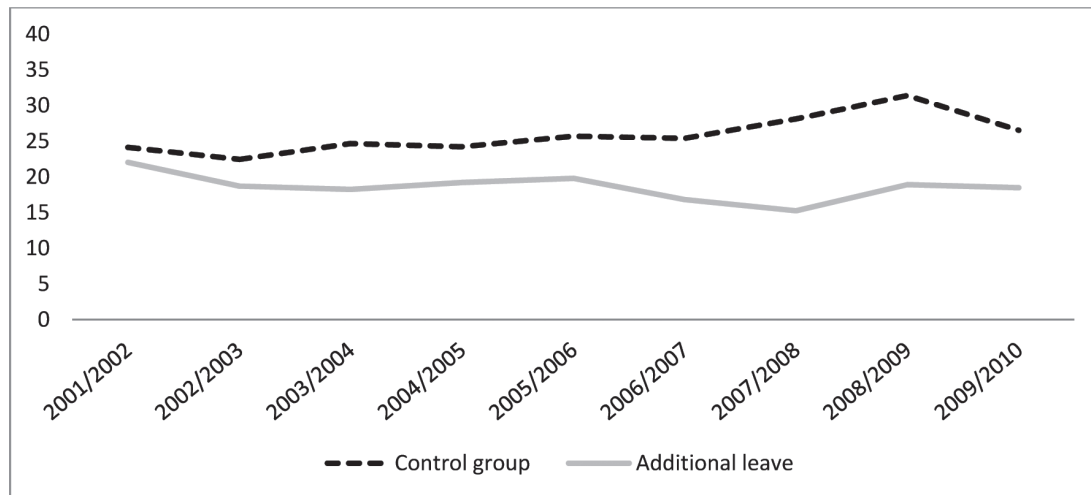
The intervention group has a higher proportion of employees working in companies which signed the IWLA between 2002 and 2010. As illustrated in Table 1, having other retention measures available to them is also more common for employees in the intervention group. To control for these differences between the intervention and control group, “IWLA company 2001,” “IWLA company 2002–2010” (“not IWLA company” ref.), and “number of other retention measures” are included in the analysis.

Results

Early retirement behavior in the period and companies under consideration is illustrated in Figure 1. Employing a difference-in-differences approach rests on an assumption that the underlying trends in the outcome variable would be the same in the absence of treatment (Angrist and Pischke, 2008). As illustrated, there are only minor variations in retirement rates between the treatment and the control group in the pretreatment period from 2001/2002 to 2004/2005 and the overall trend is a small increase in both groups. Thus, Figure 1 provides visual evidence of an equal underlying trend in the pretreatment period.



Figure 1: Percentage of 61- and 62-year-olds withdrawing a contractual pension in the next two years of employment and working in companies offering additional leave as a retention measure compared to the percentage working in companies without such an arrangement for older workers.



In the posttreatment period from 2005/2006 to 2009/2010, the treatment group experiences a fall in early retirement rates whereas in the control group early retirement rates continue to increase. Thus, the difference between the early retirement rates of the treatment and control groups is more significant in the posttreatment period than in the pretreatment period.

As a robustness check, in addition to investigating the trends in the pretreatment period in Figure 1, the analysis also includes a “placebo difference-in-differences” test (not shown) pretending that additional leave was employed among the intervention companies in 2003 and not from 2005 onward; 2001/2002 to 2002/2003 was used as the pretreatment period and 2003/2004 to 2004/2005 as the posttreatment period. The “placebo difference-in-differences” test did not yield significant results, strengthening the assumption that the trends were quite similar in the posttreatment period and that there were no unobserved trends affecting one of the groups, but not the other.

As illustrated in Table 1, the proportion of “workers” and the proportion working in a “IWLA company 2002–2010” in the control group changes from the pretreatment to the posttreatment period. Additionally, in the treatment group the proportion working in “teaching” changes from the pretreatment to the posttreatment period. To control for these changes the analysis included interactions between the respective confounders and the dummy for change from the pretreatment to the posttreatment period (not shown). To control for clustered data on company level, the analysis also included a regression using clustered standard errors (not shown). The regression results using clustered standard errors and including these interactions did not differ from the results presented in Table 2 using normal standard error and not including the respective interactions.

The analysis shows an overall average increase in the relative risk of a 61- or 62-year-old worker retiring on the contractual pension between 2001 and 2010 (“change from pretreatment period to posttreatment period”); however, among older workers employed in companies offering additional leave there has been a decrease in the relative risk (“Retention measure*change (Difference-in-Differences estimator)”). The effect of

Table II Individual relative risk of withdrawing a contractual pension among 61- to 62-year-olds in the next two years of employment, having been exposed to additional leave as a retention measure, before and after controlling for a range of individual and company characteristics.

	Model 1 OR	Model 2 OR
Woman		0.904
Living in a one-person household		0.865
Sickness absence		1.439***
Elementary school (ref.)		1.000
High school		0.978
Undergraduate from university/college		0.888
Postgraduate from university/college		0.665***
Income percentile		0.995***
Spouse income percentile		1.006***
Household debts percentile		0.994***
Spouse retired on contractual pension		1.394***
Spouse retired on disability pension		1.070
Part-time <20 hours (ref.)		1.000
Part-time 20–29 hours		2.487***
Full-time 30 hours or more		2.644***
Professional, administrator, or official (ref.)		1.000
Routine nonmanual employee		1.104
Worker		0.952
Less than 100 employees (ref.)		1.000
100 or more employees		1.329***
No human resources manager (ref.)		1.000
Human resources manager		1.083
Public administration (ref.)		1.000
Other industries		2.327***
Teaching		1.626***
Health and social services		1.148***
Construction		2.152***
Manufacturing		3.392***
Hotels and restaurants		2.185***
Wholesale and retail trade		2.483***
Not IWLA company (ref.)		1.000
IWLA 2001		0.996
IWLA 2002–2010		1.075
Number of other retention measures		1.063
Retention measure—additional leave	0.735***	0.799***
Change from pretreatment period to posttreatment period	1.195***	1.214***
Retention measure*change (Difference-in-Differences estimator)	0.731***	0.721***
Pseudo R2	0.008	0.063
N	15,231	15,231

** $p \leq 0.05$, *** $p \leq 0.01$.

OR = odds ratio.



additional leave is evident both before and after controlling for the selected individual and company characteristics. There is almost no change in the Difference-in-Differences estimator when controlling for the different confounders in model 2. Thus, the results provide evidence for additional leave having an impact on the individual relative risk of withdrawing a contractual pension. The reducing effect of additional leave on the individual relative risk of withdrawing a contractual pension is estimated to be slightly above 5%.⁴ As shown in Figure 1, the difference in aggregated retirement rates between the treatment and control group diminishes toward the end of the timespan investigated. However, the analysis investigates the changes in the *individual* relative risk of withdrawing a contractual pension and not the changes in the companies' numbers of early retirees as illustrated in Figure 1.

The relative risk of a 61- or 62-year-old withdrawing a contractual pension in the next two years of their employment is lower for those with a "postgraduate from university/college" and also decreases with "income percentile" and "household debts percentile." The relative risk of retiring early increases with having a "sick absence," "spouse income percentile," and a "spouse retired on contractual pension." Compared with "public administration," the relative risk of retiring on the contractual pension is higher for older workers in all other industries. Working "more than 20 hours per week" or "full-time" also increases the relative risk of retiring on the contractual pension, compared to those working "less than 20 hours per week." Furthermore, working in a company with "100 or more employees" increases the relative risk of retiring early.

Discussion

The few Norwegian studies that have evaluated the impact of retention measures for older workers on early retirement behavior showed that offering such measures in 2005 did not always help to delay retirement (Midtsundstad et al., 2012a, 2012b). However, the aim of these studies was not to evaluate the impact of individual retaining measure, such as additional leave, but to evaluate the overall effect of being offered retention measures. Furthermore, very few companies had initiated such measures by 2005 compared with the 2010 situation (Midtsundstad et al., 2012a, 2012b). Adding to these studies, the aim of this article was to investigate the possible effect of additional leave on early retirement, based on the 2010 situation. The results in this article show that working in a company offering additional leave for older workers reduces the relative risk of 61- and 62-year-olds withdrawing a contractual pension in the next two years of their employment. The effect⁵ of additional leave is evident both before and after controlling for a range of known individual risk factors such as gender, level of education, level of income, one-person household, contractual working hours, and occupation, as well as after controlling for company characteristics such as the number of employees, the presence of a human resources manager, industry, and the time of joining the IWLA. Hence, the effect of additional leave cannot be ascribed to differences in these respects between the intervention group and the control group. The results therefore support a notion of more leisure time being a motivating factor for workers aged 61 and 62 years who would otherwise retire on the contractual pension to instead continue working.

Offering additional leave in the final phase of working life may help older workers to reconcile work and leisure, thus reducing the burdens which may push older workers

out of working life early. Health problems, as well as physical and mental strains related to the job are important reasons for retiring early (Buchholz et al., 2006, Börsch-Supan et al., 2009, Calvo et al., 2013, Engelhardt, 2012, Gørtz, 2012, Midtsundstad, 2006). However, as previously mentioned, it must be emphasized that the data consisted exclusively of older workers above the age of 60 years. These workers can be assumed to be more healthy and motivated for work than the population of older workers as a whole, since a large proportion of employees retire on the disability pension before they turn 60 (Midtsundstad et al., 2012a). The results from this analysis cannot be generalized outside the age group investigated in this article. Thus, the analysis cannot rule out the possibility that the effect of additional leave as a measure for retaining older workers presupposes a target group which constitutes a relatively healthy and well-motivated group of older workers.

One possible objection to the analysis is that the data used do not enable the possibility of controlling for factors related to health status, the working environment, and working conditions. Nevertheless, controlling for sick absence, level of education, type of occupation, and industry does presumably capture important differences in health, working environment, and working conditions between the intervention and the control group. Furthermore, though the companies are self-selected as to whether additional leave is used as a retention measure, older workers are most likely randomly distributed between the intervention group and the control group. Thus, the health status of the workers in the intervention and control companies is most likely to be randomly distributed and hence not affecting the results of the analysis.

It seems reasonable to assume that the IWLA's goal of increasing the average retirement age has heightened the focus on the labor market situation of older workers and increased employers' awareness of the need to support the continued labor participation of this group. Offering additional leave implies that the employers actively retain older workers and encourage them to continue their working life. Even though additional leave may reduce the effect of "push factors" by helping to reconcile work and leisure, the signal effect embedded in providing this retention measure can be just as decisive in motivating older workers to continue working a few years more. Nevertheless, the ambition of this study was not to investigate whether additional leave helps to counteract more "pull" than "push factors" or vice versa. The aim was to investigate whether additional leave is effective as a retention measure on the whole, controlling for both "pull and push factors" which previous research has shown to affect early retirement behavior. The role played by additional leave as a retention measure and which factors are decisive in the decision to prolong working life will vary between individuals according to different characteristics. Nevertheless, the analysis in this article provides evidence that additional leave is an effective measure for retaining older workers considering early retirement.

