

# Inequalities and Age-Related Disadvantages in Late Working Life and Labour Market Exit in Sweden

Gülin Öylü





Linköping studies in arts and sciences No. 868

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Gülin Öylü



Department of Culture and Society, Division Ageing and Social Change  
Faculty of Arts and Sciences  
Linköpings universitet, SE-581 83 Linköping, Sweden  
Linköping 2023

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Printed in Sweden by LIU-Tryck, 2023

ISBN 978-91-8075-434-7 (print)

ISBN 978-91-8075-435-4 (PDF)

<https://doi.org/10.3384/9789180754354>

ISSN 0282-9800

# Abstract

The participation of older individuals in the labour market has increased as a result of recent demographic and societal shifts, as well as reforms of pension and social security systems. However, employment inequalities in late working life and labour market exit persist. Early exit from the labour market affects the sustainability of public finances and the availability of skilled labour, as well as the financial, social, mental, and physical well-being of individuals. So far, the literature on employment in late working life and labour market exit has mainly focused on individual choices. However, employment and exit in late working life are complex phenomena that depend on a variety of factors, such as individual life courses and labour market conditions. Based on Swedish register data, this thesis examines inequalities in employment and labour market exit among people aged 55 and over in Sweden, and the role of life course and age-related labour market disadvantages, including studies on: inequalities and diversity between gender and educational groups (*Study 1*); the relationship between mid-life labour market attachment and patterns of labour market exit (*Study 2*); age-related disadvantages in unemployment risk and re-employment chances (*Study 3*); and the link between older workers' hiring chances and the characteristics and labour market conditions of employers (*Study 4*). *Study 1* shows that employment trajectories, including the receipt of pension, unemployment and disability benefits, are structured by gender and education. While women tend to exit the labour market earlier than men and are more likely to receive disability benefits, men are more likely to move into self-employment or to receive unemployment benefits. *Study 2* demonstrates that individuals with low labour market attachment early (at age 30) or late (at age 50-59) in their working careers are more likely to exit the labour market early, while low labour market attachment in mid-career (at age 40-49) is linked with later labour market exit. However, low labour market attachment in all career stages is associated with the receipt of work-related benefits in the

year of labour market exit. *Study 3* reveals that older workers (in their late 50s and early 60s) are less likely (compared with workers in their early 50s) to be wage-employed after a spell of unemployment, and more likely to become self-employed, to remain unemployed, to exit the labour market, or, if re-employed, to experience downward mobility (lower wage or part-time unemployment). Finally, *Study 4* shows that the age and educational composition of employees, combined with the sectoral affiliation of employers and local labour market conditions, are directly related to the likelihood of hiring older workers. That is, older workers are more likely to be hired in establishments with a high share of older and low educated employees, in the health, education, transport and storage sectors, and in municipalities with a high share of older people of working age, a high unemployment rate, and a low share of unfilled vacancies. This thesis makes a unique contribution to the literature on inequalities and age-related disadvantages in late working life, as well as on policies to extend working life and tackle inequalities in old age. The overall conclusion is that the diversity of employment trajectories is socially structured and related to individuals' employability, workability, and flexibility to change employment or exit from the labour market – structured by individual life courses and labour market conditions. Policies towards equal and prolonged working lives should focus on sustainable working conditions, lifelong learning, and discriminatory practices, not only in late working life but throughout the overall working life course.

Keywords: social inequality, late working life, older workers, labour market exit, labour market attachment, life course, age-related disadvantages, hiring of older workers, Sweden

## Sammanfattning

Äldre personers deltagande på arbetsmarknaden har ökat till följd av demografiska och samhällsliga förändringar samt reformer av pensions- och socialförsäkringssystemen. Men ojämlikheten i sysselsättningen under den senare delen av arbetslivet och i utträdet från arbetsmarknaden kvarstår. Tidigt utträde från arbetsmarknaden påverkar de offentliga finansernas hållbarhet och tillgången på kvalificerad arbetskraft, samt individers ekonomiska, sociala, psykiska och fysiska välbefinnande. Hittills har litteraturen om sysselsättning och utträde från arbetsmarknaden främst fokuserat på individuella val. Sysselsättning och utträde från arbetsmarknaden är dock komplexa fenomen som beror på en mängd olika faktorer, såsom individuella livslopp och arbetsmarknadsförhållanden. Genom analyser av svenska registerdata undersöker denna avhandling ojämlikheter i sysselsättning och arbetsmarknadsutträde bland personer som är 55 år och äldre i Sverige, i relation till livslopp och åldersrelaterade arbetsmarknadsnackdelar, genom studier om: ojämlikhet och skillnader mellan kön- och utbildningsgrupper ( Studie 1); sambandet mellan arbetsmarknadsanknytning i mitten av livet och olikheter i arbetsmarknadsutträde (studie 2); åldersrelaterade nackdelar i arbetslöshetsrisk och återanställningsmöjligheter (studie 3); och sambandet mellan anställningsmöjligheten för äldre personer och företags/arbetsplatsers egenskaper och arbetsmarknadsförhållanden (Studie 4). Studie 1 visar att olika sysselsättningsbanor genom arbetslivet, inklusive mottagande av pension, arbetslöshetsersättning och sjukersättning, varierar med kön och utbildning. Medan kvinnor tenderar att lämna arbetsmarknaden tidigare än män och är mer benägna att få sjukersättning, är det mer sannolikt att män blir egenföretagare eller får arbetslöshetsersättning. Studie 2 visar att individer med svag arbetsmarknadsanknytning tidigt (vid 30 års ålder) eller sent (vid 50–59 års ålder) i arbetslivet är mer benägna att lämna

arbetsmarknaden tidigt, medan svag arbetsmarknadsanknytning i mitten av arbetslivet (vid 40–49 års ålder) är kopplat till senare utträde från arbetsmarknaden. Svag arbetsmarknadsanknytning i alla olika karriärskedan är dock förknippad med arbetsrelaterade ersättningar under året för arbetsmarknadsutträdet. Studie 3 visar att äldre arbetstagare (i slutet av 50-årsåldern och början av 60-årsåldern) har lägre sannolikhet (jämfört med arbetstagare i början av 50-årsåldern) att vara löneanställda efter en period av arbetslöshet, och högre sannolikhet att bli egenföretagare, att förbli arbetslös, att lämna arbetsmarknaden, eller, om återanställd, uppleva nedåtgående rörlighet (lägre lön eller deltidsarbetslöshet). Avslutningsvis visar Studie 4 att ålder- och utbildningssammansättning bland de anställda, i kombination med arbetsgivarens branschtillhörighet och lokala arbetsmarknadsförhållanden, är direkt relaterade till sannolikheten att äldre arbetstagare anställs. Det vill säga, äldre arbetstagare anställs i högre utsträckning på företag/arbetsplatser med en hög andel äldre eller lågutbildade anställda, inom hälso-, utbildnings-, transport- och lagersektorerna samt i kommuner med en hög andel äldre i arbetsför ålder, en hög arbetslöshet och en låg andel lediga platser. Avhandlingen ger ett unikt bidrag till litteraturen om ojämlikheter och åldersrelaterade nackdelar under den senare delen av arbetslivet samt för utvecklandet av politiska strategier för att förlänga arbetslivet och motverka ojämlikheter i den senare delen av livet. Den övergripande slutsatsen är att olikheter i sysselsättningsbanor genom arbetslivet är socialt strukturerade och relaterade till individers anställbarhet, arbetsförmåga och flexibilitet i att byta anställning eller lämna arbetsmarknaden – egenskaper som är relaterade till individuella livslopp och förhållanden på arbetsmarknaden. Politiska strategier för ett jämlikt förlängt arbetsliv bör fokusera på hållbara arbetsförhållanden, livslångt lärande och diskrimineringspraktiker, inte bara i slutet av arbetslivet utan under hela arbetslivet.

Nyckelord: social ojämlikhet, sent arbetsliv, äldre arbetstagare, utträde från arbetsmarknaden, arbetsmarknadsanknytning, livslopp, åldersrelaterade nackdelar, anställning av äldre arbetstagare, Sverige

# Acknowledgements

Throughout my PhD process, I have been truly fortunate to have received incredible guidance, support, and encouragement from my supervisors, colleagues, family, and friends. I would like to thank you all, you are an integral part of my PhD journey.

First of all, I would like to thank my main supervisor Andreas Motel-Klingebiel for your exceptional guidance, inspiring comments, encouragement, and patience throughout my PhD process. Your mentorship, excellent knowledge, constructive advice, and perspectives helped me to grow academically and have been invaluable for my PhD work. I would also like to thank my co-supervisor, Susanne Kelfve, for your constant support and encouragement, for always taking the time to help me, your brilliant solutions, empowerment, and positivity throughout my PhD time. I have been very lucky to have had such excellent supervisors during this journey, special thanks to both of you!

I also wish to thank my esteemed co-authors, Chiara Natalie Focacci and Luis Serratos-Sotelo, for excellent research collaboration, for your helpful comments, and significant contributions. Furthermore, I would like to thank all people that commented on my thesis at different stages of the process, namely, Kirk Scott, Arianna Poli, Ingemar (Pingo) Kåreholt, Martin Klinthäll, Moritz Hess, Stefanie König, and Melody Almroth whose thoughtful feedback and constructive criticism enriched the depth and quality of this thesis. In addition, I am grateful for the insightful comments and suggestions of Annika Taghizadeh Larsson and Lars-Christer Hydén, which significantly improved my thesis.

I am also deeply grateful to my current and former colleagues at the Division Ageing and Social Change for all support throughout this process. I am truly grateful for the friendly and supportive working environment that has fostered valuable discussions and contributed

significantly to my PhD process. I would also like to thank my colleagues in the EuroAgeism project and the EIWO research programme. I am grateful for the insightful discussions, valuable comments and opportunities provided by these research networks. I would also like to thank the hospitality of the European Centre for Social Welfare Policy and Research and the guidance of Kai Leichsenring and Anette Scoppetta during my secondment, which helped me to improve the policy approach in my thesis.

I would also like to acknowledge and thank the funding sources that made my PhD possible. The EuroAgeism project, funded by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie (grant no. 764632), supported my research during the early years of my PhD and the EIWO research programme, funded by the Swedish Research Council for Health, Working Life and Welfare (grant no. 2019-01245) that supported the last two years of my PhD.

Last, but not least, I would like to thank my family and friends for their constant support and encouragement throughout my PhD journey. I am grateful to Burcu İleri and Tuğçe Küçük for listening to my struggles and always motivating me. I would also like to thank Andreas Erik Jackson for always being there for me, patiently listening, always positive, and constantly supportive. Finally, I would like to thank and dedicate my thesis to my dearest family, my sister Pelin Özge Öylü and my mother Şerife Oyğur. I thank you for your endless love, support, and encouragement from the very beginning of my academic journey.