The results show that especially having a sick absence, working hours, and type of industry are of significant importance for the individual relative risk of withdrawing a contractual pension. One can question whether the use of standardized retaining measures or a one-size-fits-all approach, such as offering additional leave, is the most appropriate way to retain older workers given the heterogeneity of needs, problems, and challenges facing different industries and groups of employees (Hilsen and Midtsundstad, 2014, Midtsundstad and Bogen, 2011). Furthermore, these measures are also made eligible according to age limits (62 years), which in many sectors and industries are too high to make a difference for individuals at the risk of becoming disabled. Thus, this



study provides no definitive answer to “what works in age management.” If additional leave reduces the effect of “push factors” by helping to reconcile work and leisure, the cost of such a measure must be weighed against the benefits associated with an extended working life. If on the other hand the effect is driven by a signal effect helping to counteract an “early exit” regime, other less expensive measures may have the same effect on the individual risk of retiring early. Furthermore, the present analysis only provides insight into the effect of one single measure use to retain older workers, in a defined period of time for a selected group of employees. Retaining efforts may prove to be more efficient if targeted according to heterogeneity in needs, problems, and challenges facing different industries and groups of employees. Developing more targeted retaining measures implies a broad collaboration between policymakers, employers’ and employees’ organizations, and researchers in the field (Hilsen and Midtsundstad, 2014).

Conclusion

This article has investigated whether additional leave as a measure for retaining older workers had an effect on the relative risk of withdrawing a contractual pension in the next two years of employment among 61- and 62-year-olds during the period from 2001/2002 to 2009/2010. The analysis investigates whether the individual relative risk of retiring early is significantly different for older workers employed in companies that have introduced additional leave compared to those in companies without this retention measure.

Through applying a difference-in-differences approach and controlling for a range of individual and company characteristics, the analysis in this article has estimated the impact of additional leave on early retirement behavior. The analysis does provide evidence for additional leave affecting retirement timing among older workers in Norway. However, the analysis does not indicate which factors of additional leave are decisive in prolonging the working life of older workers in Norway. This article has shown additional leave to be an effective retention measure on early retirement, explaining how the measure impacts the individual’s decision to continue working is a challenge for upcoming research requiring additional qualitative methods not used within the scope of this study. Although this study adds to our knowledge in a so far underresearched area, more research is needed before conclusions can be drawn on how to utilize the potential represented by older workers.

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End notes

- ¹ In the government sector the social partners have agreed upon eight additional days of leave from the age of 62 years, formalized in the collective agreement. Six days more additional leave can be agreed upon on a voluntary basis.
- ² The contractual early retirement scheme was initially introduced in 1988. The scheme granted the employees of companies bound by a collective agreement the opportunity to retire from the age of 62 years. Almost 80% of older workers (40% in the private sector) are entitled to benefits from the contractual early retirement scheme (AFP), which is financed by employers and the state in collaboration.



- 3 The Register of Business Companies is responsible for registering all Norwegian and foreign business companies in Norway.
- 4 Estimated by the margins command and substantiated by a linear probability model.
- 5 The analysis is based on information about whether the companies have introduced additional leave as a retention measure, and not information about whether older workers actually opt for more additional annual leave. Thus, the effect must be interpreted as an intention to treat effect.

Paper IV

Åsmund Hermansen (2015) Retaining older workers – The effect of phased retirement on delaying early retirement. *Published in: Nordic Journal of Social Research 2015, Vol.6.*

Retaining older workers: The effect of phased retirement on delaying early retirement

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Abstract

Introduction: Phased retirement involves reducing working time in the final years before retirement. The aim of phased retirement is to extend working careers and retain older workers who would otherwise opt for full early retirement. This article investigates the effect of offering phased retirement on early-retirement behaviour in Norway.

Method: The data used in the analysis covers the period between 2000 and 2010 and comprises all employees between 61 and 62 years of age (N= 18 174) who were employed in any of the 442 companies that participated in a 2010 survey carried out by the Fafo Institute for Labour and Social Research and Respons Analyse AS, a Norwegian research firm. I use a difference-in-differences approach and logistic regression, which enables the measurement of changes in the individual relative risk of retiring full-time on the contractual pension (AFP, *avtalefestet pensjon*, contractual early-retirement pension,) before and after the introduction of phased retirement as a retention measure.

Results: The results show that working in a company that offers reduced working hours for older workers does not have an effect on the relative risk of a 61- or 62-year-old withdrawing a full contractual pension in the next two years of their employment. This result is evident both before and after controlling for a range of known individual risk factors, as well as after controlling for company characteristics.

Discussion: In the search for suitable measures for retaining older workers, offering phased retirement may still be part of the answer. Though my analysis does not support the idea that more flexible working hours is a decisive factor for those who choose to opt for full early retirement, a possible next step could be to investigate the impact of offering flexible working hours on the employment duration of those who do remain in employment.

Keywords: Difference-in-differences, early retirement, older workers, retention measures, phased retirement

Introduction and research question

Reducing early retirement and prolonging employees' working careers are important to the future of the welfare state. A large number of persons outside the labour market give rise to great political concern because it erodes the funding basis of the welfare-state system. Succeeding in reducing the number of early retirees as the population ages calls for policies and measures that prolong employees' working careers (Midtsundstad, Hermansen, & Nielsen, 2012; Taylor, 2011). In the European Union, the so-called Lisbon Strategy led to the 'Barcelona target' in 2002, which demanded that every EU member state seek an increase in average retirement age of about five years by 2010 (Hofäcker, 2010). The increased attention to the ageing part of the workforce in Norway is manifested through the Inclusive Working Life Agreement (The IWLA) which set out to increase the average age of retirement (2001-2010) and from 2010 to increase the total years in employment. With the signing of the IWLA in 2001, the Norwegian government called for employers to take greater social responsibility for keeping people in employment until they reach pensionable age. They thus acknowledged, as many other European countries have done, that it is changes to employers' policies that can drive a significant change in retirement behaviour (Vickerstaff, Cox, & Keen, 2003).

The increased attention on the employer's role in reducing early retirement has fostered a growing interest in measures for retaining older workers both in the EU and Norway (Taylor, 2006). Since the signing of the IWLA in 2001, offering older workers the possibility of reducing their working hours in the final years before retirement has increased in popularity in Norway. Almost 20 per cent of Norwegian companies with ten or more employees offered their older workers such an arrangement in 2010 (Midtsundstad & Bogen, 2011). Several studies have suggested that flexible working hours can have a positive effect on the labour supply of older workers, providing a more phased transition into retirement and thereby extending the working career of older employees (Bredgaard & Tros, 2006; Delsen, 1996; Gielen, 2009; Johnson, 2011; Taylor, 2006; Wadensjö, 2006). Despite the recognition of phased retirement as an effective means of increasing the labour supply of older workers, research into the efficacy of reducing working hours as a retention measure is limited in Norway. *The aim of my study is to examine whether offering phased retirement has an effect on the relative risk of retiring full-time on the contractual pension.*

The few Norwegian studies investigating the impact of retention measures on early-retirement behaviour show that the existing measures in 2005 did not always help to delay retirement (Midtsundstad, Hermansen, & Nielsen, 2012; Midtsundstad, Nielsen, & Hermansen, 2012). However, the aim of these studies was not to evaluate the impact of individual retaining measure, such as phased retirement, but to evaluate the overall effect of being offered retention measures. Furthermore, very few companies had initiated such measures by 2005 compared with the 2010 situation (Midtsundstad, Hermansen, & Nielsen, 2012; Midtsundstad, Nielsen, & Hermansen, 2012). Hence, further analysis of the effects of the measures used by companies to retain older workers is needed.

Previous research

Reducing early retirement and increasing employees' working careers has been on the policy agenda for many years (Disney, 1996; Esping-Andersen, 2000; Meier & Werding, 2010). In contrast to the many alleged advantages brought about by phased retirement, measures promoting a smooth transition between full employment and full retirement are rare in most countries. Thus, research on the labour-supply effects of these measures in respect of retaining older workers is limited (Graf, Hofer, & Winter-Ebmer, 2011; Hutchens & Grace-Martin, 2006; Taylor, 2006).

Studying phased-retirement policies in Denmark, Finland and Sweden, Delsen (1996) argues that only the Swedish programme, which was abolished in 2001, can be considered successful with regard to reducing the number of early retirees. According to Delsen, part-time employment helped to reverse a negative trend in the labour-market participation rate of older workers. Compared to Denmark and Finland, the crucial conditions making phased retirement a success in Sweden were an adequate supply of part-time jobs and financial incentives for continuing working. The Danish programme was inspired by the Swedish, but unfavourable labour market conditions, in the form of a recession, and a generous early-retirement scheme meant the programme was less successful (Delsen, 1996). The same factors limited the success of the Finnish phased-retirement scheme, in addition to the fact that pensioners had difficulties finding part-time work. According to these experiences,

labour-market conditions, the supply of part-time jobs, the impact of part-time employment on pension entitlements and the existence of generous retirement schemes all seem to be important factors determining the success or failure of phased-retirement schemes (Delsen, 1996; Latulippe & Turner, 2000; Redaymulvey, 2000).

Evaluating the subsidized Austrian Old-Age Part-Time Scheme introduced in 2000, Graf et al. (2011) find the scheme to have a negative impact on labour supply among older workers. Their analysis indicates that workers who would normally work full-time change to part-time, resulting in an overall decrease in the labour supply among older workers. These findings are supported by a Norwegian study by Becken (2011), which reveals subsidizing reduced working hours to older employees in four Norwegian public agencies to have a negative effect on labour supply. Other studies reach the same conclusion: subsidizing reduced working hours induces a larger number of those who would have otherwise continued working full-time to reduce their working hours (Hilsen & Salomon, 2010; Midtsundstad & Bogen, 2011).

Several studies have shown that a considerable proportion of older workers emphasize reduced working hours as a decisive factor in the decision to prolong their working career (Midtsundstad, 2006, 2009; Midtsundstad & Nielsen, 2013; Reichborn-Kjennerud, Gamperiene, & Hilsen, 2011). Similarly, Charles and DeCicca (2007) reveal that older American workers who are not free to lower their usual working hours, that is, workers who are hours-constrained or over-employed, are much more likely to retire than workers who are free to adjust their hours of work. Using the three first waves of the Health and Retirement Study (1992 to 1996), Charles and DeCicca show that these findings hold true for both sexes, but the lack of flexibility had the greatest effect on men.

Studying the presence of constraints of hours in the labour market in the United Kingdom, Gielen (2009) finds that some over-employed women in the UK, especially those working full-time, leave the labour market early owing to a lack of gradual retirement opportunities with their current employer. However, the study was unable to investigate whether more flexibility would actually increase the labour supply of older workers. According to Gielen, increasing flexibility may increase total hours worked as a result of increased participation, but this might be offset by shorter hours among previously hours-constrained workers.

Using data from the Health and Retirement study, Gustman and Steinmeier (2004) have used simulations to yield insight into the effect of abolishing minimum-hours constraints. Abolishing minimum-hours constraints significantly increases the number of partially retired workers, reducing full-time employment among older workers and resulting in a small net increase in labour supply. Wadensjö (2006) reaches the same conclusion in his study of the abolished Swedish phased-retirement scheme. The scheme had a positive effect on the labour supply of older workers (number of hours worked), especially among women. The positive effect of people working part-time instead of retiring early outweighed the negative effect of reduced working hours among those who would have otherwise continued working full-time until normal retirement age.

Boockmann et al. (2012) have analysed longitudinal employer-employee data for German¹ companies in order to investigate the effect of age-specific part-time work among older workers. Up until 2009 the German Federal Employment Agency paid subsidies to employers offering age-specific part-time work to employees aged 55 and over. The results of this study indicate that offering part-time work to older workers tended to reduce the duration of employment among workers between age 58 and 63.