Norrköping, November 2023

Gülin Öylü

## List of papers

- I. Öylü, G., Kelfve, S., & Motel-Klingebiel, A. (2022). Late Work in Sweden: Exit Pathways Express Unequal Exclusion Risks. *Nordic Journal of Working Life Studies*, 13(3), 23-47. <https://doi.org/10.18291/njwls.135385>
- II. Öylü, G., Focacci, C.N., Serratos-Sotelo, L., Motel-Klingebiel, A., & Kelfve, S. (2023). When We Were Young: How Labour-market Attachment During Mid-life Affects Labour Market Exit. *International Journal of Sociology and Social Policy*, 43 (13/14), 245-262. <https://doi.org/10.1108/IJSSP-08-2023-0189>
- III. Öylü, G., Motel-Klingebiel, A., & Kelfve, S. (accepted). Age Differences in Unemployment Risk and Re-Employment Outcomes in Late Working Life in Sweden. *Journal of Aging & Social Policy*.
- IV. Öylü, G., Kelfve, S., & Motel-Klingebiel, A. (submitted). Who Hires Older Workers? The Role of Employee Structure, Sectoral Affiliation, and Local Labour Context of Establishments.



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# Chapter 1

## Introduction

Labour force participation among older people has increased in many European and OECD (Organisation for Economic Co-operation and Development) countries since the late 1990s, with individuals tending to exit working life at later ages (Boissonneault et al., 2020). However, the increase in labour force participation in old age differs between individuals, and the labour market is characterised by social inequalities in employment and labour market exit (Kadefors et al., 2019; Wels, 2016). Women, lower-educated, low-skilled and blue-collar workers, the long-term sick and disabled as well as many migrants are more likely to exit the labour market early and experience precarious employment (Hess et al., 2016; Visser et al., 2018). Older workers also face a number of age-related disadvantages such as early retirement incentives from employers (Naegele et al., 2018), lay-offs (Schmitt, 2004), the risk of long-term unemployment (Marmora & Ritter, 2015), limited re-employment opportunities (Wanberg et al., 2016) or downward mobility in terms of earnings or duration or intensity of employment (Visser et al., 2018).

Faced with labour scarcity and increasing healthcare/pension system costs due to population ageing, many countries – primarily European and OECD ones – have implemented policies such as pension reforms and active ageing policies to increase participation by older workers (Duncan, 2017; Foster & Walker, 2015; Geppert et al., 2019). Exclusion and inequality in late working life have several implications, not only for the sustainability of pension and social security systems, but also for individuals' lives and the labour market (Merkl & Van Rens, 2018). Employment affects many aspects of individuals' lives, including their financial status, mental and physical health, and social participation (König, Lindwall, et al., 2019; van Erp et al., 2014). Moreover, the exclusion of older people from working life leads to

shortages in the supply of experienced labour and underuse of the labour force's full potential, resulting in inefficiency in the allocation of resources (Levanon et al., 2014; OECD, 2007; Stypińska & Nikander, 2018).

Labour force participation and the labour market exit of older workers are often discussed and explained in relation to the retirement process, as labour market exit is institutionalised by pension and social security systems (Feldman & Beehr, 2011; Wang & Shultz, 2010). Population ageing and accelerating social change have given rise to more complex pension systems and employment options (OECD, 2017a). As a consequence, retirement or labour market exits are no longer binary outcomes, but rather form transition processes that can take many forms, including combinations of paid work and pension receipt (König et al., 2022; OECD, 2017b). Given such complexity, this thesis examines the employment and exit of older workers by focusing on the trajectories of attachment and exit from paid work, taking into account various actors and factors, including social security and pension systems, rather than defining and assigning retirement status.

The employment and labour market exit of older workers has been predominantly explained in the literature by supply-side, individual decisions about participation in the labour market (Rabaté, 2019). However, there are several other actors and factors that also play a role in labour force participation or exit in late working life. Diverse employment and exit patterns have been linked to various factors such as individual life histories, socioeconomic status, labour market structure and institutional settings (Benson et al., 2017; Möhring, 2016), as well as to employers' recruitment behaviours (Conen et al., 2012), local and national economic conditions, and institutional settings (Ebbinghaus & Radl, 2015). Among these interdependent factors and actors, meso-level actors and factors such as employers' hiring of older workers and local economic conditions are the most overlooked.

Throughout the ageing process, individual resources including health status, human and social capital, and financial resources are shaped by their individual experiences and labour market history, as well as by the surrounding institutional framework (Kuitto & Helmdag, 2021). These factors affect individuals' employability, work capacity, savings and pensions, which ultimately affect an individual's opportunities and risks for employment or exit in late working life (Bennett & Moehring, 2015). Consequently, heterogeneity in employment status and labour market exit among older people is closely

linked to the differentiated life course trajectories of individuals with varying characteristics and experiences such as birth cohort, socioeconomic status, childhood conditions, family relationships and employment trajectories. Against this background, this thesis applies the life course theory (Elder Jr, 1975; Settersten Jr, 2006) to elucidate the link between individual life courses and inequalities in late working life.

Age is closely connected to the timeline of working life and is often seen as a proxy for experience, health status, productivity and various skills, even though individuals of the same age have diverse characteristics (Settersten et al., 2016). Age is a strong predictor of involuntary exit from the labour market, unemployment or re-employment chances, even after controlling for individual characteristics correlated with age (Frimmel, 2021). The institutionalisation and homogeneity of ageist assumptions based on chronology lead to age-related disadvantages and contribute to inequality in late working life (Barrett, 2022).

The age-related disadvantages experienced by older workers are also diverse, not only because they vary across sectors, occupations, or local labour markets, but also because they could lead to different outcomes depending on individual resources, as explained by the life course perspective. On the one hand, employers in different sectors and labour markets differ in hiring, layoff and training policies for older workers (Lössbroek et al., 2021). On the other, individuals with different financial resources, pension accumulations and work experience may have different employment and exit possibilities when confronted with job loss or lack of employment opportunities (Burr & Mutchler, 2007).

Despite the richness of literature on labour market participation and exit in late working life, including the retirement transitions of older workers (Czaja, 2019; Nilsson, 2016; Wang & Shultz, 2010), there are gaps in the academic and political knowledge about inequalities and age-related disadvantages in late working life, as well as associated factors and predictors. This knowledge gap may be due to the complex interplay between different actors and factors influencing labour market participation, retirement transitions and age-related disadvantages in late working life. This thesis focuses on inequalities in employment and labour market exit in late working life in Sweden, and the impact of sociodemographic factors, earlier life course experiences and age-related disadvantages.

Sweden has implemented active ageing and activation programmes since the 1990s and is likewise an OECD forerunner in pension reforms (Jensen, 2021). As a result of work incentives, flexible retirement and employment options, and shifts in retirement regulations, Sweden has relatively high labour force participation among older workers (Laun & Palme, 2020). However, some of its policies aimed at high labour force participation by older workers, such as increases in statutory retirement ages and stricter eligibility rules for disability and unemployment incomes, could contribute to inequalities and exclusion risks in late working life (McHale et al., 2020). It is evident that inequalities and exclusion risks in late working life remain significant in Sweden (Kadefors et al., 2019).

This thesis examines inequalities, exclusion risks and age-related disadvantages in late working life in Sweden against the backdrop of individual life courses and the impact of multiple actors. Although the analyses are based on Swedish data, they could well be relevant for other European societies experiencing similar challenges and societal changes.

## 1.1 Aim and objectives

This thesis aims to contribute to the body of knowledge on inequalities and exclusion risks in employment and labour market exit in late working life in Sweden, and thus serve as a basis for adequate labour market and life course policies. The main objectives are a) to illustrate inequalities in employment and exit in late working life by gender and educational groups, b) to investigate the link between labour market attachment during mid-life and labour market exit, c) to assess age-related disadvantages in unemployment and re-employment outcomes in late working life, and d) to understand the impact of age and educational composition of employees, sectoral affiliation and local labour market conditions of establishments, on the hiring of older workers.

## 1.2 Content

Following the introduction in Chapter 1, Chapter 2 presents the institutionalisation of late work and retirement through labour market policies, institutions, pension and further social security systems in the welfare state, as well as basic considerations defining employment and labour market exit in late working life as a key dimension of the thesis (Chapter 2.1). It then introduces the main actors in late working life and the factors that affect them, all of which shape the structure late work

(Chapter 2.2). It ends by describing late work in Sweden, including recent developments in the pension and social security systems and the labour market structure (Chapter 2.3).

Chapter 3 considers how late working life is shaped by individual life courses through the ageing process, using the life course theory to explore the link between individuals' life courses and the workability, risks, and opportunities in late working life (Chapter 3.1). Chapter 3.2 discusses how age has an impact on individuals' lives through the ageing process and its correlation with individual characteristics through ageism and age-based decision-making by institutions, employers, and individuals themselves. Chapter 3.2 introduces age-related disadvantages, one of the key focuses of this thesis. Chapter 3.3 describes the risks and opportunities for exit and employment that can arise in late working life as a result of the ageing process and age-related disadvantages.

The employment and exit patterns of individuals shaped by life course and age-related disadvantages experienced in late working life are heterogenous and socially structured. Chapter 4 presents examples of inequalities in employment and labour market exit (4.1); the individual, labour market and institutional factors that affect inequalities and age-related disadvantages (4.2); examples from Swedish late working life on inequalities and age-related disadvantages (4.3); and ends with a description of the research gaps and needs informing the four studies in this thesis (4.4).

Chapter 5 explains the data structure and methodological approach of each study included in thesis and Chapter 6 summarises their findings. Chapter 7 discusses these findings, their contributions to the body of literature, policy implications, transferability, and limitations, before providing concluding remarks.



## Chapter 2

# Late work and ageing societies

The traditional tripartite life course of education, work and retirement is being reshaped by demographic, social and economic change: life courses are becoming more fluid with flexible transitions (Kohli, 2007; Naegele & Walker, 2021). Late work, often defined as paid employment at the end of working life close to the statutory retirement age, has also changed in line with changing life courses, particularly demographic changes. Long-term full-time work followed by exit into full-time retirement has become less common, while alternative work arrangements and exit trajectories involving reduced working hours before or after pension receipt are becoming more conventional (Siegenthaler & Brenner, 2000).

Despite these ongoing changes in late work, retirement retains a significant role in defining labour market exit (Hardy et al., 2016). The following section (2.1) explains the brief evolution of the retirement institution and the role of social security and pension systems in outlining labour market exit, elaborating the approach adopted in this thesis to defining labour market exit. As several other than institutional actors are involved in the work course and labour market exit, section 2.2 defines the various actors and factors influencing late work and exit. Finally, section 2.3 provides a brief history of late work in Sweden and the main features of the Swedish pension and social security system.

### 2.1 Institutionalisation of late work and delayed exit

Modern retirement programmes and pension systems emerged during the early 20<sup>th</sup> century in most industrialised countries (Bengtson & Settersten Jr, 2016). The general trend in most countries was for retirement only to be available initially to a small occupational or

economic class, mostly high-income and white-collar workers. Then it expanded into financial support for older individuals unable to work, distributed by the social security system of governments, employers and unions (Hardy et al., 2016). With the expansion of retirement alongside economic growth and fierce labour market competition, early retirement and age-based mandatory retirement became widespread in many countries (Hofäcker & Radl, 2016). Eventually, it became structured as a period of leisure at a certain age after the end of one's working life (van Vuuren, 2014). Benefits during retirement are generally funded by the pension contributions of individuals who are still working, thus formalising an implicit social contract across generations (Boeri et al., 2006).