The existing studies on phased retirement exhibit mixed results and do not allow us to draw universally applicable conclusions. The effect of offering phased retirement on labour supply seems to vary with labour-market conditions, the supply of part-time jobs, the impact of part-time employment on pension entitlements, and the existence of generous retirement schemes (Delsen, 1996; Latulippe & Turner, 2000; Redaymulvey, 2000). Boockmann et al. (2012) conclude that the search for suitable retention measures which utilize the potential of older workers must continue. More research is needed before we can draw any conclusions as to 'what works in age management' (p. 21).

¹ The analysis is based on survey information for 1063 West German establishments between 2000 and 2002. The establishment data is linked with retrospective register data on all employees between ages 40 and 65, providing information on employment durations observed back to 1975. East German establishments are excluded from their analysis, owing to missing data before the 1990s.

Method

The data used in this analysis covers the period between 2000 and 2010 and comprises all employees between 61 and 62 years of age (N= 18 174) who were employed in any of the 442 companies that participated in a 2010 survey. The survey was conducted by the Fafo Institute for Labour and Social Research and Respons Analyse AS, a Norwegian research firm, in the period August to September 2010. The sample was representative for all Norwegian companies with ten or more employees in 2010, and one or more employees between 61 and 62 years of age. The survey provides information on company characteristics and whether reduced working hours is used as a retention measure and, if so, in which year the measure was introduced (Midtsundstad & Bogen, 2011). All information on individual employees has been provided by Statistics Norway (SSB) and is drawn from administrative registers.

In my analysis, I investigate whether, in the period 2000 to 2008, the introduction of phased retirement affected the relative risk of workers aged 61 and 62 fully retiring on the contractual pension in the next two years of their employment. The contractual pension (contractual early retirement pension AFP) offered older workers the possibility of opting for early retirement between the ages of 62 and 66 in the timespan investigated in this article.² Early retirement was available to all public-sector workers and about 40 per cent of private-sector workers (the scheme was optional for private-sector companies) (Nergaard, 2009). Of the 442 companies included in the analysis, 135 companies are in the public sector and 307 are in the private sector. All of the private sector companies I include in the analysis offer the contractual pension (contractual early retirement pension AFP) to their employees.

Difference-in-differences

In my analysis, I use a difference-in-differences approach which enables the measurement of changes in the individual relative risk of fully retiring on the contractual pension before and after the

² From the 1st of January 2011 the contractual early-retirement scheme was changed to a flexible lifelong annuity for private-sector workers, making the scheme distinctly different from the scheme in the public sector, which is still designed as an early-retirement scheme. Nevertheless, this regulatory change was implemented after the timespan investigated in this article.

introduction of reduced working hours. This is a standard method for measuring the effects of interventions and regulatory changes. The method consists of comparing two groups, where one group experiences a policy change or intervention during the period under consideration. In my analysis, the introduction of reduced working hours as a retention measure represents the policy change or intervention (Angrist & Pischke, 2008; Wooldridge, 2005, 2009).

I investigated whether offering phased retirement impacts the individual relative risk of withdrawing a full contractual pension. These differences in average change are also referred to as a difference-in-differences estimator (Angrist & Pischke, 2008; Wooldridge, 2009). Given that the dependent variable is binary categorical, I use logistic regression in the analysis and I report odds ratios. I have also estimated the two models as linear probability models, obtaining substantially similar results (not shown).

All my analyses were performed using Stata, version 12. In model 1, I investigate the total effect of offering phased retirement. To be able to investigate the total effect I have included the retention measure as a dummy variable, a dummy for separating the pre-treatment period (0) and post-treatment period (1), measuring the overall change and the interaction between the change and the retention measure (difference-in-differences estimator). Thus, in model 1, I estimate the gross effect of offering phased retirement. However, it is very unlikely that companies offering phased retirement are identical to those without such a measure in all other respects, and that the employees working in companies offering phased retirement are identical to those in companies without the measure. Thus, in model 2, I control for various individual and company characteristics which may vary between the intervention and control group.

The measurement of phased retirement which I apply in this article is based upon the HR manager/executive director in the surveyed sample of companies reporting to have made it possible for workers to opt for reduced working hours from the age of 62, thereby facilitating phased retirement (Midtsundstad & Bogen, 2011). Hence, the measurement of phased retirement I use in this article is based on a reduction in weekly or annual working hours for older workers aged 62 and above, continuing with their current employer. The measurement I use includes arrangements where the reduction is subsidized as well as those where it is not, the former comprising 65 per cent of the treatment group and the latter 35 per cent.

The number of companies offering phased retirement was quite low prior to 2005, with less than two per cent of the companies surveyed offering reduced working hours. The measure increased in popularity from 2005, with more than six per cent of the companies offering reduced working hours by 2006, increasing further still to 18.6 per cent in 2010. To make a clear delimitation between the pre- and post-treatment period I have chosen to include only those companies which initiated reduced working hours as a retention measure from 2005. Thus, I investigate the relative risk of 61- and 62- year- olds retiring in the next two years of their employment during a period when none of the companies in my data had initiated this retention measure, compared with the relative risk of retiring during a period when a known selection of the companies had introduced such a measure. I refer to the first period, 2001/2002 to 2004/2005 as the pre-treatment period, and to the second period, 2005/2006 to 2009/2010, as the post-treatment period.

Offering phased retirement is a choice made by each individual company and thus the group of Norwegian companies offering this retention measure is self-selected. However, I find it reasonable to assume that the distribution of older employees between the intervention and the control group is random. I base this assumption on the fact that very few change jobs after the age of 60, enabling them actively to seek out companies with such retention measures for older workers (Lien, 2013; OECD, 2013). However, in order to be able to measure the true effect of providing phased retirement, I must assume that the two groups are comparable over time. Such comparability is not very likely, thus I control for a range of individual and company characteristics. Including these individual and company characteristics allows me not only to control for differences between the two groups, but also to control for known factors associated with early retirement.

Factors associated with early retirement

Understanding the transition from work to retirement and the role played by phased retirement as a retention measure rests on our ability to recognize the variety of factors influencing early-retirement practices. Whether an early exit from working life is voluntary or involuntary and whether it is mainly affected by labour supply or labour

demand are two related and central questions within the debate on early retirement (Jensen & Øverbye, 2013; Midtsundstad, 2013).

Working on the assumptions that individuals desire to maximize their lifetime earnings and that the exit of older workers from the labour market is voluntary and mainly affected by labour supply, economic studies primarily place the emphasis on financial incentives 'pulling' employees out of working life early (Engelhardt, 2012; Gambetta, 1987; Gruber & Wise, 2007, 2010; Hernæs, Røed, & Strøm, 2002). To account for the effect of financial incentives presumably 'pulling' older workers into early retirement, I included 'income percentile' (net income after tax divided into percentiles); 'spouse income percentile' (spouse income after tax divided into percentiles) and 'household debts percentile' (household debts divided into percentiles) in the analysis.

Contradicting the emphasis on free individual choice and 'pull-factors', a growing research literature is focusing on involuntary retirement as a result of 'push-factors' and labour demand. This includes 'labour market and company-level push factors' such as structural adjustments, rationalization, increased eligibility requirements, and other factors that 'push' elderly, less productive or less skilled workers out of the labour market (Halvorsen 1977; Gambetta 1987; Dorn and Sousa-Poza 2010). Referred to as 'individual push factors', health problems as well as physical and mental strains related to the job have proven to increase the relative risk of older workers opting for early retirement (Buchholz, Hofäcker & Blossfeld 2006; Midtsundstad 2006; Börsch-Supan, Brugiavini, & Croda 2009; Engelhardt 2012; Gørtz 2012; Calvo, Sarkisian & Tamborini 2013).

One of the limitations of the data I apply in the analysis is the lack of variables controlling for differences in health, working environment, and conditions between the intervention and control group. However, controlling for 'sick absence', 'level of education', 'occupation', and 'industry' does presumably capture important aspects of differences in health, working environment, and conditions between the intervention and control group. Thus, I included 'sick absence' ('sickness absence' certified by a physician and lasting for more than 16 days, 'no sick absences' (ref.)) and 'level of education' divided into 'elementary school' (ref.), 'secondary school', 'undergraduate from university/college' and 'postgraduate from university/college' in the analysis. The classification of the different occupations I use is based on the Erikson-Goldthorpe social class schema, using the

International Standard Classification of Occupations (ISCO88) which distinguishes between ‘workers’, ‘routine non-manual employees’ and ‘professionals, administrators, and officials’ (ref.) (Leiulfstrud, Bison, & Jensberg, 2005). To control for type of ‘industry’ in the analysis, I included the following: ‘public administration’ (ref.), ‘other industries’, ‘teaching’, ‘health and social services’, ‘manufacturing’, ‘construction’, ‘hotels and restaurants’, and ‘wholesale and retail trade’.

As I have illustrated in Table 1 (below), the intervention group has a higher proportion of employees with ‘elementary school’ as their highest ‘level of education’ and a lower proportion with ‘undergraduate from university/college’ than the control group. The intervention group also has a higher proportion working in ‘public administration’ and ‘other industries’. Hence, I also included ‘level of education’ and ‘industry’ to control for the differences between the intervention and control group.

Older employees working full-time may feel a greater need to reduce working hours in the final years of their career than those working part-time and thus have a higher relative risk of opting for phased retirement than employees already working part-time. To account for the effect of working hours, I included contractual working hours, that is, ‘full-time’ (ref.), ‘long part-time’ (from 50 to 80% full-time equivalent), and ‘short part-time’ (less than 50% full-time equivalent) in the analysis.

Table 1. Distribution by independent variables

	2001/2002 – 2004/2005		2005/2006 – 2009/2010	
	Intervention group	Control group	Intervention group	Control group
Woman	65.6	62.3	60.1	62.1
Living in a one-person household	18.8	20	19.4	21.4
Sick absence	20.2	16.5	13.8	12.2
Elementary school	25.8	21.5	22.1	14.2
Secondary school	43.2	44.3	49.6	39.1
Undergraduate from university/college	24.7	25.6	19.9	34.9
Postgraduate from university/college	6.3	8.6	8.4	11.8

Income percentile, mean (s.d.)	46.2 (29.1)	51.9 (28.5)	46.6 (29.4)	53.1 (28.4)
Spouse income percentile, mean (s.d.)	42.7 (30.5)	43.2 (31.3)	43.5 (30.1)	46.2 (33.1)
Household debts percentile, mean (s.d.)	36 (29.6)	39.9 (29.5)	44.7 (29.5)	40.2 (28.3)
Spouse retired on AFP retirement scheme	7.5	7.3	6.8	5.8
Spouse retired on disability pension	16.9	15.9	16.5	13.6
Full-time 30 hours or more	64.4	69.7	70.8	72.7
Part-time 20-29 hours	16.3	14.4	13.2	13.5
Part-time <20 hours	19.2	15.9	16	13.8
Worker	64.2	42.6	50	34.7
Routine non-manual employee	14	39.9	20	40
Professional, administrator or official	21.8	17.6	30.1	25.3
100 or more employees	83.9	82.8	88.8	84.7
Human resources manager	97.9	91.1	97	92.3
Public administration	16.2	10.3	18.8	7.7
Other industries	16.1	8.2	27.1	8.6
Teaching	38.6	28.1	15.9	33.9
Health and social services	22	27.7	20.9	27.8
Manufacturing	4.7	12.6	6.2	10.7
Construction	2.2	4.3	1.7	2.9
Hotels and restaurants	1.1	2.6	1.3	2.1
Wholesale and retail trade	1.7	7.2	4.2	2
Not IWLA-company	28.4	41.3	33.5	57.6
IWLA-company 2001	4.9	11.2	7.3	8.7
IWLA-company 2002-2010	66.7	47.5	59.2	33.7
N	3 986	3 870	3 624	6 694

In the analysis I also included confounders controlling for whether the employees work in a company with '100 or more employees' ('less than 100 employees', ref.) and whether the company has a 'human resources manager' ('no human resources manager', ref.). Larger

companies are presumably more flexible since they have a large workforce, which provides greater leeway for offering flexible working hours. The human-resources manager holds an important role in facilitating working conditions which safeguard the needs of employees and advocates adaptations to account for these needs. As I have shown in Table 1, the intervention group has a slightly larger proportion employed in companies with a human-resources manager, thus I also included the confounder to control for this difference.