Population ageing, labour market changes, financial market integration, migration trends, globalisation and digitalisation (Bonoli, 2003; Frericks et al., 2009) played a role in the development of both social security and pension systems in European countries. Increasing life expectancy and greater numbers of older workers have put pressure on the fiscal balances and challenged the sustainability of pension systems in European countries, especially those based on social insurance like Sweden's (Bonoli, 2003; Foster, 2012). As a result, governments have implemented significant changes to their pension systems, with statutory retirement ages rising during the late 20<sup>th</sup> century and the early 21<sup>st</sup> century in most countries (Hinrichs, 2021). Overall, pension systems have become shaped into complex arrangements involving private savings, government-sponsored programmes, employer agreements outlining a necessary number of years of work, required contribution levels depending on individuals' occupations and sectors, and often an age threshold for entitlement. (Bonoli, 2003).

Even though retirement traditionally corresponds to the end of working life, it has a complex set of functions throughout the working lives of individuals, with implications for national economies (Quadagno & McClellan, 1989). First, it regulates the savings of individuals across their working life and contributes to smoothing consumption over the life course. Second, it has a redistributive function by ensuring pension rights for those who have not accumulated pensions over their working life. Moreover, it is an insurance mechanism for both individual events, such as unemployment or disability, and also collective ones like economic crises or periods of high inflation (Ponds, 2003).

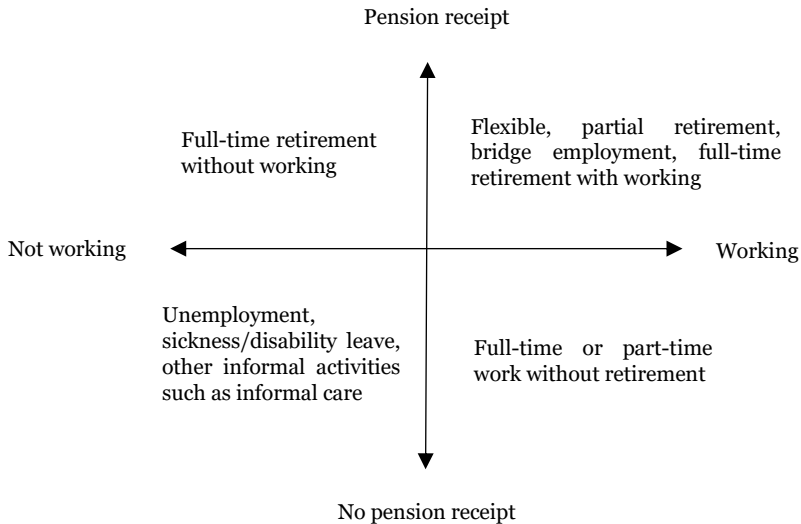
The structure, functions, coverage and rules of pension systems as well as their history and their normative and economic bases differ across societies (Duval, 2003). Depending on the regulation of a pension system, it can serve as a strong incentive to exit from or stay in working life. While the pension received can be seen as a substitute for labour market income or unemployment benefit after retirement age, mandatory retirement or minimum retirement ages can lead to an involuntary exit from work in late working life (van Erp et al., 2014). Recently, several developed countries have started to introduce flexible retirement options that allow individuals to combine receipt of a pension with work (OECD, 2017b). This has expanded the functions of pension systems to e.g., using pension savings not for exiting work, but for staying in working life (Ramnath et al., 2021).

Not only pension systems, but also social security systems and labour market policies in general shape work over the life course. Employment protection (Estevez-Abe et al., 2001), active labour market policies (Rueda, 2015), unemployment, sickness and disability insurance (Stensöta & Bendz, 2019), as well as care and health services (Kim et al., 2012), provide incentives for individuals to remain in the labour market. On the other hand, unemployment and disability protection can be used as alternative exit routes from the labour market (Boeri & Ours, 2008; Lammers et al., 2013). This is particularly the case following increases in the statutory retirement age and the inability of older workers with limited employment opportunities or working capacity to remain in the labour force (Staubli & Zweimüller, 2013). Due to increased expenditure and efforts to discourage early exit from the labour market, several OECD countries has been introducing stricter eligibility criteria for disability and unemployment benefits in addition to pension reforms (Burkhauser et al., 2014).

Late work and exit from the labour market have been changed by social security system reforms with flexible new work arrangements stemming from ongoing demographic and social changes (Naegele & Walker, 2021). Increased statutory retirement ages, reduced pension benefits and the possibility of flexible retirement schemes allow new forms of employment in late work and exit to supplement the full-time work/full-time exit model (Siegenthaler & Brenner, 2000). This has also led to new forms of retirement such as “phased retirement”, reduced working hours prior to retirement, “bridge employment” changing employment before retirement (Cahill et al., 2015), and “unretirement”, returning to work after retirement (Platts et al., 2019). Combining work and pensions after statutory retirement ages is allowed in all OECD

countries, and combining them before in 11 countries (OECD, 2017a). Possible alternatives for combining work and pension receipt are shown in Figure 1.

Figure 1: Combinations of work and receipt of pension



Even though the statutory retirement age often corresponds to exit age, working life is not always left through retirement or financial decision-making with pension accumulation (van Erp et al., 2014), and the end of paid work can correspond to events other than receipt of a pension – often disability, unemployment or individual preference (Boeri & Ours, 2008). Disability and unemployment benefits or private savings are common substitutes for pension receipt before retirement age (Inderbitzin et al., 2016).

As the complexity of employment in late working life and exit from the labour market has increased, this thesis defines exit from the labour market as the end of paid work and considers any kind of paid work to be employment. Therefore, instead of defining retirement, this paper focuses on exit and different employment trajectories in combination

with pension and social security receipt to allow for complex and varied scenarios regarding late work and exit.

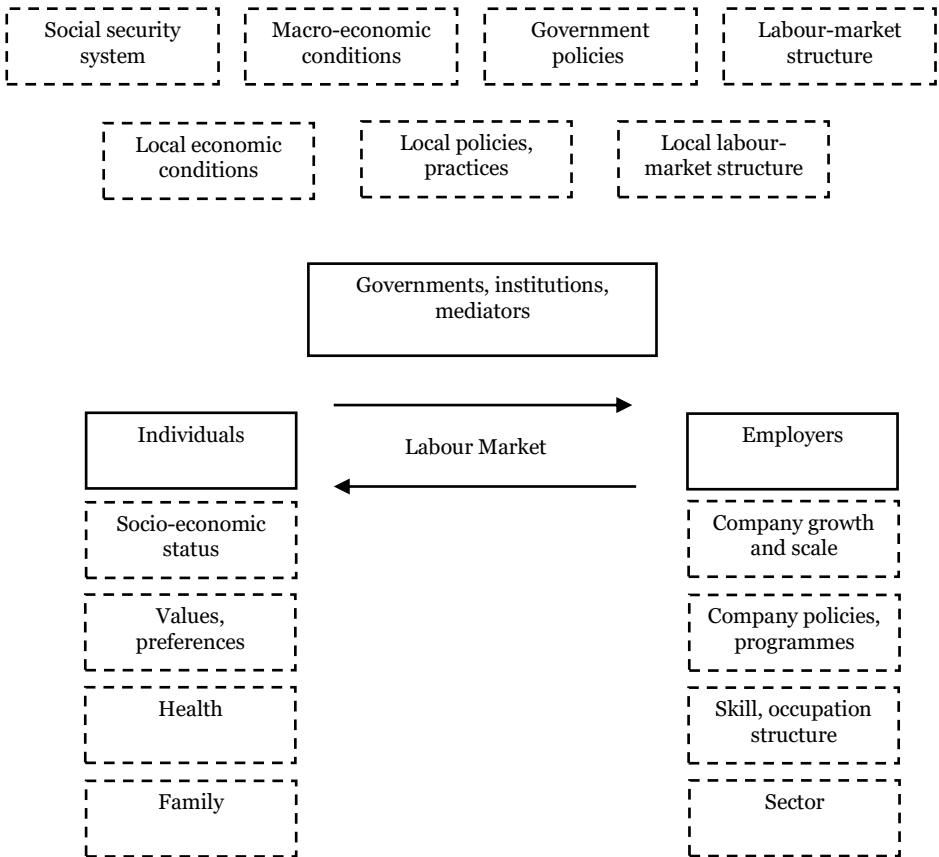
## 2.2 Multi-level structure of late work and exit

Individual decision-making is often emphasised in attempts to explain late labour force participation and exit from late working life. However, labour markets involve multiple actors and complex sets of factors (Figure 2). Labour markets include: individuals on the supply side who decide whether or not to work, and the duration and type of their work; companies on the demand side who decide the number of employees or total working time needed, as well as how to invest in employees; local and national governments and mediating institutions that set and implement policies affecting the labour market structure and overall macroeconomic and institutional setting; and trade unions, which systematise negotiations between employees, companies and government. Even though labour supply decisions are made by the individual, all these actors play a role in the individual employment patterns of late working life, either directly or indirectly.

### *Individuals*

Financial incentives to participate in or exit from the labour market have been central to the academic literature and policy discussions seeking to explain the labour market participation of older workers (Gough & Niza, 2011; van Erp et al., 2014). Wage rates, pension accumulations and financial resources influence individual decisions to participate in or exit from the labour market. Option value, defined as the additional bonus to potentially be earned by working rather than retiring, is commonly invoked to explain the decision to continue to work or exit the labour market with a pension. In theory, individuals continue to work as long as the present value of working is greater than the present value of labour market exit. Individuals therefore postpone exit if their option value is positive, and then exit when it becomes negative (Chan & Huff Stevens, 2001).

Figure 2: Structure of late work



However individuals’ participation and exit decisions are influenced by many other factors and incentives, such as personal preferences, social norms, care responsibilities, health status or working environment (Fisher et al., 2016; van Erp et al., 2014). It is well established that mental and physical health problems are strong predictors of early exit from the labour market (Chen, 2019). Family responsibilities such as care-giving, and a desire to spend more time with partners, also affect decisions about the moment of exit (Lamarche & Rolison, 2021). Additionally, work-related factors such as the environment, employment type or industrial sector are strong predictors for working longer (Anxo et al., 2019), and the literature shows that individuals with high work satisfaction and a good working environment continue to work longer than others (van Erp

et al., 2014). Finally, social norms may allow or discourage individuals to stay in or leave the labour market around the statutory retirement age without any direct influence of financial or other non-financial incentives (Lindquist & Wadensjö, 2009).

Individual decisions about participation in or exit from working life also depend on institutional settings and labour market structures (Von Bonsdorff et al., 2009). Such contextual factors have been largely understood as ‘push’ and ‘pull’ factors. ‘Push’ factors are mainly driven by labour market failures such as high unemployment, limited job opportunities for older workers, lack of incentives for training to prevent skills obsolescence, or constraints on changing working hours. ‘Pull’ factors are attractive exit routes within an institutionalised setting, typically generous old age pensions or early retirement incentives (Duncan, 2017). Hofäcker and colleagues extend this theoretical framework by adding ‘maintain’ and ‘need’ factors in analyses of late exit. The former cover policies aimed at the continued participation of older workers, such as active labour market policies or incentives for employers to hire or retain older workers, whereas the latter include measures that disincentivise or limit early exit, such as age thresholds for pensions or stricter eligibility criteria for disability and unemployment insurance (Hofäcker et al., 2016).