Studies show that retirement practices vary according to individual circumstances, such as gender, and experiences outside the workplace, such as family situation and spouse retirement behaviour, referred to as 'jump-factors' (Hallberg, 2007; Hank, 2004; Hauge & Årethun, 2008; Midsundstad, 2002, 2005a; Oude Hengel, Blatter, Geuskens, Koppes, & Bongers, 2012). To account for gender and possible jump-factors I included 'woman' ('male', ref.), 'living in a one-person household' ('not living in a one-person household', ref.), 'spouse retired on the contractual pension' ('no spouse or spouse not retired on the contractual pension', ref.) and 'spouse retired on disability pension' ('no spouse or spouse not retired on disability pension', ref.) in the analysis.

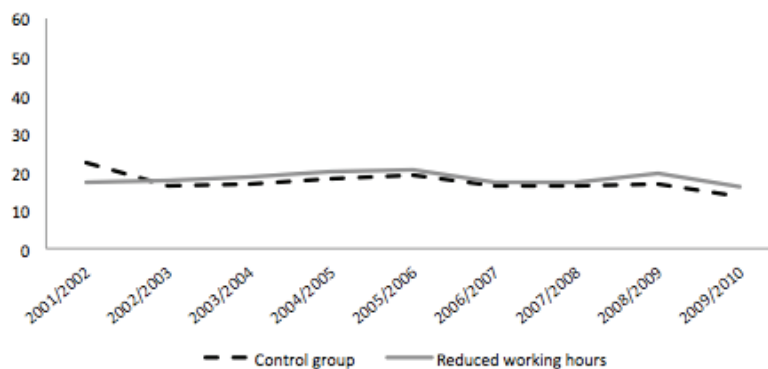
Companies that have signed the Inclusive Working Life Agreement presumably have a greater focus on supporting and motivating older workers to continue working. From 2006, all IWLA-companies were also obligated to formulate an active ageing policy (Midsundstad & Bogen, 2011). To account for working in an IWLA-company and when the company signed the Inclusive Working Life Agreement, I include 'IWLA-company 2001' and 'IWLA-company 2002-2010' ('not IWLA-company', ref.) in the analysis.

Results

I have illustrated the early-retirement behaviour for the period and companies under consideration in Figure 1 below. Employing a difference-in-differences approach rests on an assumption that the underlying trends in the outcome variable would be the same in the absence of treatment (Angrist & Pischke, 2008). As I illustrate in Figure 1, the number of employees withdrawing a full contractual pension is quite similar for both groups in the pre-treatment period from 2001/2002 to 2004/2005. Thus, I argue that Figure 1 provides

visual evidence of an equal underlying trend in the pre-treatment period.

Figure 1. Percentage of 61- and 62-year-olds withdrawing a full contractual pension in the next two years of their employment working in companies offering phased retirement as a retention measure compared with the percentage working in companies without such an arrangement for older workers.



In the post-treatment period from 2005/2006 to 2009/2010, the early-retirement figures are also quite similar. However, the early-retirement figures in the treatment group do not seem to be significantly different from the figures in the control group. One would expect the figures to be significantly different if reduced working hours have an impact on the relative risk of withdrawal of a full contractual pension. Nevertheless, in the analysis I have investigated the changes in the individual relative risk of withdrawing a full contractual pension and not the changes in the companies' numbers of early retirees, as I have illustrated in Figure 1.

In addition, I have performed a 'placebo difference-in-differences' test (not shown) as a check for robustness to investigate the trends in Figure 1. In the placebo test I simulated that reduced working hours were initiated among the intervention companies from 2003 and not from 2005 onwards. I used 2001/2002 to 2002/2003 as the pre-treatment period and 2003/2004 to 2004/2005 as the post-treatment period. The placebo difference-in-differences did not yield significant

results, thus strengthening my assumption that the trends were quite similar in the pre-treatment period and that there were no unobserved trends affecting one of the groups but not the other.

As I have illustrated in Table 1, the proportion of workers with 'elementary school' as their highest level of education, the proportion of 'workers', and the proportion working in a 'non IWLA-company' change significantly in the control group from the pre-treatment to the post-treatment period. Also, in the treatment group, the proportion working in 'other industries' changes significantly from the pre-treatment to the post-treatment period. To control for these changes I have re-estimated the analysis and included interactions between the respective confounders and the dummy for change from the pre-treatment to the post-treatment period (not shown). To control for clustered data on company level, I have also performed a regression using clustered standard errors (not shown). The regression results using clustered standard errors and including these interactions did not differ from the results which I have presented in Table 2 (below) using normal standard errors and not including the respective interactions.

Table 2. Individual relative risk of withdrawing a full contractual pension among 61- and 62-year-olds in the next two years of employment, having been exposed to reduced working hours as a retention measure, before and after controlling for a range of individual and company characteristics. OR = odds ratio.

	Model 1 OR	Model 2 OR
Woman		.787***
Living in a one-person household		.804***
Sickness absence		1.608***
Elementary school (ref.)		1.000
Secondary school		.868***
Undergraduate from university/college		.674***
Postgraduate from university/college		.406***
Income percentile		.994***
Spouse income percentile		1.006***
Household debts percentile		.993***
Spouse retired on contractual pension		1.495***
Spouse retired on disability pension		1.092
Part-time <20 hours (ref.)		1.000

Part-time 20-29 hours		2.039***
Full-time 30 hours or more		1.780***
Professional, administrator or official (ref.)		1.000
Routine non-manual employee		1.120
Worker		.940
Less than 100 employees (ref.)		1.000
100 or more employees		1.190***
No human resources manager (ref.)		1.000
Human resources manager		1.056
Public administration (ref.)		1.000
Other industries		2.984***
Teaching		2.194***
Health and social services		1.282***
Construction		2.745***
Manufacturing		4.933***
Hotels and restaurants		3.755***
Wholesale and retail trade		2.562***
Not IWLA-company (ref.)		1.000
IWLA 2001		1.184**
IWLA 2002-2010		1.156***
Retention measure – reduced working hours	1.012	1.037
Change from pre-treatment period to post-treatment period	.814	.913
Retention measure* change (difference-in-differences estimator)	1.137	.964
Pseudo R ²	.001	.077
N	18 174	18 174

** : $p \leq 0.05$, *** : $p \leq 0.01$

The analysis shows that offering 61- and 62-year-olds reduced working hours has no significant effect on the relative risk of withdrawing a full contractual pension in the next two years of employment. The lack of an effect is evident both before (model 1) and after controlling for the selected individual and company characteristics (model 2). I find almost no change in the difference-in-differences estimator when controlling for the different confounders. I have done a re-estimation, delimiting the treatment group to only those with a subsidized reduction in working hours, excluding those with an unsubsidized reduction (not shown). The re-estimated results are the same, offering reduced working hours does not affect the

relative risk of withdrawing a full contractual pension among 61- and 62-year-olds in the next two years of their employment. Thus, the results provide evidence for phased retirement having no impact on the individual relative risk of withdrawing a full contractual pension.

Discussion

The results I have presented in this article show that working in a company that offers reduced working hours for older workers does not have an effect on the relative risk of a 61- or 62-year-old withdrawing a full contractual pension in the next two years of their employment. This result is evident both before and after controlling for a range of known individual risks, as well as after controlling for company characteristics. Thus, the lack of an effect of reduced working hours cannot be ascribed to differences in these respects between individuals working in intervention companies and those working in the companies that constitute the control group.

I must emphasize that the analysis is based on information about whether the companies have introduced the reduced working hours as a measure for retaining older workers, and not information about whether older employees actually opt to reduce their working hours. Thus, my analysis is based on the initial treatment assigned and not on the treatment actually received, known as intention to treat analysis. Nevertheless, the possibility of reduced working hours is available to all employees from the age of 62 years. Thus, I find it quite unlikely that a large proportion of the employees in the treatment group have not been faced with the possibility of opting for phased retirement when deciding whether or not to make an early exit.

The existing research on phased retirement does not allow universally applicable conclusions to be drawn. The results differ according to labour-market conditions, the supply of part-time jobs, the impact of part-time employment on pension entitlements and the existence of generous retirement schemes (Delsen, 1996; Latulippe & Turner, 2000; Redaymulvey, 2000). Using phased retirement as a retaining measure implies by definition that companies offer older workers the possibility of entering part-time work. Furthermore, opting for phased retirement – combining part-time work and partial retirement – will provide higher financial rewards than withdrawing a full contractual pension. Thus, I find it reasonable to assume that such an arrangement reduces the attractiveness of withdrawing a full

contractual pension. Thus, the lack of an effect of offering phased retirement on the withdrawal of a full contractual pension does not necessarily stem from constraints in the supply of part-time possibilities or generous retirement schemes.

It needs to be emphasized that the Norwegian labour market was characterized by low levels of unemployment during the vast part of the period which I have investigated. When the financial crisis hit in 2009, the number of unemployed increased somewhat, yet marginally compared with the rest of Europe (NAV, 2014; Eurostat, 2014). Delsen (1996) concludes, as previously mentioned, that the Danish and Finnish phased-retirement programmes failed, among other reasons, because of unfavourable labour-market conditions, in the form of a recession. Thus, on the basis of the experiences from Denmark and Finland, I find it reasonable to assume that the worsening labour-market conditions following the financial crisis would not have changed the results presented in this article. Even though I studied a period with quite favourable labour-market conditions, my results demonstrate that phased retirement does not have an impact on early-retirement behaviour.

I find it reasonable to assume that reduced working hours reduce psychical and mental strains in the final phase of working life, providing older workers with the possibility to reconcile a wish for more leisure time and to continue working. Surveys show that two out of ten early retirees in Norway justify an exit to full retirement on the basis of a lack of working time flexibility (Midtsundstad, 2002, 2005b; Midtsundstad & Nielsen, 2013). Two out of ten Norwegian employees also express that combining part-time work and part-time retirement is difficult at their workplace (Dalen, 2012). Thus, providing older over-employed workers with the possibility of a smooth transition between full-time work and full-time retirement may have a significant impact as a retention measure. Nevertheless, the results in this article do not support the notion that offering phased retirement may reduce over-employment among older workers or have a positive effect on the labour supply. However, these surveys also show that the need for more leisure time, physical and mental strains related to the job, health problems, and loss of interest and motivation are emphasized as reasons to retire by early retirees to a greater extent than a lack of working time flexibility (Midtsundstad, 2005a; Midtsundstad & Nielsen, 2013). Thus, the possibility of opting for phased retirement may simply not be enough to discourage early retirees from withdrawing a full contractual pension if they also experience physical and mental

strains at work, health problems, or a loss of interest and motivation. Justifying an exit to full-time retirement on the basis of a lack of working time flexibility may be just one of many reasons and not *the* reason for leaving the labour market altogether (Midtsundstad, 2002, 2005b; Midtsundstad & Nielsen, 2013).