### *Employers*

Employers play a significant role in whether older workers leave or stay in jobs with their hiring practices, manner of terminating contracts, type of contract used and intensity demanded at work, but they also influence individuals' participation, employability, workability or preferences by investing in training, policies and practices that affect workload and work environment (Bills et al., 2017).

Employers' employment and hiring behaviour depends on their characteristics such as cost structure, size, and growth, as well as recruitment policies, type of jobs – high- or low-skilled – and sector. Principi and colleagues conclude that the age and skill profile and size of a firm affect their employment and HR practices for older workers (Principi et al., 2020). In addition, employers' age norms influence the likelihood of their hiring older workers (Mulders et al., 2014).

Theoretically, employers' hiring decisions and HR policies and practices are motivated by profit maximisation, which requires them to hire or employ workers according to their employability or workability.

However, in practice, their decision-making is also influenced by stereotypes, often manifesting as discrimination. Baert (2018) has shown that employers discriminate in the hiring process on many grounds, including sexual orientation, age, gender, race, and religion. These discriminatory practices are also affected by other factors such as establishment size (Baert et al., 2018), employer stereotypes (Carlsson & Eriksson, 2019), sector (Villadsen & Wulff, 2018) and labour shortages (Karpinska et al., 2011).

Moreover, as with individuals' participation behaviour, employers' HR policies and practices are influenced by the institutional environment, labour market structure, labour supply and demand, labour market rules and regulations, and macroeconomic conditions (Conen et al., 2011; Oude Mulders et al., 2016). The literature shows that while employers continue to employ older workers, they are less likely to hire them (Charni, 2021; Heywood et al., 2010). This pattern is explained by the backloading of higher wages in the later career stages (Heywood et al., 2010) and labour market rigidities in wages (Lind & Møller, 2018), as well as employment protection legislation. Age thresholds in social security systems, such as early retirement and mandatory retirement ages, also affect the likelihood of employers' hiring older workers (Vigtel, 2018).

### *Institutions and mediators*

Governments set the national policy agenda for the labour market: the minimum wage and social security schemes. These are the national policy agendas, but the implementation of these policies within employment ministries and agencies also affects how the labour market works. In some countries, local governments also play a role in setting a regional policy agenda or practices that affect working life (Hudson, 1993).

Trade unions are voluntary organisations that work to protect and bargain for their members. They have an influence in bargaining on wages and other benefits, and are therefore relevant actors for the working life patterns of individuals (Jonsson et al., 2021).

## 2.3 Late work in Sweden

Active labour market policies, social equity, social insurance and financial security of inhabitants throughout their life course through universal access to generous social security benefits (Försäkringskassan,

2019) are key components of the Swedish welfare state, which is often classified as social democratic or universal (Brandt & Hank, 2014). The welfare state is one of the main reasons for high labour force participation in Sweden (McAllister et al., 2019), along with other factors such as the pension reforms of the 1990s (Qi et al., 2019), increased stringency of disability insurance programmes, and a greater concentration of highly educated and healthier groups (Laun & Palme, 2020).

The Swedish pension and social security systems underwent major changes in the 1990s and 2000s to extend individuals' working lives and increase the participation of older workers (Palme & Laun, 2018). A major change came in 1998, when the generous universal and earnings-related pensions were replaced by a notional defined contribution scheme (NDC) (Barr, 2013; Laun & Palme, 2020). In this scheme, individual contributions are saved in notional accounts, which are adjusted according to the growth of contributions, and which can be claimed in full or in part after the legal minimum retirement age, increased from 60 to 61 at the same time (Palmer, 2002). The earnings-related and premium pensions are based on a person's previous contributions and can be withdrawn from the age of 61. The guarantee pension is for those with low pension entitlements and can be withdrawn from the age of 65. Occupational pensions are administered by private companies, depending on specific agreements with the employer, on which the eligibility age also depends (Barr, 2013). The eligibility for public pension benefits has been increasing and now statutory retirement ages for future cohorts are expected to be increased in line with life expectancy. Those born in 1958 or earlier can receive the income and premium pensions at the age of 61 or later. Individuals born in 1959 and 1960 can receive their pension from the age of 62 and guarantee pension from the age of 66 after the 2020 change in pension ages. Individuals born in 1961 and 1962 can receive their pension from the age of 63. New pension ages will apply for younger cohorts depending on the average life expectancy in Sweden after the 2023 change in pension age regulation (Pensionsmyndigheten, 2022).

The right to disability insurance for the long-term unemployed over 60 was abolished in 1991, and the more favourable eligibility rules for those aged between 60 and 64 were abolished in 1997. In 2003, it became part of health insurance rather than the pension system (which is called 'sickness compensation' by the Swedish Social Insurance agency). In 2010, stricter health requirements were introduced for sickness

compensation. The eligibility age for sickness compensation is between 19 and 64 (Försäkringskassan, 2021).

In Sweden, working people are covered by unemployment insurance until the age of 66 (up from 65 in 2023) and by the Employment Protection Act until the age of 69 (up to 68 in 2020 and then to 69 in 2023) (Arbetsförmedlingen, 2022). As the Employment Protection Act includes rules and regulations on termination of contracts (Riksdag, 2022) – e.g., termination must be for objective reasons – the upper age limit for coverage can be used by employers to involuntarily retire employees. In addition to unemployment insurance and employment protection, the Employment Agency offers a variety of incentives to activate labour market participation. These include training programmes, support for vocational training, support for those whose contracts or working hours are shorter than desired, and subsidies to employers for hiring new migrants or people who have been out of the labour market for a long time (Arbetsförmedlingen, 2023a).

In addition to labour market protection regulated by the government, trade unions – usually organized by sector and occupations – and employers' organisations play a significant role in the Swedish labour market since it is collective agreements between these bodies that determine wages, lifelong learning opportunities and occupational pension arrangements for employees in different sectors or branches (Oosterwijk, 2015).

The participation of older workers in Sweden is also supported by life course policies, which encourage labour market participation throughout working life and help with interruptions to employment due to illness or childcare (Genelyte et al., 2021). In Sweden, everyone in paid employment who is unable to work during a period due to illness is entitled to sickness benefits, administered by the Swedish Social Insurance Agency (Försäkringskassan, 2019). There is also a strong public network of childcare services, which has contributed to the high participation of women in the labour market (Genelyte et al., 2021). In addition, the Swedish labour market allows for flexible part-time arrangements or reduced working hours for people with informal care responsibilities or illness, which enables them to continue working rather than having to exit the labour market (Bovenberg, 2008; Olivetti & Petrongolo, 2017).

Sweden has a decentralized governmental system, comprising 21 regions and 290 municipalities (Sveriges Kommuner och Regioner,

2023). These municipalities and regions have internal government tasks and play a significant role in policies and practices that affect individuals' local environment, work opportunities, and health and social care services. The labour market is regulated at a national level, but municipalities play a role in setting training activities, cooperating with employment agencies and implementing some measures in co-operation with them (OECD, 2007).

Overall, late working life in Sweden is inclusive, flexible and supportive of stability and participation in the labour market. However, late working life in Sweden is not without challenges in terms of inequality and participation, including age discrimination, inequality among older workers and shortages of skilled labour. Unlike other social divisions such as gender or ethnicity, pension and social security systems are largely institutionalised through age thresholds. While important for financial stability and social equity, generous work-related benefits can be used as an alternative exit route especially for groups that are with limited employment opportunities and impaired health (Boeri & Ours, 2008; Palme & Svensson, 2004). Moreover, although flexible arrangements like those in Sweden are suggested for increasing participation of older workers in terms of flexibility to work part-time or with less intensity, they can also lead to precarious work as suggested by the higher prevalence of part-time work among women in Sweden (Rasmussen et al., 2019)



## Chapter 3

# Late working life and ageing

Late working life is often defined in the literature as the years approaching statutory retirement age and thus eligibility for pension payments (Furunes et al., 2015). As the late years of working life vary dramatically across individuals, groups and countries in terms of the exit timing, intensity, form, type of work and employment trajectories (Flynn, 2010), the age interval covers a wide range, generally starting in the late fifties and extending until the late sixties (Weber & Loichinger, 2022).

Accumulated and decumulated resources linked to ageing over the life course shape the late working life of individuals (Settersten Jr, 2006). In addition to factors related to the ageing process, the chronological age of individuals affects their employment in late working life due to the accepted meanings of chronological age at individual, interpersonal, institutional or societal levels (Settersten et al., 2016). Therefore, the late working life course is structured by age and the ageing process of individuals. This section first explains how ageing and the life course are linked with late working life using the life course perspective and theories connected to life course theory. Secondly, the role of age in structuring late working life is explained. Then common late working life patterns related to the life course and age structure are described.

### 3.1 Life course perspective

The characteristics and resources that affect individuals' employability, workability, risks, and opportunities in late working life are influenced by their experiences throughout working life as well as by the accumulation and decumulation of resources during their life course and

the ageing process. Late working life is therefore often theorised and studied in interconnection with other stages of life (Naegele & Walker, 2021).

Life course theory suggests that the accumulated effects of experiences, circumstances and institutional setting over an individual life course affect that individual's life trajectories, including late work (Elder Jr, 1995; Kohli, 2007; Settersten Jr, 2006). Starting even before birth, genetic, epigenetic and prenatal factors, then various sources and forms of capital accumulated over the life course, are linked to ageing processes (Burnay et al., 2023; Ferraro & Shippee, 2009). These accumulated resources are shaped by both individual decisions, values and preferences (agency), and the institutional, cultural, economic and political context (structure) in which individuals live (Marshall, 2005). Therefore, life course theory considers both autonomy and the direct and indirect external constraints experienced.

Over the life course, linked with biological ageing processes, the institutional design of the life course and individual life circumstances, various types and forms of capital and resources are accumulated and depreciate (Bovenberg, 2008; Lu et al., 2017; Stafford et al., 2019). Financial savings, human capital, work experience, social capital, networks, and health are among those resources most strongly affecting participation in and exit from late working life. Life course theory is used as overarching theory here to explain the role of different resources, opportunities and risks accumulated over the life course for employment and exit in late working life. Examples of resources and mechanisms that influence late working life outcomes are discussed below.

Consumption smoothing over the life course requires increased financial capital and savings towards the end of life, when individuals are typically no longer working (Heckman, 1976). This is regulated by the pensions systems through pension contributions and the subsequent receipt of pensions after labour market exit in most industrialized countries (as explained in section 2.1). Both the accumulation of private savings and pensions are associated with individual outcomes in late working life, including the timing of exit, reliance on social security benefits or career changes. As pension contributions and private savings are strongly related to the type, duration and continuity of employment/occupation over the life course, the participation of individuals in late working life and exit from it are influenced by their mid-career history (da Silva et al., 2021).