The data I have used in this article consists exclusively of older workers above the age of 60 years. These workers are a select group compared with the population of older workers as a whole, since a large proportion of employees retire on the disability pension before they turn 60 (Midtsundstad, Hermansen, & Nielsen, 2012). I cannot rule out the possibility that other facilitation measures involving some sort of work time reduction would be different for other age groups. Thus, the results from this analysis cannot be generalized outside the age group investigated in this article. Midtsundstad, Hermansen, & Nielsen (2012) emphasize that the age requirement for eligibility to retaining measures, such as phased retirement, appears to be excessive in some industries (62 years). Workers who become disabled before reaching the age requirement and who may have been the most in need of facilitation will not benefit from these measures.

The results must be interpreted with caution, given the fact that the data I have used in my analysis lack of possibility of controlling for factors related to health status, working environment, and working conditions. Thus, I cannot rule out the possibility that the health status of older workers, the working conditions, and the working environment in companies that offer reduced working hours are on the whole less favourable than in companies that do not provide reduced working hours. Thus, in not controlling for health status, working environment and conditions it might be that I have underestimated the effect of reduced working hours. Even though controlling for 'sick leave', 'level of education', 'occupation' and 'industry' may capture important aspects of possible differences in health, working environment, and conditions between the two groups, I find it most likely that they fail to capture all the differences in health, working environment, and conditions. However, despite the fact that offering reduced working hours as a retention measure is a choice made by the individual company, I find it reasonable to assume that older workers are most likely randomly distributed between the intervention and the control companies. Thus, I argue that the health status of the workers, in turn, is most likely randomly distributed and should therefore not influence the results.

In the search for suitable measures for retaining older workers and to utilize their potential better, the offer of phased retirement may still be part of the answer. In this article I have only investigated whether offering reduced working hours affects the relative risk of withdrawing a full contractual pension. Though my analysis does not support the notion that reduced working hours is a decisive factor for those who choose to opt for full early retirement, my analysis does not shed light on the duration of employment of those who keep on working. A possible next step could be to investigate the impact of offering flexible working hours on the duration of employment of those who do remain in employment.

In any event, there is little doubt that working time flexibility will be on the Norwegian policy agenda in the years to come. Flexibility is a cornerstone of the Norwegian pension reform implemented in 2011, which has made the withdrawal of the old-age pension from National Insurance flexible from the age of 62 for both public- and private-sector workers. Previously, the old age pension was first paid from the age of 67. For private-sector workers, the contractual pension was also changed to a flexible lifelong annuity and is no longer purely an early-retirement scheme. Pension benefits are also adjusted according to life expectancy. By making these changes to the pension system, policy makers hope to increase the labour supply of older workers in the years to come.

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Paper V

Åsmund Hermansen and Tove Midtsundstad. The effect of retaining bonuses on delaying early retirement financial incentives revisited. Submitted to: Work, Aging and Retirement.

The effect of retaining bonuses on delaying early retirement – financial incentives revisited

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Abstract

In this paper we analyze the effect of the retaining bonus on early retirement behavior using a unique dataset consisting of a Norwegian employer survey from 2010 combined with register data on all older employees in the period 2000 to 2010. The retaining bonus is one of the most common retention measures offered by Norwegian companies to prevent their older workers from retiring early. The most common arrangement is a lump sum of between 10,000 and 25,000 Norwegian Kroner (between 1,100 and 2,600 Euros), which was less than the mean monthly pay before tax in Norway in 2010. In spite of this modest sum, our analysis shows that retaining bonuses of 20,000 NOK or more do reduce the probability of 61-year-olds retiring in the next two years of employment. However, the effect is more than three times higher for men than for women. Furthermore, when separating according to income group, our results indicate that the retirement decision of older men in the top third of the income distribution may be affected both by the financial incentive and by a “signal effect” embedded in the retaining bonus. For women in the lowest third of the income distribution on the other hand, the effect of the retaining bonus first and foremost seems to derive from the increased financial gains from continuing working.

Keywords: Early retirement, Older workers, Retention measures, Financial incentives

INTRODUCTION

Reducing early retirement is a goal that features on social policy agendas across Europe, and as people are "living longer", keeping them "working longer" is at the core of the social policy debate (OECD, 2006; Phillipson, 2013). In Norway, as in many other European countries, the makers of social policy are acknowledging the fact that a significant change in retirement behavior will come from the modification of employers' policies and retention efforts (Vickerstaff, Cox, & Keen, 2003). Employers play a key role in defining the opportunities for working longer, thus the success of policy aimed at delaying retirement depends to a significant degree on the actions and attitudes of employers (Henkens & van Dalen, 2012; Hofäcker, 2010). In spite of the increased awareness of the role played by employers, research on the efficacy of retention measures at the company level is limited (Hilsen & Midtsundstad, 2015).

In Norway, one of the most common retention measures used by employers to prevent their older workers from making an early exit is the retaining bonus. In 2010 more than ten percent of Norwegian companies (with ten or more employees) offered their older workers such monetary rewards if they continued working past the age of 62 (Midtsundstad & Bogen, 2011). The most common arrangement was a lump sum of between 10,000 and 25,000 Norwegian Kroner (between 1,000 and 2,600 Euros), which was less than the mean monthly pay before tax in Norway in 2010¹. Given the relatively low sum offered, it is doubtful whether such retaining bonuses can be effective in altering early retirement behavior. In addition, research shows that the retirement planning of older male workers is more affected by an increase in earnings than the retirement planning of older female workers is, suggesting that employer-initiated measures will not necessarily be as effective in retaining female workers (Larsen, 2008). *Thus, the aim of this paper is to investigate whether being offered a*

retaining bonus has an effect on the probability of opting for early retirement, and whether the effect differs by gender.

There is a substantial strand of research investigating the effect of pension benefits and tax rates on early retirement behavior, and most of these studies show that financial incentives have an impact on retirement behavior (Bratsberg, Røed & Raaum, 2008; Gruber & Wise, 2002; Gruber & Wise, 2007; Gruber & Wise, 2010). Nevertheless, they also show that the financial reward must be of a significant size to alter retirement behavior (Hernæs, 1999; Krueger & Pischke, 1992). However, these studies investigate the effect of “passive” policies at the national level and not “active” measures at the company level (Corsi & Samek, 2010). Thus, this paper addresses a gap in the research literature by investigating the effect of an “active” measure used by employers to retain their older workers. Furthermore, we investigate whether the effect of retaining bonuses varies according to gender and income group. Our analysis is based on a unique dataset consisting of a Norwegian employer survey from 2010 combined with register data on all older employees in the period 2000 to 2010.

POLICY CONTEXT

Active aging in Norway and the retaining bonus

Like many European countries, Norway has adopted a twofold active-aging strategy consisting of “passive” labor market policies and “active” measures aimed at retaining older workers (Corsi & Samek, 2010). The pension reform, implemented from January 1st 2011, represents the “passive” part of Norway’s strategy, and early retirement is discouraged through introducing actuarial neutrality, by tightening the link between contributions paid and benefits received by the individual, and by calculating benefits according to life expectancy.

The second part of the Norwegian strategy, emphasizing the use of “active” measures, was formulated in 2001 at the national level with the signing of the Tripartite Agreement on an

Inclusive Working Life (the IWL agreement). With the introduction of the IWL agreement, the Norwegian government and the social partners called for employers to assume greater social responsibility for keeping people in employment and preventing older workers from making an early exit (Midtsundstad, 2011). Since the introduction of the IWL agreement, the use of retention measures at the company level has increased significantly. The two most common retention measures in Norway in 2010 were additional leave and phased retirement, making the retaining bonus the third most used “active” measure aimed at extending the working lives of older workers (Hermansen & Midtsundstad, 2015).

The retaining bonus is a monetary reward offered from a given age to *all* employees working in companies with such a measure, in addition to their fixed compensation. Thus, the only criteria for being offered such a bonus is that employees continue working after a certain age; all employees who pass this age threshold are given the bonus. The most common age for being entitled to a retaining bonus was 62 yearsⁱⁱ in 2010, which is the eligible age for withdrawing early retirement benefits (AFP) in Norway. The most common level of compensationⁱⁱⁱ was between 10,000 and 25,000 Norwegian Kroner (between 1,100 and 2,600 Euros), significantly less than 36,700 Norwegian Kroner (about 3,800 Euros), the mean monthly pay before tax in 2010.

The number of companies offering a retaining bonus was quite low prior to 2005, with fewer than two percent of companies using this retention measure. However, bonuses gained greater popularity from 2005; in 2006 four percent of Norwegian companies with ten or more employees offered a retaining bonus, and by 2010 a total of ten percent offered this measure (Midtsundstad & Bogen, 2011). The fact that a relatively small number of Norwegian companies offer a retaining bonus can be explained by the fact that Norwegian companies operate within a framework which offers few incentives for retaining older workers. The main exception was the contractual pension (AFP), which meant that (until 2011 in the private

sector) employers shouldered an extensive share of the cost if one of their employees chose to retire between the ages of 62 and 67. A study by Hermansen & Midtsundstad (2015) also shows that offering retaining bonuses was much more common among companies with a contractual early retirement scheme in 2010. Thus, they conclude that the financial incentives embedded in the contractual pension seem to be of significant importance for the retention efforts of Norwegian companies. However, the study shows that offering a retaining bonus is not correlated with number of employees, whether the company has signed the IWL agreement or not, perceived labor shortages, the time required to train new staff, or the proportion of older workers in the company (Hermansen & Midtsundstad, 2015).

The labor market in Norway

The overall labor market situation does undoubtedly affect the employment situation for older workers, and it must be underscored that Norway, since the beginning of the new millennium, has enjoyed a period of strong economic expansion. Even during periods of economic downturn for the rest of Europe and strong increases in unemployment rates, the expected remaining years in employment for a 50-year-old in Norway has been steady or rising. Figures from the National Labor and Welfare Administration (NAV) show a strong increase in the expected remaining years in employment for a 50-year-old in the period 2001 to 2014. In 2001, the expected remaining years in employment for a 50-year-old was on average 9.6 years, whereas in 2010 it was 10.9, increasing further still to 11.5 in 2014 (Haga, 2015). Accordingly, Norway has one of the highest employment rates among 55- to 64-year-olds in Europe and an employment rate above the OECD average (OECD, 2013). Furthermore, the Norwegian "age-culture" is, according to de Vroom (2004), the "extreme" case in Europe, in the sense of being work-oriented; it is based upon a broadly accepted and institutionalized norm that older workers have a right and a duty to participate in the labor market. Thus, both

a favorable economic situation and work-oriented culture have contributed to an overall high employment rate among older workers.

The high employment rate among older employees in Norway can also partly be explained by the following five factors (Midtsundstad, 2011). First, compared to other European countries, the employment rate among women has been high for many years. Second, until 2011, Norway had a relatively high statutory retirement age, 67 years for both men and women. Third, the possibility of retiring at the age of 62 was first given to Norwegian employees in 1998 through the contractual pension (contractual early retirement pension or AFP scheme). The contractual pension^{iv} offers about 80 percent of all older workers the possibility of opting for early retirement between 62 and 67 years of age (Nergaard, 2009). Fourth, from 1997 the contractual pension allowed individuals to combine part-time work with a partial contractual pension, provided that it was approved by their employer, thus making it easier for many older workers to continue working. Fifth, Norwegian employers cannot terminate the employment contract before employees turn 70 (today 72), with some exceptions^v (the Work Environment Act § 15-13). In addition, redundancy regulations in Norway normally follow the "last in, first out" principle, making dismissal protection in Norway especially strong for older workers with seniority (Svalund, Saloniemi & Vulkan, 2015).