Employment outcomes over the work course, including late work, are influenced by investments in education, skills, experience and on-the-job training, starting in early childhood (Becker, 1975). Investment in human capital through education and training as well as experience increases productivity and hence employment opportunities and outcomes over working life, directly through its impact on employability and earnings (Neumark et al., 2019), and indirectly through its link with financial capital accumulation and health status over the life course. Although initial theoretical explanations of human capital focused on rational decision-making regarding investment in it for increased returns on the labour market, they later developed to acknowledge the effects of family, neighbourhood, networks and institutional design on individuals' human capital accumulation (Kang & Mok, 2022). Despite human capital increasing throughout the working life course, some skills can become obsolete over time and human capital can depreciate over a lifetime without on-the-job training and lifelong learning (Chéron & Terriau, 2018).

Over the life course, many individuals build social or work-related relationships and networks that help their career, either directly or indirectly. This is often explained in terms of social capital (Halpern, 2005). As with the accumulation of human capital, social capital is also accumulated through family, neighbourhood, networks and work history over the life course (McDonald & Mair, 2010).

Health is the most distinct factor compared with the other resources because it is the only one that is assumed to strictly depreciate over the life course. Although this decline in physical and mental ability during the ageing process does not necessarily occur during or affect working life, it is linked with a decrease in productivity or employability if it does happen (Robertson & Tracy, 1998).

Apart from the role of resource allocation, investment and consumption over the life course, ageing research has produced other explanations for the meaning of work throughout the ageing process and its impact on employment and participation in late working life. While disengagement theory explains the decrease in work participation and exit from working life by individuals' withdrawal from their roles in society, activity theory argues for the importance of continuing with meaningful activities, including work-related roles, in old age (Estes et al., 1982). Moreover, continuity theory suggests that individuals tend to maintain their identities through activities that are meaningful to them. Therefore, those who are strongly attached to working life during their

early and mid-career tend to maintain participation in working life into old age (Atchley, 1989; Von Bonsdorff et al., 2009).

### 3.2 Role of age in late working life

Chronological age has several functions over the life course and plays a crucial role in the late working life outcomes of individuals. As chronological age is a measure of the passage of time through the ageing process, it is correlated with individual characteristics and stages of development (Bengtson & Settersten Jr, 2016). As also explained in the previous section, health status, experience, or human capital changes over the life course through the ageing process and correlates with chronological age through the ageing process.

Although chronological age correlates with experience, human capital, health and the financial capital of individuals, heterogenous life courses mean that individuals with the same chronological age have different development patterns, goals, life situations and accumulation of resources (Dannefer, 2003). However, due to chronological age-based institutional design and more broadly meanings attributed by society, companies and policy makers, individuals with different characteristics but the same chronological age experience similar rules, regulations and practices that affect their late working life outcomes (Settersten et al., 2016).

Chronological age-based institutional design and discrimination are explained by ageism (Ayalon & Tesch-Römer, 2018). After its first definition by Butler (1969) as one age group's prejudice against others, ageism has been explained and conceptualised in various ways. Iversen and colleagues tried to give a more comprehensive and complex explanation by analysing the existing literature, and defined it as:

negative or positive stereotypes, prejudice and/or discrimination against (or to the advantage of) elderly people on the basis of their chronological age or on the basis of a perception of them as being 'old' or 'elderly'. Ageism can be implicit or explicit and can be expressed on a micro-, meso- or macro-level (Iversen et al., 2009).

Ageism and age discrimination in working life affect the late working life of individuals in several ways. First, age is a very common threshold for pension and social security benefits eligibility criteria, incentivising or disincentivising individuals' work participation or exit. Second, age

discrimination in working life, the behavioural component of ageism, can be identified in hiring (Baert, 2018; Carlsson & Eriksson, 2019), promotion (Adams, 2002; Lazazzara et al., 2013; Perry & Parlamis, 2006), training (Urwin, 2006), displacement, lay-offs, and job termination. This not only affects individual employment opportunities directly, but can also affect individual participation and exit indirectly by altering the overall meaning of work and motivation for individuals (Aldén et al., 2015; Solem, 2016). Finally, ageism can be experienced internally by individuals, influencing their beliefs about themselves regarding their health and productivity, which can affect participation in and exit from working life (Giles & Reid, 2005). This can be also generated by broader social norms (Radl, 2012; Vickerstaff & Van der Horst, 2021).

The age-based discrimination and ageist practices are not always straightforward to observe. Unequal outcomes linked to age can be generated by complex interrelated factors. For instance, age-based disadvantages in the employability of older workers are not only generated by employer discrimination, but also prior investments by employers, ageist working environments or labour market structure. This thesis investigates age-related disadvantages generated by ageism and age discrimination regarding employment outcomes in late working life.

### 3.3 Late working life patterns

The employment and exit patterns of individuals in late working life are diverse due to different life courses, characteristics, and individual preferences. However, there are some common patterns of late working life based on common risks and opportunities of late working, such as the availability of pensions, the risk of age discrimination as an institutional feature of late working, ageing processes and age-related disadvantages throughout the life course that shape the late working life of individuals.

Although employees generally have increased job security in their late career due to their increased human capital, experience and duration of employment within a company, linked to increased loyalty and trust, their re-employment chances are reduced due to discrimination, skills mismatch and the higher risk of exit due to statutory retirement ages (Charni, 2021). In addition to lower re-employment chances, individuals in late working life are more likely to have increased financial capital or be eligible for one or more pensions, so employment breaks due to

unemployment or lay-offs are more likely to result in exiting the workforce during late working life (Johnson & Mommaerts, 2010).

Reduced working hours and changed working schemes are also among the components of late working life patterns. While flexible working schemes and flexibility in combining work with pensions do contribute to the work-related well-being of many individuals, reduced working time and temporary employment can also amount to vulnerable forms of employment (Visser et al., 2018). Employees with financial constraints and limited employment options are more likely to accept jobs with reduced working hours, low wages, or poor job security in late working life.

Another widely observed pattern in late working life is a change in employment type, specifically moving from waged employment to self-employment (Halvorsen & Morrow-Howell, 2017). This may be attributed to changes in lifetime goals and preferences, such as the desire for more flexible work, as well as increased resources for self-employment such as experience and financial capital (Minola et al., 2016). The change in employment type may also be attributed to the decreased likelihood of finding a new job and the increased likelihood of experiencing age discrimination when applying for jobs, and age discrimination practices in the workplace (Sargeant, 2016).

## Chapter 4

# Inequalities in employment and exit in late working life

Late working life patterns are heterogeneous, and individuals face unequal opportunities and risks in terms of employment and exit from the labour market during late working life (McAllister et al., 2019). These heterogeneous employment and exit patterns are often linked to individuals differing in characteristics such as age, cohort, education, gender, occupation, country of origin, and so on (Martin, 2018; Möhring, 2016; Naegele & Walker, 2021). Some of these heterogeneous trajectories are involuntary and generated by disadvantages that are distributed unequally between individuals (Jensen, 2021). These disadvantages, such as being laid off or having limited re-employment chances, increase the risk of labour market exclusion and negative outcomes of unemployment such as reduced income (Etgeton, 2018) or poorer health status (König, Lindwall, et al., 2019).

The following section presents examples of employment and exit inequalities in late working life, both generally and specifically in Sweden, as well as the factors driving these inequalities, suggesting research directions for a greater understanding of them.

### 4.1 Inequalities in late working life

Research shows a strong association between exit timing from late working life and individual characteristics (Martin, 2018; Scharn et al., 2018). The average age of exit from working life is lower for women than men in more than 80% of OECD countries (OECD, 2023). Primary-educated women exit from working life earlier than women with higher education (McAllister et al., 2019). Non-manual (Leinonen et al., 2020)

or white-collar workers (Solem, 2016), highly skilled workers, the self-employed and workers in agriculture, healthcare and transportation sectors all exit later (Anxo et al., 2019).

Precarious employment is another aspect of inequality in late working life. Older workers who have limited re-employment chances are more like to be employed in part-time or temporary jobs (van Horn & Heidkamp, 2019; Visser et al., 2018). Visser and colleagues show that older workers with lower education and manual occupations are more likely to face cutbacks in working hours (Visser et al., 2018). Moreover, women are more likely to experience discontinuous and/or part-time employment than men in late working life (Baumann & Madero-Cabib, 2021; van der Horst et al., 2017).

## 4.2 Factors contributing inequalities in late working life

There are various factors and mechanisms at work in the life courses of individuals that contribute to inequalities in employment and exit in late working life. Individuals experience unequal access to resources and opportunities, as well as varying exposure to risks and different forms of advantage and disadvantage during the life course at various levels, including individual experiences, institutional setting and labour market conditions (Settersten Jr, 2006). These advantages and disadvantages experienced by individuals accumulate over the life course, affecting the accumulation of financial, human and social capital in addition to health status (Dannefer, 2003).

The advantages and disadvantages experienced by individuals accumulate over the life course and result in diverse outcomes and chances in late working life (Benson et al., 2017; Hoven et al., 2018; Kendig et al., 2016). For example, individuals who experienced better financial conditions during childhood will have had more opportunities to invest in education or healthcare and ended up being more employable in later life or had more opportunities to choose the career they wanted (Hoven et al. 2018).

Risks and opportunities are unequally distributed within the labour market due to employer decisions, the structure of sectors and occupations, and labour market conditions. Companies discriminate in relation to hiring, terminating contracts or investing in employees due to employees' gender, age, education or ethnicity (Baert, 2018). Apart from this discrimination, sectoral or occupational structure – such as working conditions, working hours or contract type – leads to unequal

opportunities for employees (Kadefors et al., 2018). Furthermore, diversity in local labour market conditions in terms of labour demand, employment opportunities or demographic structure causes geographical inequalities in terms of employment opportunities (Eriksson et al., 2018).

Age discrimination can also intersect with other forms of discrimination such as gender, race (Lundborg, 2013) or disability (Sargeant, 2016). For example, women are exposed to age discrimination in working life more often and at earlier ages than men, and age discrimination may have gender-role-specific consequences (Duncan & Loretto, 2004). Moreover, the extent of and grounds for age discrimination may vary between branches, occupations and companies (Karpinska et al., 2011).

Collective experiences, institutional designs and economic shocks related to the time when individuals were born lead to different patterns and outcomes between different cohorts (Dannefer et al., 2019). Many social security systems play a qualified redistributive role and contribute to creating equal chances in working life. However, social security systems and institutional settings can also contribute to inequality, either directly or indirectly (Blomqvist & Palme, 2020). First, various cohorts are differently affected by institutional rules and regulations, and this creates diversity and inequality across different cohorts (Focacci et al., 2023). Second, the coverage of social security systems also leads to inequality in late working life by excluding some groups from receiving benefits through age thresholds or the sectoral coverage of pensions (Ebbinghaus, 2020). Moreover, some of the rules intended to protect disadvantaged groups can also indirectly lead to inequality (Boeri & Ours, 2008). For example, labour-protection laws can increase discrimination by causing labour market rigidities (Vodopivec et al., 2019). National economic conditions also have an impact on inequality in late working life, as economic cycles affect different groups to different extents (Bentolila & Jansen, 2016). Moreover, discrimination in lay-offs or hiring increases during economic crises (Rembeza & Radlińska, 2021).

### 4.3 Inequalities in late working life in Sweden

Sweden has one of the highest labour force participation rates among both male and female older workers of all OECD countries (Jensen, 2021). Sweden's higher participation rate is often explained by active labour market policies and incentives designed to keep people working (McAllister et al., 2019), as well as by the pension reforms of the 1990s

(Qi et al., 2019), the increased stringency of disability insurance programmes and a greater concentration of highly educated and healthier groups (Laun & Palme, 2020). However, inequalities among different gender, age, educational, ethnic, occupational and sectoral groups remain (Kadefors et al., 2019).

McAllister and colleagues show that primary-educated older women have lower employment rates than primary-educated men (McAllister et al., 2020). Kadefors and colleagues show that lower-educated and blue-collar occupational groups have earlier labour market exit (Kadefors et al., 2018). Carlsson and colleagues show that lower-educated men have a greater risk of exiting via disability and unemployment than the higher-educated in Sweden (Carlsson et al., 2023). Rasmussen and colleagues show that non-standard employment and flexible work arrangements are part of the Swedish labour market and that this can lead to precarious work for some groups, especially women (Rasmussen et al., 2019). This is mainly generated by sectoral segregation between genders contributing to heterogeneous employment between men and women (Bettio et al., 2009).

In Sweden, discrimination due to age, gender, ethnicity, or sexual orientation is prohibited by law (Discrimination Act, 2008). However, there is hiring discrimination against women, older workers and immigrants (Baert, 2018; Carlsson & Eriksson, 2019). Moreover, older workers are less likely to find another job following job loss than younger workers (Nivorozhkin, 2008; Seim, 2019).

#### 4.4 Further understanding of inequalities in late working life

Inequalities in employment and labour market exit in late working life have been studied because of their importance in individuals' lives as well as their policy relevance (Genelyte et al., 2021; Kadefors et al., 2019). However, due to the complexity and multi-level structure of inequalities and their contributory, there is still a need for further knowledge to understand the nature and mechanisms of inequalities in late working life. This section outlines that need in terms of identifying late working life outcomes, the role of the life course perspective and age-related disadvantages, as well as labour market structure.

Late work and labour market exit are predominantly identified in the literature by the timing of retirement, often measured in linear or binary terms, and by the participation status of older workers (Fisher et al.,

2016). However, the employment and exit of individuals in late working life can take many forms – precarious employment, voluntary or involuntary labour market exit via private savings or unemployment, continued paid work with pension income (König et al., 2022; Lain et al., 2018). These different forms of employment and exit require a more detailed description of employment trajectories and patterns. First, although the employment and exit of older workers is correlated with chronological age for many reasons (Falk Erhag et al., 2022), the strength of each chronological age is different due to the social security and pension systems, and this should also be reflected in the categorisation of the timing of labour market exit. Second, different types of exits in terms of their mechanisms and voluntary or involuntary structure should be taken into account in patterns of exit from late working life, not only for social security expenditure, but also for the individual risks of involuntary exit and disadvantages in late working life (Ebbinghaus & Radl, 2015). Third, although employment breaks are risk factors for permanent labour market exit, individual non-participation can be followed by different forms of re-employment (Wanberg et al., 2016). As with labour market exit, identifying types of non-participation are relevant for identifying the mechanisms of risk and disadvantage for retaining older workers in late working life and for understanding the disadvantages they experience in remaining employed. Finally, whether it is continued employment or re-employment followed by an employment break, individuals change their type, intensity and form of employment in late working life (Halvorsen & Morrow-Howell, 2017; Visser et al., 2018). These are important for understanding not only precarious employment patterns but also flexibility to change employment for continued participation in working life, which is not available to all groups equally.

Although individual participation decisions are emphasised in late work and exit, risks and opportunities in late working life are generated cumulatively over the life course; and age-related disadvantages in late working life, as well as the structure of the labour market and the hiring decisions of employers, influence the outcomes of individuals in late working life (Frøyland et al., 2019; van Dalen et al., 2009). Inequalities in labour market exit and employment are observed in late working life, but a portion of them is generated during the individual life course through childhood, education and labour market history, each influenced by both individual and collective conditions. Several studies have identified the link between conditions in childhood (Hoven et al., 2018), mid-career history (König, 2017; Thern et al., 2022) and late work and exit. However, the evidence is mixed on whether experience of

disadvantage increases the risk of early exit through increased risks of unemployment and disability or reduces the risk of early exit through insufficient pension accumulation. Moreover, there is insufficient knowledge about the possible differentiating effect of different life stages and their association with precarious work.

Age-related disadvantages, i.e., those related to the chronological age of older workers, also generate unequal employment outcomes in late working life, both directly affecting employment opportunities and indirectly affecting their employability and work-related motivation. Although there are studies showing that older workers are more at risk of age discrimination than middle-aged groups (Nivorozhkin, 2008), supported by surveys of employer attitudes (Lössbroek et al., 2021) and field experiments with older workers (Ahmed et al., 2012), there are few studies showing the actual emergence of different employment outcomes and comparing older workers in late working life. Examining the different employment outcomes of older workers in the labour market is important because age-related disadvantage is multidimensional and may be under-represented by exit options or downward mobility in re-employment. For example, older workers may exit the labour market after unemployment due to discouragement and exit options, or they may be re-employed in jobs with lower hours or wages than desired.

Employers are one of the actors in the labour market that can directly influence the employment outcomes of individuals through hiring, firing, training, and the working environment. The literature shows that employers tend to hire older workers less and to encourage them to leave due to various factors such as age discrimination, wage backloading or institutional rules (Lössbroek et al., 2021; Vigtel, 2018). However, as the decision-making mechanisms of different companies depend on several factors such as HR policies, practices, size, sector and prevalent level of ageism, decisions to employ older workers vary and relate to their specific characteristics. Although this is a component that can create disadvantages for older workers and affect their participation and exit, there are only few studies that focus on the behaviour and characteristics of employers. The literature shows that establishments with a higher proportion of older workers (Tunney et al., 2022) and high skill levels, as well as in public sector (Tunney et al., 2022) with limited opportunities for recruitment (Adler & Hilber, 2009), hire more older workers than do other types of establishments. However, the evidence on the link between the characteristics of establishments and the contextual factors that affect them and their employment and hiring behaviour is mixed and limited.

As previously stated, this thesis aims to contribute to the academic understanding of inequalities in employment and exit in late working life by conducting four different studies on: identifying inequalities and exit patterns in late working life across gender and educational groups; examining the link between childhood conditions and mid-life labour market attachment and exit; examining age-related disadvantage, unemployment and re-employment outcomes; and examining the link between the re-employment chances of older workers and characteristics of establishments using the case of Sweden. The methodology used in the studies and the summary results of these studies are explained in the following sections.



# Chapter 5

## Data and methodology

### 5.1 Data

The data sources for this dissertation consist of the Swedish national registers, including the register of the total population, the register of education and the register of jobs, along with health insurance and labour market studies. The database was compiled by Statistics Sweden (SCB) on behalf of the Division of Ageing and Social Change (ASC), based on ethical approval (Dnr 201629331).

The database includes all people born in 1968 or earlier and registered in Sweden at any time between 1990–2018, with their registered partners. The total number of individuals is 7,131,235. For this population, the database covers information from all years between 1990 and 2018, regardless of age. It also contains information on households (population and housing censuses) for this population for every five years between 1960 and 1990 (SCB, 2023).

In addition to the Swedish national registers, the data for municipality type and level labour market indicators are retrieved from the data published by the Swedish association of local authorities and regions (Sveriges Kommuner och Regioner, 2013), and the Swedish public employment service (Arbetsförmedlingen, 2023b).

The years analysed, the time periods for which individuals are followed, the birth cohorts and age thresholds of the study population, and the indicators of each study were chosen in relation to Swedish social security rules as well as dataset coverage. For the cohorts in our database, the earliest age for pension eligibility of is 61; the latest age for

unemployment benefit and sickness compensation (for those who have reduced working capacity), and the earliest age for receipt of the guarantee pension, is 65; and the age that employment protection ends is 67. These were used as reference points for designing the study populations and thresholds for working life indicators.

The population of *Study 1*, in which inequality structure by gender and education level is examined, covers individuals born in 1950 and registered in Sweden between 2010 and 2018 (a total of 107,830). Individuals are followed from the age of 60 – that is, one year before the earliest age of eligibility for public pensions – until the age of 68, one year after the age that employment protection coverage ends. Cohort 1950 was chosen for this study as they were 68 in 2018, the most recent year of the database. In order to observe cohort 1950's employment and exit outcomes between 60 and 68, we selected individuals registered in Sweden in all years between 2010 and 2018.

Similar to *Study 1*, the population of *Study 2* covers individuals who were born in 1950, registered in Sweden between 2010 and 2018, with at least one month of income statement between the ages of 60 and 68 (n=93,506). The population of *Study 2* is smaller due to the restriction of having at least one month's income statement between the ages of 60 and 68. As this paper examines the link between labour market attachment during mid-life and labour market exit, only individuals who were active in the labour market around the ages of public pension eligibility and employment protection coverage are included.

The population of *Study 3*, which examines the age-related disadvantages in unemployment and re-employment, covers all individuals in the birth cohorts 1954–1968 registered in Sweden between 2012 and 2018 and with income statements from the same company in December 2016 to 2017 (n=1,384,430). Individuals born in 1968 are the youngest cohort in this database, with the oldest cohort limited to 1954 since unemployment insurance is not available to those over 64. The reason the study population was limited to individuals registered in Sweden in any year between 2012 and 2018 was to enable observation of their attachment history in the final five years (2012–2016) for the subgroup that experienced an unemployment event during 2017 (n=32,011), and then their re-employment outcomes in 2018. Due to possible reporting errors (registration of income statements until December even if it ended earlier in some cases) and to avoid the inclusion of individuals who were already unemployed in December 2016, only individuals employed in both December 2016 and January 2017 were included.

The population of *Study 4* covers all establishments registered in Sweden both in 2017 and 2018 with at least ten employees in 2017 (80,993 establishments and 43,832 enterprises which own the establishments). Again, 2017 and 2018 were chosen as these are the most recent years in the database. Micro-size enterprises (defined as under ten employees) were not eligible since in contrast to larger establishments, they tend to be managed by the owner, be more personalized, and depend on internal sources to greater extent (Russo & Tencati, 2009).

In this dataset, an establishment is characterized as a workplace that employs at least one gainful employee, while an enterprise is characterized by owning at least two establishments in different locations with at least one gainful employee each. An enterprise (företag) contains all Sweden's companies, authorities and organisations registered in Sweden owned by both privately and publicly. This study population is on the establishment level – enterprises which own and manage establishments are used for the multi-level design of the study.

## 5.2 Identification of employment indicators

This thesis has employed various strategies using Swedish registry data to identify employment types, breaks and timing, types of labour market exit and employment trajectories. This section explains these strategies and defines the terms used in the studies and more generally in the thesis.