THEORETICAL FRAMEWORK

The early retirement puzzle is complex and being offered a retaining bonus is just one of many factors in the work-retirement transition (Wang & Shultz, 2010). As expressed by Philipson (2013:148): *“The complexity of the transition from work to retirement stems from being at the heart of the ‘messy’ reality of people’s lives, cutting across individual and household characteristics, work contexts, and wider economic and sociological forces”*. Thus, understanding the retirement transition and the possible role played by retaining bonuses in

keeping older workers in employment rests on our ability to recognize the variety of factors influencing early retirement practices. In an effort to explain this complexity, theoretical traditions within the research literature on early retirement behavior present different factors influencing labor supply in the final phase of working life. The different perceptions of factors used to explain early retirement primarily stem from differences in the notion of whether the exit is voluntary or involuntary and whether it is mainly affected by labor supply or labor demand (Engelhardt, 2012; Jensen and Øverbye, 2013; Midtsundstad, 2012).

Working on the assumptions that preferences are homogeneous and individuals only work to maximize their lifetime earnings, the economic theory of retirement models the retirement decision as a strictly financial calculation with consumption as the final aim (Engelhardt, 2012; Radl, 2012). Desiring leisure over work, utility-maximizing workers select the time they believe is optimal to retire, taking into consideration financial opportunities and constraints. Thus, the financial incentives embedded in early retirement pension schemes and other welfare-state programs “pull” older workers out of working life (Gruber & Wise 2002; Gruber & Wise 2007; Gruber & Wise 2010; Hernæs, Røed & Strøm, 2002). The opportunities for different action alternatives are determined by the accessibility and performance of the various pension schemes available, which are decisive when making the choice between work and leisure. Payment levels and corresponding tax rates, age restrictions, and selection criteria act as factors “pulling” employees out of working life early. Hence the labor market exit of older workers can be traced back to the financial incentives to retire offered by early retirement pension schemes and other welfare-state programs (Engelhardt, 2012; Gambetta, 1987; Gruber & Wise 2007; Gruber & Wise 2010).

The economic theory of retirement has long been criticized for modeling the transition between employment and retirement as a voluntary choice (Midtsundstad, 2002; Midtsundstad, 2012; Engelhardt, 2012). The approach neglects the labor demand side,

focusing exclusively on the individual decision and hence taking a singular labor-supply view. As a modification to the fundamental economic principle that “if they aren’t paid, people don’t work” (Gruber & Wise, 2002: 1), sociological approaches to early retirement usually assume that there is an intrinsic value to work. People do not see work as merely a source of income, but also as a way of gaining self-realization, social recognition and social contacts (Doherty, 2009; Radl, 2012; Riach & Loretto 2009; Vickerstaff & Cox 2005). Radl (2012) emphasizes that the intrinsic value of work should be reflected in a resistance to leave work prematurely, a hypothesis which is supported by the frequent occurrence of older workers being "pushed" out of work or into involuntary retirement (Calvo, Sarkisian & Tamborini 2013; Dorn & Sousa-Poza 2010; Midtsundstad 2005; Midtsundstad 2002; Halvorsen 1977).

Evidence indicates that intrinsic factors, such as the meaningfulness of work, autonomy, and work enjoyment may have an even greater influence on retirement decisions than extrinsic factors, such as financial incentives (Waginger, 2015). Adding to this research, a large meta-analysis conducted by Kooij et al. (2011) shows a significant positive correlation between intrinsic motivators and age and a negative correlation between extrinsic factors and age.

Beyond relating "pull factors" to purely financial incentives and a preference for leisure over work, sociological research has also added a more social and cultural understanding of these factors. From a sociological point of view, early retirement schemes reproduce the culturally-constructed notion of when older workers should leave the labor market (Jensen & Øverbye, 2013). Hence, early retirement schemes underpin an "early exit" regime by influencing *when* older workers believe they are supposed to retire, exerting an independent normative effect, "pulling" older workers out of work early (Esser, 2005; Jensen & Øverbye, 2013). The existence of internalized age norms concerning retirement timing is documented in empirical studies across European countries (Esser, 2005; Radl, 2012). Such age norms can

also “push” older workers out of the workforce early, in the sense that culturally-constructed age norms make older employees leave the labor market early due to social pressure, and not a desire to retire early (Radl, 2012).

In contrast to the economic research emphasizing free and unconstrained individual choice, a significant part of the research literature on early retirement has focused on involuntary retirement as a result of "push factors". This includes labor market and company-level push factors such as structural adjustments, rationalization, increased eligibility requirements, and other factors that “push” elderly, less productive or less skilled labor out of the labor market (Dorn & Sousa-Poza, 2010; Midtsundstad 2005; Midtsundstad, 2002; Halvorsen, 1977). Referred to as "individual push factors", health problems, as well as physical and mental strains related to the job, have proven to increase the likelihood of older workers opting for early retirement (Buchholz, Hofäcker & Blossfeld, 2006; Börsch-Supan, Brugiavini & Croda, 2009; Calvo, Sarkisian & Tamborini, 2013; Engelhardt, 2012; Gørtz, 2012; Larsen, 2004; Midtsundstad, 2005; Midtsundstad, 2002).

As a retention measure, the retaining bonus will mainly reduce the significance of economic "pull factors" in the transition between work and retirement, as it changes the compensation rate, making work more economically valuable than leisure. However, offering a retaining bonus might also send a signal to older workers that they are wanted and appreciated. Such signals may help to reduce the significance of the culturally-constructed beliefs about when older workers should leave the labor market and thus the effect of culturally-constructed “pull” or “push” factors. This “signal effect” may be as important as the financial effect when older workers are weighing the pros and cons of continuing working versus leaving the labor market altogether. Analyses explaining the factors of early retirement practices which emphasize only “pull” or “push” factors have proven to be inadequate (Midtsundstad, 2002; Midtsundstad, 2005; Engelhardt, 2012). Both sets of factors are relevant

as there may be a variety of factors influencing early retirement behavior. Thus, analyses of early retirement behavior benefit from including a model which sufficiently recognizes the variety of factors influencing early retirement practices and as comprehensively as possible controls for the complexity of these factors.

PREVIOUS RESEARCH

According to a newly-published international literature review (Hilsen & Midtsundstad, 2015), few policies and facilitation programs for older workers have been evaluated and only a few studies have investigated the effects of retention measures on early retirement behavior in Norway. Evaluating the overall effect of being offered retention measures using a difference-in-differences approach, Midtsundstad, Hermansen & Nielsen (2012) found that these measures did not help to delay retirement among older workers in Norway in the period 2005 to 2007. A study by Hermansen (2015) also shows that being offered the possibility of phased retirement does not reduce the likelihood of 61- and 62-year-olds retiring in the next two years of their employment. Meanwhile, another study on the effect of additional leave as a retention measure shows that being offered extra days off reduces the likelihood of retiring early (Hermansen, 2014). To the extent of our knowledge, no studies have investigated the effect of retaining bonuses offered by companies to alter early retirement behavior, thus the analysis in this paper is the first of its kind.

In the international literature, the use of financial incentives to prevent early exit, such as bonuses, is often studied in connection with special early retirement programs, referred to as buy-outs, aimed at encouraging older workers to opt for early retirement. Using a Swedish register-based longitudinal dataset, Hallberg & Eklöf (2010) investigate the effect of buy-outs on early retirement behavior. The results indicate that the probability of making an early exit from working life decreases in the absence of buy-outs, the decrease being somewhat larger among men than among women. In an earlier Norwegian study, Midtsundstad (2002) also

found that being offered a supplementary pension (buy-out) increased the likelihood of drawing a contractual pension early among older workers in the private sector.

Financial incentives in general, and bonuses in particular, have also been widely studied in connection with job performance. Based on a longitudinal dataset consisting of a sample comprising 739 US employees in a service-related organization, Park & Sturman (2009) investigated the effects of merit pay, bonuses, and long-term incentives^{vi} on future job performance. Their study found merit pay to have a greater positive effect on future job performance, compared with a bonus plan. However, a bonus plan had a greater effect on future job performance when compared with long-term incentives (Park & Sturman, 2009).

In a US study based on the Health and Retirement Study (HRS), Brown (2002) studied the prevalence and effect of so-called “Early Retirement Windows” or “Early-out Windows”, defined as special financial incentives to retire at a particular time (Brown, 2002). These incentives included cash bonuses, improvement in or accelerated eligibility for pension benefits, and continuation of health insurance. Using a sample of workers between the ages of 51 and 61 from the Health and Retirement Study (HRS) in 1992, Brown found that those who received window offers were less likely to work in the subsequent wave of the HRS, the effect being largest at the interview following the window offer, declining rapidly thereafter (Brown, 2002).

Using data from a Dutch longitudinal household panel (the LISS panel) for the period 2008 to 2012, da Silva Soca (2013) investigated the effect of a so-called work-continuation bonus (*doorwerkbonus*) on retirement behavior among older Dutch workers. The *doorwerkbonus* was introduced by the Dutch government in 2009, seeking to delay retirement by providing a discount on taxable income from 62 years of age. Applying a difference-in-differences approach, da Silva Soca concludes that the reform led to an increase in the expected^{vii} retirement age for those workers who were eligible to the *doorwerkbonus*.

However, the study does not shed light on whether the work-continuation bonus affected the actual retirement age.

Larsen (2008) investigates whether a number of quality of work life measures differ in importance for male and female workers in their retirement planning, using data from a Danish survey merged with longitudinal register data. The results suggest that male and female workers are affected differently by various aspects of the job. Larsen found the retirement plans of both men and women were affected by an increase in earnings, however, significantly more so for men than for women. A ten percent increase in income increased the planned retirement age by half a month among women and by four months among men.

A substantial strand of research has also investigated the effect of different sorts of pension benefits and tax rates on the retirement behavior of older workers. Most of these studies show that financial incentives have an impact on retirement behavior (Bratsberg, Røed & Raaum, 2008; Gruber & Wise, 2002; Gruber & Wise, 2007; Gruber & Wise, 2010). The effect seems to be stronger for those in lower, than for those in higher income groups. Nevertheless, they also show that the financial reward must be of a significant size to alter retirement behavior (Hernæs, 1999; Krueger & Pischke, 1992). However, as previously highlighted, these studies investigate the effects of “passive” policies at the national level and not “active” measures at the company level, such as the retaining bonus.

METHODS

Data

The data used in this paper covers the period 2000 to 2010 and comprises all 61-year-old employees (N= 12 513) who were employed in one of 437 (from a total sample of 800) companies that participated in a 2010 survey (see Midtsundstad & Bogen, 2011, for documentation of the survey). The sample of 800 companies was representative for all Norwegian companies with ten or more employees in 2010. The survey was conducted in the

period August to September 2010 by Respons Analyse AS, a Norwegian research firm, on behalf of the Fafo Institute for Labor and Social Research. The survey provides information on company characteristics, and whether a retaining bonus is used as a retention measure, and, if so, in which year the retaining bonus was introduced and the amount offered (Midtsundstad & Bogen, 2011).

All information on the individual employees working in these companies has been provided by Statistics Norway (SSB) and is drawn from administrative registers. In the private sector only those employees working in a company with a contractual pension (AFP scheme) are included in the analysis. In the public sector all employees had access to the contractual pension and were accordingly included in the analysis. Furthermore, we only included companies with one or more employee aged 61. Of the 800 companies that participated in the 2010 survey, only 437 met these criteria – 129 in the public sector and 308 in the private sector.