Employment is defined on the basis of connection to paid work in labour market in the studies of this thesis. Paid work, receiving employment-related earnings, is identified having an income (tax) statement at a given time (month or year depending on the study). Therefore, any income-generating activity undertaken in an employer within a year (or month) is identified as being employed. Each employee has income statement information that shows the earliest and latest month of any given calendar year in which they have income statements from their employers or whether they engaged in self-employed work or not in a calendar year. Three main employment types are referred to here:

- Wage employment: individuals who have an income statement from an employer and no self-employed work registration in a given calendar year.

- Self-employment: individuals who have registered for self-employed work and have no income statement from an employer in a given calendar year.
- Both wage- and self-employment: individuals who have both an income statement from an employer and a self-employed work registration in a given calendar year.

Labour market exit is defined as not having an income statement or registration for self-employed work until the end of the time that an individual is followed. The year in which an individual received their last income statement/self-employed work register is identified as the year of exit.

A temporary period (year/month) without an income statement/self-employment register is identified as an employment break if this period is followed by further employment at a later point in time.

Unemployment is defined as the end of receiving income statements and being registered as unemployed with the Swedish Employment Agency. Re-employment is defined as new employment after the unemployment event.

Individuals who are employed but have a fixed or shorter-term contract than they would like or who are in temporary hourly-paid employment can also apply for Employment Agency benefits and programmes. They are categorized here as part-time unemployed in line with SCB and Employment Agency terminology (Arbetsförmedlingen, 2023a).

Various sources of income, pensions and benefits are also used to identify employment and exit patterns. All sources of income, pensions and benefits are registered annually in the dataset. Labour market earnings correspond to earnings from any paid work during the calendar year. Pensions used in the studies are the sum of all types of pensions in Sweden, including guarantee, occupational and earnings-related as well as private pensions. Unemployment insurance includes total unemployment insurance received from the Employment Agency due to job loss. Sickness compensation (also refereed as disability insurance) is a benefit for a permanent part or full reduction in the working capacity of individuals. Work-related benefits include benefits for reasons other than active participation in the current employment such as sickness or unemployment benefits. These benefits signal a restriction of full-time

work, and include study compensation and parental leave (SCB, 2019). For this study population, sickness benefit, unemployment insurance and sickness compensation correspond to 97% of these benefits.

Overall, late working life patterns were defined using the working life dimensions of exit timing, employment type, having employment breaks and being in receipt of pensions and benefits. Working life patterns and trajectories were constructed using the various combinations of these dimensions at a given time, or a sequence of them over the years.

## 5.3 Employment, exit, and hiring outcomes

### *Study 1*

In order to investigate various exit and employment trajectories, *Study 1* employed five different outcomes by following cohort 1950 between the ages of 60 and 68 (2010-2018).

The first outcome (*exit age groups*) is a categorical variable for age at exit, grouped into categories based on age thresholds of Swedish pension and social security system. *Exit age groups* variable includes the categories: exit before age 61, exit between the ages of 61 and 64, exit at the age of 65, exit between the ages of 66 and 67, and exit after the age of 67.

As mentioned in the previous section (5.2), exit is defined as end of the paid work until the end of the time individuals are followed (age of 68 in 2018).

The second outcome (*exit type*) is a categorical indicator of exit type, identified based on receipt of pensions, unemployment, and sickness compensations for those who exit between the ages of 61 and 64 as social security benefits are not available for this cohort after the age of 65. Benefit or pension receipt in the exit year corresponds to any positive amount receipt in the calendar year that individuals have their last income statement. *Exit type* includes the categories: receiving unemployment benefit in the year of exit, receiving sickness compensation during the year of exit, receiving a pension during the year of exit, and no benefit or pension received during the year of exit.

The third outcome (*employment break*) is the binary outcome of an employment break, a temporary period at the end of paid work, defined

as at least one month with no income statement followed by an income statement later.

As with *exit type*, different employment breaks (*employment break type*) are also identified based on receipt of pension and benefits. Pension or benefit receipt is again defined as any positive amount of particular income in the calendar year that individuals experienced during an employment break. *Employment break type* includes categories of unemployment benefits during the employment break, sickness compensation during the employment break, pension payments during the employment break, and no benefit or pension received during the year of exit.

*Employment break type* and *employment break* are also defined for those who exit between the ages of 61 and 64, similar to the variable *exit type* as benefit receipt ends at the age of 65.

Lastly, changes and continuity in employment types between the ages of 60 and 68 (and the period 2010–2018) are defined (*employment type trajectories*) for those who exit after the age of 65 based on their employment type. These employment trajectories are summarised as below:

- wage- employment only,
- self-employment only,
- both wage and self-employment,
- starting with both wage and self-employment, ending with only self-employment,
- starting with both wage and self-employment, ending with only wage employment,
- starting with wage employment, ending with only self-employment,
- starting with wage employment, ending with both wage and self-employment,
- starting with self-employment, ending with only wage employment,
- starting with self-employment, ending with both wage and self-employment,
- mixed.

## *Study 2*

In order to examine the link between labour market attachment in mid-life and labour market exit, *Study 2* follows individuals' employment between the years 1990 and 2010 (for mid-life attachment) and between 2010 and 2018 (for labour market exit). This study has three different outcomes. First, a linear indicator of labour market exit, measured between the ages of 60 and 68 (*age of exit*). Second, a binary outcome of early labour market exit (*early exit*), defined as exiting before the age of 65, i.e., when entitlement to work-related benefits ends and the guarantee pension begins. The third outcome (*types of exit*) includes timing of exit, grouped into age categories (in line with *Study 1*), and whether individuals received work-related benefits or not in their exit year. *Type of exit* is categorised into:

- exit at age 60, no work-related benefits in the exit year,
- exit at age 60, with work-related benefits in the exit year,
- exit at age 61, no work-related benefits in the exit year,
- exit at age 61, with work-related benefits in the exit year,
- exit between the ages of 62 and 64, no work-related benefits in the exit year,
- exit between the ages of 62 and 64, with work-related benefits in the exit year,
- exit at age 65, no work-related benefits in the exit year,
- exit at age 65, with work-related benefits in the exit year,
- exit between the ages of 66 and 67,
- exit after the age of 67.

Overall, *type of exit* includes not only exit timing but also exit on work-related benefits, which is used for signalling involuntary non-participation due to unemployment or disability. Although *age of exit* and *early exit* are covered indirectly by *type of exit*, they were also included in the analyses as they 1) provide a simple way of understanding labour market attachment, exit timing, or the probability of exit, and 2) are policy-relevant as Sweden has earnings-related pensions as well as a threshold of 65 for several social security system schemes.

## *Study 3*

In order to examine the link between age and unemployment for the cohorts born in the period 1954–1968, as well as re-employment outcomes, *Study 3* identifies four different outcomes. First, the risk of unemployment in 2017 is measured (*unemployment*) by end of income statement in 2017 and registration with the Employment Agency.

Second, for that unemployment, several categories of employment outcomes (*what follows unemployment*) are identified in 2018. *What follows unemployment* includes categories of re-employment on a wage within a year, re-employment on a self-employed basis, unemployment longer than one year, and exit (no re-employment and registration to Employment Agency).

Among those employed on a wage, two outcomes were created to identify whether individuals experienced downward mobility. One of those is the binary outcome of having a lower wage (*lower wage*) in the new employment in 2018 than in the previous employment in 2016. Another, which is the last outcome in this study, is the binary outcome of part-time unemployment (*part-time unemployment*), or a shorter duration of employment than desired, in 2018.

#### *Study 4*

In order to examine the relationship between employee structure, sector, the local labour market conditions of the establishments and their likelihood of hiring older workers, Study 4 uses two outcomes: one is a binary outcome of whether an older worker is hired (*hiring older workers*), the other is a continuous outcome of the relative number of older workers hired as a proportion of the total number of employees in the establishment in 2017 (*newly hired to employee number*) among those establishments taking on at least one older employee between 2017 and 2018. An older worker having been hired by an establishment is measured by their being registered in an establishment in 2018 but not in 2017.

## 5.4 Covariates

#### *Study 1*

*Study 1* includes the interaction of the variables *gender* and *education level* to examine inequalities among individuals. *Gender* is a binary indicator of being a man or woman. There are three *education levels* (primary, secondary, and higher education) based on the classification in Swedish registers. Primary education involves pre-secondary education of nine years and less than nine years; secondary education involves high school education; and higher education involves post-secondary education and postgraduate education.

## *Study 2*

The main independent variables of *Study 2* are indicators of individuals' labour market attachment history, measured by three categorical variables of labour market attachment in three different stages of mid-life: at the age of 30 (*attachment at age 30*), aged between 40 and 49 (*attachment between ages of 40-49*) and then between 50 and 59 (*attachment between ages of 50-59*). As the data starts from 1990, the attachment information starts from the age of 40 (for cohort 1950 as used in the study population). However, the population and housing census (FOB) included in the registers has information on individuals in Sweden between 1960 and 1990 at five-year intervals. As labour market attachment at the age of 30 is used based on this register, it has other categories than for labour market attachment between the ages of 40 and 59. The *attachment at age 30* based on fob 1980 (when cohort 1950 was aged 30) includes categories of: worked between one and 34 hours per week, worked 35 hours or more per week, not employed, students, and missing information. The categories of *attachment between ages of 40-49* and *attachment between ages of 50-59* are: always employed, employed for five or more consecutive years, employed for under five consecutive years, never employed, and not in Sweden for some of the time.

In addition to labour market attachment, this study includes covariates for *gender*, *level of education*, *foreign-born* and proxy variables for childhood socioeconomic status. Gender and education are measured as in *Study 1*. *Foreign-born* is a binary indicator of being born in Sweden or abroad.

As with attachment at the age 30, FOB (1960) was used to identify childhood conditions at the age of ten for cohort 1950. Two different variables were used in line with the literature. These are *living in crowded house* (living in a house with more than two people per room, less than three people, and missing information) and *occupation sector of household head* at the age of ten (agriculture and forestry; industry, trade, and transport; entrepreneurs in the liberal professions such as doctors and lawyers; business supervisors, technicians; military; not employed; and missing information).

## *Study 3*

The main interest of *Study 3*, chronological *age*, was identified using the difference between the year of the analysis (calendar year) and birth year. The variable *age* includes ages between 49 and 63 in 2017 (the year an unemployment event is observed) and 50 and 64 in 2018 (when

employment outcomes are observed). As mentioned previously, the minimum age 49 is due to coverage of the dataset (the youngest cohort being 1968) and 63 was chosen since 64 is the last age at which individuals can benefit from unemployment insurance.

This study also includes the variables *gender*, *level of education*, and *foreign-born* as defined in *Studies 1* and *2*. This study also includes the *sector* of the individual's previous workplace before unemployment (sectors in 2016) and the sector of the workplace where individuals are re-employed after unemployment (sectors 2018). Different *sectors* are categorised by SCB's industry classification SNI-2007, in line with NACE (Statistical classification of economic activities in the European Community) codes. The *sector* categories include agriculture, forestry and fishing; manufacturing and extraction; energy supply; environmental activities; construction activities; trade; transport and storage; hotels and restaurants; information and communication; finance and insurance operations; real estate activities; business services; public administration and defence; education; health and social care; social services; cultural and personal services; unknown activity. Moreover, the study also includes a binary outcome of working in the *same sector* before and after unemployment (for those re-employed).