Dependent and Explanatory Variable

The dependent variable is measured as withdrawal of a contractual pension in the next two years of employment, among workers still working at age 61 in the period 2000 to 2008. Thus, the dependent variable is measured in the period 2001 to 2010. Employees aged 61 and withdrawing early retirement benefits in the next two years of employment are given the value “1” upon withdrawal, whereas those who do not retire are given the value “0” on the dependent variable.

The retaining bonus is measured as a dummy variable; those who are not offered a bonus are given the value “0”, whereas those 61-year-olds who are offered the bonus are given the value “1” when they turn 62. Thus, for those who are not offered a retaining bonus, the dummy variable is “0” at the ages of 61, 62 and 63, whereas for those who are offered a bonus, the variable is “0” at age 61 and “1” at ages 62 and 63.

Model - Individual fixed effects

In order to investigate the effect of the retaining bonus on early retirement behavior we use the panel data method, individual fixed effects in combination with a linear probability model. The advantage of using individual fixed effects is that this model controls for all time-independent unobservable heterogeneity that could be correlated with the main independent variable and thereby produces an over- or underestimated coefficient. An individual fixed-effects model uses only variation within the same unit (individual) over time and therefore produces robust estimates on the effects of changes in different independent variables on different outcomes, controlling for all time-invariant explanatory variables and time-independent unobservable heterogeneity (Angrist & Pischke, 2008; Wooldridge, 2005; Wooldridge, 2009). Estimating the effect of the retaining bonus using individual fixed effects and a linear probability model can be written as follows (Angrist & Pischke, 2008):

$$y_{it} = \alpha_i + \lambda_i + \beta x_{it} + \beta 2TREAT_{it} + \beta 3AGE62_i + \beta 4AGE63_i + \varepsilon_{it}$$

where, $i = 1 \dots n, t = 1, \dots, T_i$

In the analysis we investigate whether 61-year-olds working in companies offering a retaining bonus at age 62 ($\beta 2BONUS_{it}$) have a lower probability of retiring early (y_{it}) in the next two years of employment. $\beta 2BONUS_{it}$ equals “1” if the individual is offered a bonus at age 62, and is still “1” for these individuals at age 63. $\beta 3AGE62_i$ provides an estimate of the overall probability of retiring at age 62 for all included individuals and $\beta 4AGE63_i$ provides an estimate of the overall probability of retiring at age 63.

A company is identified as offering a retaining bonus on the basis of the HR manager/executive director of the company in August–September of 2010 having reported to have made this measure available to older workers with the purpose of encouraging them to continue working. Among the companies having introduced a retaining bonus, only those with an entitlement age set at 62 years are included in the analysis. Offering a retaining bonus

is a choice made by each individual company and hence the group of Norwegian companies offering this retention measure is self-selected. However, the distribution of older workers in the intervention group and the control group can be assumed to be random, given that very few employees change jobs after the age of 60, enabling them to actively seek out companies with such retention measures for older workers (Lien, 2013; OECD, 2013). Furthermore, any time-invariant differences between workers being offered the retaining bonus and those not receiving such an offer is controlled for when using individual fixed effects. In addition to controlling for any time-invariant differences, we include time-variant controls in our analysis, guided by previous research.

Control Variables

As previously mentioned, the advantage of using individual fixed effects is that these models control for all time-invariant explanatory variables and time-independent unobservable heterogeneity (Angrist & Pischke, 2008; Wooldridge, 2005; Wooldridge, 2009). Thus, despite not being listed in the tables reporting the results, we control for all time-invariant risk factors. Given that these factors are fixed and do not vary within the individual over time, the individual fixed-effects model does not estimate a covariate showing their effect on the outcome of interest (Angrist & Pischke 2008; Wooldridge, 2005; Wooldridge, 2009).

To account for the effect of time-varying financial incentives that might influence employees' probability of drawing an early retirement pension, "income percentile" (net income after tax divided into percentiles); "spouse income percentile" (spouse income after tax divided into percentiles) and "household debts percentile" (household debts divided into percentiles) are included in the analysis.

Research on the relationship between marital status and economic activity shows that many couples "coordinate" their retirement. The tendency for couples to make a joint exit from working life is known as "the joint retirement hypothesis" (Charles & DeCicca 2007;

Hank 2004; Lancee & Radl, 2012). To control for the possibility that couples “coordinate” their retirement, the analysis includes “spouse retired on the contractual pension” and “spouse retired on disability pension”.

In Table 1 we present descriptive statistics for the control variables and a selection of key information for the group of 61-year-olds being offered a retaining bonus and the 61-year-olds not being offered this retention measure.

Table 1. Descriptive statistics – control variables and a selection of key information for the group of 61-year-olds being offered a retaining bonus and the 61-year-olds not being offered this retention measure

	Bonus	No bonus
Women	69.7	60.2
Men	30.3	39.8
Elementary school	19.18	20.02
High school	45.67	43.59
Undergraduate from university/college	28.43	26.94
Postgraduate from university/college	6.72	9.45
Income percentile, mean	43.93 (28)	50.72 (29)
Spouse income percentile, mean (s.d.)	46.47 (31)	44.82 (31)
Household debts percentile, mean (s.d.)	37.96 (29)	42.10 (29)
Spouse retired on AFP	8.05	6.29
Spouse retired on disability pension	15.55	15.62
Full-time 30 hours or more	62.5	72.9
Part-time 20–29 hours	19.1	14.9
Part-time <20 hours	18.4	12.2
Worker	63.9	41.5
Routine non-manual employee	17.6	32.8
Professional, administrator, or official	18.5	25.7
Public administration	12.7	9.4
Other industries	5.1	15.4
Teaching	31.1	27.2
Health and social services	34.1	26.0
Manufacturing	8.3	9.7

Construction	3.1	3.1
Hotels and restaurants	0.04	3.9
Wholesale and retail trade	5.6	5.3
N	2 680	9 833

As shown in Table 1, the group of 61-year-olds being offered a retaining bonus consists of a somewhat higher share of women and the mean income percentile of this group is somewhat lower than for the group not being offered a retaining bonus. The descriptive statistics also show that the share working full-time 30 hours or more is somewhat lower for the group of 61-year-olds being offered a retaining bonus, whereas the distribution according to occupational class shows that the share of workers is somewhat higher. Among the 61-year-olds being offered a bonus, there is also a somewhat higher share of employees who work in public administration, teaching and health and social services.

RESULTS

All analyses were performed using Stata, version 12, and all models presented in the four tables have been estimated using individual fixed effects and linear probability models. In Table 2 we present the results for all bonuses and bonuses of 20,000 NOK or more. As shown in the table, the overall probability of a 61-year-old withdrawing a contractual pension is 22 percent when turning 62 and 31 percent when turning 63. When looking at the results for all bonuses, 61-year-olds being offered a bonus at age 62 do not have a lower probability of retiring in the next two years of employment. This result does not change when including the control variables in model 2.

Table 2. Individual probability of withdrawing a contractual pension among 61-year-olds in the next two years of employment, having been exposed to bonus as a retention measure from age 62, all amounts and 20,000 NOK or more

	All bonuses Model 1	All bonuses Model 2	Bonus ≥ 20,000 NOK Model 1	Bonus ≥ 20,000 NOK Model 2
Retention measure – bonus	-.023	-.018	-.065***	-.057***
Age 62	.221***	.216***	.220***	.215***
Age 63	.335***	.307***	.334***	.307***
Income percentile		-.005***		-.005***
Spouse income percentile		-.001***		-.001***
Household debts percentile		-.000		-.000
Spouse retired on contractual pension		.110***		.111***
Spouse retired on disability pension		.021		.018
R² within-group	.254	.285	.259	.282
Number of observations	35946	35946	34626	34626
Number of groups	12513	12513	12513	12513

** : $p \leq 0.05$, *** : $p \leq 0.01$

However, when investigating the effect of bonuses with an offered amount of 20,000 NOK or more, 61-year-olds being offered the retaining bonus have a 5.7 percent lower overall probability of retiring in the next two years of employment. The results also show that the probability of retiring early on the contractual pension is reduced with an increase in income percentile and spouse income percentile. Furthermore, having a spouse who retires on the contractual pension significantly increases the probability of retiring early in the next two years of employment.

In Table 3 the results are divided according to gender. The results show that neither women nor men being offered a retaining bonus, irrespective of the amount being offered, have a lower probability of retiring early. However, women being offered a bonus of 20,000 NOK or more, have on average a 3.6 percent lower probability of retiring early, whereas the effect for men is 12.2 percent.

Table 3. Individual probability of withdrawing a contractual pension among 61-year-old women and men in the next two years of employment, having been exposed to bonus as a retention measure from age 62, according to gender, all amounts and 20,000 NOK or more

	Women All bonuses	Men All bonuses	Women Bonus ≥ 20,000 NOK	Men Bonus ≥ 20,000 NOK
Retention measure – bonus	-0.015	-0.022	-0.036**	-0.122***
Age 62	.207***	.228***	.205***	.228***
Age 63	.302***	.311***	.303***	.310***
Income percentile	-.006***	-.005***	-.005***	-.005***
Spouse income percentile	-.001***	.000	-.001***	.000
Household debts percentile	-.000	.000	-.000	.000
Spouse retired on contractual pension	.086***	.182***	.086***	.191***
Spouse retired on disability pension	.002	.057	-.001	.055
R² within-group	.279	.297	.276	.296
Number of observations	22396	13542	21610	13008
Number of groups	7785	4728	7785	4728

** $p \leq 0.05$, *** $p \leq 0.01$

To further investigate the importance of the amount being offered, we have performed the analysis according to income group, dividing between the lowest third, the mid third and the top third of the income distribution at age 61. Tables 4 and 5 present the results divided by gender, income group and the amount being offered.

Table 4. Individual probability of withdrawing a contractual pension among 61-year-old women in the next two years of employment, having been exposed to bonus as a retention measure, according to income at age 61, all amounts and 20,000 NOK or more

	Women		Women		Women	
	The lowest third of the income distribution at age 61		The mid third of the income distribution at age 61		The top third of the income distribution at age 61	
	All bonuses	Bonus \geq 20,000 NOK	All bonuses	Bonus \geq 20,000 NOK	All bonuses	Bonus \geq 20,000 NOK
Retention measure – bonus	-0.033	-0.053**	-0.012	-0.045	-0.000	.001
Age 62	.234***	.230***	.201***	.200***	.157***	.155***
Age 63	.336***	.335***	.289***	.291***	.237***	.242***
Income percentile	-.005***	-.005***	-.008***	-.007***	-.006***	-.006***
Spouse income percentile	-.001***	-.001**	-.002***	-.002***	-.000	-.000
Household debts percentile	-.001	-.000	-.000	-.000	-.000	-.000
Spouse retired on contractual pension	.089***	.087***	.068***	.070***	.102**	.098**
Spouse retired on disability pension	.012	.008	.008	.014	-.030	-.062
R² within-group	.275	.272	.303	.299	.269	.268
Number of observations	10331	9980	7525	7235	4540	4395
Number of groups	3527	3527	2616	2616	1576	1576

** : $p \leq 0.05$, *** : $p \leq 0.01$

As shown in Table 4, only women in the lowest third of the income distribution at age 61 have a significantly lower probability of retiring in the next two years of employment, on average 5.3 percent, when offered a bonus of 20,000 NOK or more. The result for men is quite the opposite, as shown in Table 5, only men in the top third of the income distribution at age 61 have a significantly lower probability of retiring in the next two years of employment when being offered a retaining bonus.

Table 5. Individual probability of withdrawing a contractual pension among 61-year-old men in the next two years of employment, having been exposed to bonus as a retention measure, according to income at age 61, all amounts and 20,000 NOK or more

	Men		Men		Men	
	The lowest third of the income distribution at age 61		The mid third of the income distribution at age 61		The top third of the income distribution at age 61	
	All bonuses	Bonus \geq 20,000 NOK	All bonuses	Bonus \geq 20,000 NOK	All bonuses	Bonus \geq 20,000 NOK
Retention measure – bonus	-.043	-.113	.049	-.069	-.059**	-.146***
Age 62	.231***	.222***	.281***	.282***	.186***	.188***
Age 63	.318***	.312***	.362***	.366***	.260***	.258***
Income percentile	-.002***	-.002***	-.005***	-.005***	-.006***	-.006***
Spouse income percentile	.003	.004**	-.000	-.002	.000	.000
Household debts percentile	-.002	-.002	.001	.001	-.000	-.000
Spouse retired on contractual pension	-.023	-.024	.270***	.290***	.158***	.166***
Spouse retired on disability pension	.012	.010	.116**	.137***	.009	-.010
R² within-group	.250	.247	.350	.347	.289	.289
Number of observations	1608	1540	4511	4330	7423	7138
Number of groups	567	567	1580	1580	2584	2584

** $: p \leq 0.05$, *** $: p \leq 0.01$

Men in the top third of the income distribution being offered a retaining bonus, irrespective of the amount being offered, have on average a 5.9 percent lower probability of retiring in the next two years of employment. Furthermore, those being offered a bonus of 20,000 NOK or more have on average a 14.6 percent lower probability of retiring early at the ages of 62 or 63.

Discussion

This paper revisits a long-debated subject in early retirement research, namely the importance of financial incentives in the transition between work and retirement. Financial considerations and constraints do undoubtedly affect the opportunity structure of older workers in the

transition between work and retirement and there is, as previously highlighted, a substantial strand of research showing that financial incentives have a significant impact on retirement behavior (Bratsberg, Røed & Raaum 2008; Gruber & Wise 2002; Gruber & Wise 2007; Gruber & Wise, 2010; Radl, 2012). However, research also indicates that the financial reward must be of a significant size to alter an early-exit decision (Hernæs, 1999; Krueger & Pischke, 1992).

Unlike these previous studies investigating the effect of “passive” policies at the national level, our analysis is based on investigating the effects of an “active” measure at the company level – offering a modest lump sum of money to prevent older workers from making an early exit. To our knowledge, this is the first study investigating the effect of retaining bonuses on early retirement behavior. Thus, we address a gap in the literature on the significance of financial incentives for early retirement behavior. Our results show that a retaining bonus of 20,000 NOK or more (equal to 54 percent of a mean monthly income in 2010) does reduce the probability of retiring early, thus our analysis supports the widely-drawn conclusion that financial incentives do alter early retirement behavior. Thus, even an arguably modest financial incentive may have an impact on when older workers choose to exit the labor market.

Inspired by Larsen (2008), we went further than investigating the overall effect of the retaining bonus, performing separate analyses for women and men. As previously mentioned, Larsen found that the retirement plans of male workers are more affected by an increase in earnings than those of female workers, suggesting that employer-initiated efforts to retain older workers will not necessarily be as effective for female as for male workers. Our analysis strongly supports this hypothesis, when separating between men and women, our results show that women being offered a bonus of 20,000 NOK or more have on average 3.6 percent lower probability of retiring early, whereas the effect for men was 12.2 percent. Thus, the effect for

men is more than three times higher than the effect for women. These results suggest that the retaining bonus is a more effective measure when targeting men than when targeting women.

The retaining bonus, investigated in this paper, is essentially a purely financial incentive, as it does not involve any adaptation of the work situation or strengthening of employees' work ability (Hermansen & Midtsundstad, 2015). Thus, as previously argued, the retaining bonus will mainly reduce the significance of economic "pull factors" in the transition between work and retirement, as it changes the compensation rate, making work more economically valuable than leisure. Nevertheless, being offered a retaining bonus arguably also sends a signal to older workers that they are wanted and appreciated by the company, irrespective of the pure financial value it may represent for the employees. Such signals may help to reduce the significance of culturally-constructed beliefs about when older workers should leave the labor market.

This "signal effect" embedded in the retaining bonus may be as important for older employees as the financial effect of the bonus when they are weighing the pros and cons of continuing working versus leaving the labor market altogether. However, analysis based on register data provides at best only indirect insight into the complexity of desires, beliefs and opportunities faced by older workers in the transition between work and retirement. Thus, given the data we use in our analyses, we are unable to distinguish between the relative significance of these two factors. Nevertheless, the financial incentive embedded in the retaining bonus will arguably be greater for those in the lower income groups, given that the one-time lump sum offered will constitute a larger percentage of income for lower income groups than for higher income groups. Thus, one might argue that for those with low income, the retaining bonus may both act as a signal and as a financial incentive, whereas for those with higher wages, the bonus primarily acts as signal, given the low sum being offered.

To further investigate the significance of retaining bonuses in the transition between work and retirement, we performed separate analysis according to income group, separating between women and men and according to the amount being offered. The results show that for women, only those in the lowest third of the income distribution at age 61 have a lower probability of retiring early when being offered a bonus of 20,000 NOK or more. For men, by contrast, only those in the highest third of the income distribution at age 61 have a lower probability of retiring early. The results show that men with the highest earnings have on average 5.9 percent lower probability of retiring early when being offered a bonus, irrespective of the sum being offered. When delimiting the analysis to retaining bonuses of 20,000 NOK or more, men with the highest earnings being offered this measure have on average 14.6 percent lower probability of making an early exit in the next two years of employment.

Given these results, it seems reasonable to assume that older women in the lowest income group are retained primarily by the financial incentive embedded in the retaining bonus. This argument is supported by the fact that we find no effect of the bonus when investigating all bonuses, irrespective of the amount being offered. The results show that only bonuses of 20,000 NOK or more have an effect on the early retirement probability for older women with the lowest earnings. Whereas, for older men in the highest third of the income distribution, the results indicate that both the “signal effect” and the financial incentive embedded in the retaining bonus might be of importance when they are weighing the pros and cons of continuing working versus leaving the labor market altogether.

Radl (2013) underscores that the opportunity structure of older workers is to a significant degree shaped by their health and financial situation. Radl argues that only those who are healthy and have a job, or the chance of getting one, can opt for continued work, and only those who have accumulated the necessary pension entitlements or who hold significant assets

can afford to retire early. Given these facts, we must emphasize that the data used in our analyses consisted exclusively of older employees who were all working at the age of 61. These employees can be assumed to be healthier than the population of older employees as a whole, since a large proportion of Norwegian employees leave the labor market on the disability pension before they turn 60 (Midtsundstad, Hermansen & Nielsen, 2012). Thus, our results cannot be generalized outside the age group investigated in this paper and we cannot rule out the possibility that the effect of the retaining bonus presupposes a target group which constitutes a relatively healthy group of older workers.

Furthermore, the financial situation is undoubtedly a key element in the opportunity structure facing older workers and financial constraints vary significantly between different income groups (Radl, 2012). Moreover, it seems reasonable to assume that older male workers in the top third of the income distribution have accumulated the necessary pension entitlements and have the assets making early retirement an affordable option. Thus, this group of older workers may have a desire to keep on working, they believe they are able to keep up and their health provides them with the opportunity to do so; being offered a bonus may just be the triggering mechanism for them to stay on. For older women in the lowest third of the income distribution, however, whose health allows them to continue working, early retirement may be desirable, but low pension entitlements and a lack of assets may force them to continue working. For older men in the top third of the income distribution, the retaining bonus marginally increases the benefits of continuing working, but also motivates them to keep on working for a few more years. For women in the lowest third of the income distribution, on the other hand, low pension entitlements, a lack of assets and being offered a retaining bonus of 20,000 NOK or more makes continuing working a financial necessity, rather than a motivated choice.

Conclusion

In this paper we have analyzed the effect of the retaining bonus on early retirement behavior using a unique dataset consisting of a Norwegian employer survey from 2010 combined with register data on all older employees in the period 2000 to 2010. In spite of the relatively low sum being offered to prevent older workers from making an early exit, our analysis shows that retaining bonuses of 20,000 NOK or more (equal to 54 percent of a mean monthly income in 2010) do reduce the probability of 61-year-olds retiring in the next two years of employment. However, the effect is more than three times higher for men than for women. Furthermore, when separating according to income group, our results indicate that both the financial incentive and the «signal effect» embedded in the retaining bonus affect the retirement decision of older men in the top third of the income distribution. For women on the other hand, the effect of the retaining bonus for those in the lowest third of the income distribution seems to derive from the increased financial gains of working a few more years.

As previously mentioned, register data provides at best only indirect insight into the desires, beliefs and opportunities facing older workers. Thus, we are unable to fully grasp this complexity in the present study, and interpretation of the results must inevitably be based on assumptions and indirect evidence. Nevertheless, older workers still working at the age of 61 is arguably a select group of employees. Therefore, the results presented in this paper only provide insight into the effect of one single measure used to retain older workers, in a defined period of time, and for a select group of employees.

One can also question, as Midtsundstad & Bogen (2011) have, whether the use of standardized retention measures or a one-size-fits-all approach, such as offering a retaining bonus, is the most appropriate way to retain older workers given the heterogeneity of needs, problems, and challenges facing different industries and groups of older employees. Furthermore, employees are only eligible for these measures at the age of 62, which in many sectors and industries is too high to make a difference for individuals at the risk of becoming

disabled. As Midtsundstad & Bogen (2011) argue, retaining efforts, including bonuses, may prove to be more effective if targeted according to the heterogeneity of needs, problems, and challenges facing different industries and groups of employees. Instead of offering a retaining bonus, which is essentially just an incentive, not affecting the work situation or work ability of older workers, one might argue, as Paullin & Whetzel (2012) have, that the easiest and least costly retention strategy may be just to simply *ask* healthy and work-able older workers to continue working and strive to make them feel valued.

As an alternative to the emphasis on incentives, Midtsundstad (2015) argues for the importance of a broader approach to active aging in Norway, in which the prevention of health problems and reduced work capacity is more emphasized. A broader focus to active aging will potentially enhance the opportunity structure of the less healthy and work-able older workers. Along similar lines, Larsen (2008) argues for improving older workers' quality of work as a strategy for reversing the tendency towards early withdrawal from the labor market. Reducing health impairment, by improving working conditions and focusing on early prevention, may not only provide older workers with the opportunity to continue working, but also be an incentive to continue working by enhancing the desire to work longer and the belief in one's ability to do so (Larsen 2008; Midtsundstad 2015).

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ⁱ According to Statistics Norway the mean monthly pay before tax in 2010 was 36,700 Norwegian Kroner.

ⁱⁱ This entitlement age applied to 92 (8 percent) of the 61-year-olds working in companies offering retaining bonuses in 2010.

ⁱⁱⁱ This level of compensation was available to 90 (5 percent) of the 61-year-olds working in companies using bonuses as retention measures.

^{iv} From January 1st, 2011 the contractual pension was changed to a flexible lifelong annuity for private sector workers, making the scheme distinctly different from the public sector where it is still designed as an early retirement scheme. Nevertheless, this regulatory change was implemented after the timespan investigated in this article.

^v There are however some exceptions to this general rule which affect, for example, employees in occupations with a special age limit and employees in companies with a defined contribution pension scheme, which consequently terminate employment contracts before the age of 70, typically at the age of 67.

^{vi} According to Park & Sturman (2009), long-term incentives are rewards linked to a firm's long-term growth, usually in the form of cash or stocks.

^{vii} The respondents were asked when they expected/were planning to retire.