This study also includes two different labour market attachment variables: one measuring unemployment and being employed by the same enterprise (*attachment and experience*) in the previous five years, the other measuring unemployment experience and change of employer (*attachment and employment change*) in the same period. There are two different variables since the first one focuses on how many years individuals work in the same enterprise before the unemployment event, as being in the same company is related to the risk of unemployment. The other one is used as a proxy for the individual's likelihood of employability and being in a sector that requires a change of employer or frequent temporary contracts for the likelihood of re-employment.

*Attachment and experience* includes the categories: employees who have less than one year's experience in the same enterprise and had at least one unemployment break in the previous five years; employees who have less than one year's experience in the same enterprise and did not have an unemployment break in the previous five years; employees who have more than one year and less than two years' experience in the same enterprise and had at least one unemployment break in the previous five years; employees who have more than one year and less than two years' experience in the same enterprise and did not have an unemployment

break in the previous five years; employees who have more than two years and less than four years' experience in the same enterprise and had at least one unemployment break in the previous five years; employees who have more than two years and less than four years' experience in the same enterprise and did not have an unemployment break in the previous five years; employees who have more than four years' experience in the same enterprise and did not have any unemployment break in the previous five years.

The *attachment and employment change* indicator includes categories: employees with at least one unemployment experience in the previous five years; employees who have no unemployment experience but changed their enterprise at least once in the previous five years; employees who did not change enterprise and did not experience unemployment in the previous five years.

Lastly, the study includes a binary indicator of whether individuals received a pension or not (*pension receipt*).

#### *Study 4*

Apart from the first three studies, which focus on variables at the individual level, *Study 4* focuses on variables at the establishment level. It includes three sets of covariates – employee composition, sector affiliation and local labour market characteristics – plus a number of control variables for adjusting the models. Employee structure includes the ratio of older employees to the total number of employees in each establishment (*share of older employees*). Older workers are defined as workers aged 55 and older, in line with the Employment Agency statistics used for labour market conditions. The other employee composition indicators are *share of primary-educated* employees among all employees and *share of higher-educated* among all employees in each establishment. Classification of *education* is a similar measure to those used in the previous studies. The share of secondary-educated is not included due to collinearity (as the sum of all ratios is equal to 1). *Sector* categories of establishment also correspond to the categories in *Study 3* (minus the category for missing information). Local labour market characteristics where workplaces are located include three variables: *share of older* workers in labour force in each municipality (local labour market), *unemployment rate*, *ratio of open positions* not filled until the end of year to the total number of employees and *municipality type* in terms of population size of the municipality. Two additional variables are defined to adjust the models – the logarithm of the establishment size

(*employee number of establishment*) and the *employee growth* of the establishment between 2017 and 2018.

## 5.5 Methods

The methods of ordinary least squares, or OLS (for linear outcomes of exit), probit (for binary outcome of exit and employment outcomes), multinomial probit regression (for categorical outcomes of exit and employment outcomes) as well as multi-level (mixed effects) probit and OLS regressions are used in this thesis.

In *Study 1*, the predicted probabilities of *exit age groups*, *exit type*, *employment break type* and *employment trajectories* by the interaction of *gender* and *education* are estimated using multinomial probit regressions model. Predicted probabilities for *employment break* by the interaction of *gender* and *education* are estimated using a probit regression model. All models include the interaction of *gender* and *education*.

In *Study 2*, an OLS regression is used for the linear indicator of *age of exit*. For the binary outcome of *early exit*, a probit regression model is used, and for the outcome of different *types of exit*, a multinomial probit regression model is used. Independent variables for all three regressions are: *attachment at age 30*, *attachment between ages 40 and 49*, *attachment between ages 50 and 59*, *gender*, *education*, *foreign-born*, *living in crowded house* and *occupation sector of household head*.

*Study 3* has four models with four outcomes: risk of *unemployment*, *what follows unemployment*, the risk of having *lower wage*, and risk of *part-time unemployment*. As the variable *what follows unemployment* includes four categories (re-employment on a wage, self-employment, staying unemployed and exit), a multinomial probit model is used. For the other three models, probit regression models are used. Independent variables for the risk of *unemployment* are *age*, *gender*, *foreign-born*, *sector* and *attachment and experience*. Independent variables for the re-employment outcomes are *age groups*, *gender*, *foreign-born*, *sector*, *attachment* and *employment change variable*. The model of risk of *lower wage* includes *age*, *gender*, *foreign-born*, *sector*, *same sector*, *pension receipt* and *attachment and employment change*. The risk of being *part-time employed* included the variables *age*, *gender*, *foreign-born*, *sector*, *same sector or not*, *attachment and employment change* variables.

In *Study 4*, the link between establishment characteristics and hiring behaviour in relation to older employees is investigated using multi-level probit and continuous models. Independent variables include *share of older employees, share of primary-educated, share of higher-educated, sectors, unemployment rate, share of older workers in labour force, proportion of unfilled positions, and municipality type*. While the model for *hiring older workers* includes adjustments for *employee number of establishment and employee growth*, the model for *newly hired to employee number* includes adjustments for *employee growth*.



# Chapter 6

## Summary of results

### 6.1 Study 1

The results of *Study 1* show that participation in the labour market decreases by age (between ages 60 and 67) and is lowest among people with low education and women. While participation in wage-employment, as well as wage and self-employment, decreases with age, participation in self-employment increases with age, and is more common among men. The gender difference in labour market participation is most prominent among those with low education. Women with primary education are more likely to exit labour market before the state pension age of 61 compared to women with higher education and men. The share of individuals receiving sickness benefit decreases with educational level, both among men and women, but women are more likely to receive disability insurance than men in all education groups. A large proportion of individuals start receiving pension at the age of 65, and this is most common among women with low education, though they start receiving pensions less than other groups before the age 65.

Women with primary education have a 32 percent probability of leaving the labour market before the age of 61. Among those who exit between the ages of 61 and 64, men are more likely to receive unemployment benefits in the year of exit, while women are more likely to receive sickness benefits. Older workers with higher education are more likely to receive a pension in their exit year (among those that exit between 61 and 64) compared to those with lower education. Men with higher education have the lowest probability of having unemployment

(11%) or sickness compensation (7%) in the exit year (for those exiting between the age of 61 and 64). Compared to men with higher education, men with primary and secondary education are more likely to have a break in employment between the ages of 61 and 64. Those with a higher level of education are more likely to receive only pension and no benefits in both the year of exit and the year of a break in employment than those with a primary or lower level of education. While pension receipts in the year of the employment break are highest for those with higher education, the absence of benefits and pension receipts in the year of the employment break are highest for those with primary education. Employment trajectories between the ages of 61 and 68 for those leaving employment later than 65 show that while women are more likely to remain in wage employment, men, especially those with higher education, are more likely to move from wage employment to self-employment or a combination of self-employment and wage employment.

## 6.2 Study 2

The results from *Study 2* are consistent across all three models. Being employed or studying at the age of 30 is associated with later labour market exit compared to not being employed and having low attachment at the age of 30. However, low labour market attachment between the ages of 40 and 49 is associated with later exit compared to being employed every year between the ages of 40 and 49. By contrast, low labour market attachment between the ages of 50 and 59 is associated with earlier labour market exit compared to being employed every year between the ages of 50 and 59, similar to attachment at the age of 30.

The results based on the model for exit types show that older workers who were students at the age of 30 are less likely to exit between the ages of 62 and 64 and more likely to exit after the age of 65 than those who were employed part-time at the age of 30. Older workers who were not employed at age 30 were more likely to exit between the ages of 62 and 64, to receive work-related benefits in the exit year and at age 65, and less likely to exit after the age of 67 compared with those employed part-time at the age of 30. Similarly to the continuous and binary models of exit, individuals who experienced employment breaks (but with at least five consecutive years of employment in each calendar year) between the ages of 40 and 49 are more likely to exit after the age of 67 than those who were employed every year between the ages of 40 and 49. However, the same group (those with employment breaks between 40 and 49) is also more likely to exit between the ages of 62 and 65 and at 65 with

work-related benefits in the year of exit. Labour market attachment between the ages of 50 and 59 has the most significant effect compared with other stages. Individuals with low labour market attachment during their 50s are more likely to exit the labour market before the age of 66 with work-related benefits in the exit year, compared to individuals with high labour market attachment during their 50s. Individuals who were not employed in any years between 50 and 59 are also more likely to exit with work-related benefits, but they are also more likely to exit after the age of 67, compared to individuals employed all years between the age of 50 and 59. Finally, individuals with poor childhood conditions (measured as crowded house during childhood) are less likely to exit after the age of 67 and more likely to exit between the ages of 62 and 66 with work-related benefits, than those who lived in a non-crowded house during childhood.

### 6.3 Study 3

The results from *Study 3* show that the risk of unemployment increases marginally with age among older workers (aged 49-63). The unemployment risk is estimated to be 7 percentage points higher in the oldest age group compared to the youngest age group. Experience in the same company is the most important factor for the probability of unemployment in 2017. Individuals with less than one year's experience in the same company are 13 percentage points more likely to be unemployed than those with at least four years' experience in the same company. Individuals in the hotel and restaurant sector have the highest probability of being unemployed compared with other sectors.

In contrast to the risk of unemployment, age seem to substantially impact the chances of re-employment after unemployment. After a period of unemployment, older workers in their late 50s or early 60s are less likely to be wage-employed, more likely to be self-employed, to remain unemployed, and to exit the labour market, compared to workers in their early 50s, and this age effect increases significantly with age. E.g., among individuals unemployed, the probability for (wage) re-employment during the year after unemployment is 45 percent; self-employment 6 percent; unemployment 18 percent; and exit the labour market 30 percent for those aged 64. Corresponding numbers for those aged 55 is 76 percent for wage-employment, 3 percent for self-employment, 15 percent for unemployment, and 6 percent for labour market exit.

Individuals who have been unemployed or changed companies in the previous five years are more likely to be re-employed in late working life than individuals who have been in the same enterprise and never experienced unemployment. Individuals who have been in the same enterprise and never experienced unemployment are slightly more likely to exit the labour market, while those who have experienced a change of enterprise are the least likely to remain unemployed. As more than half of employees change sector after re-employment, it is difficult to assess the relationship between sector and re-employment outcomes. Employees who have been employed in construction and trade have the highest probability of labour market exit. Older workers employed in education, health, and public administration are less likely to be re-employed following unemployment compared to older workers employed in other sectors.

Among those re-employed as wage-employed (after unemployment), older workers in early 60s are more likely to have a lower salary and to be employed part-time (having applied to an employment agency and having a shorter contract than desired) compared to older workers in their early 50s. E.g., older workers re-employed at the age of 64 are 12 percentage points more likely to have a lower salary and 3 percentage points more likely to be part-time unemployed, compared to those unemployed at the age of 55. While the probability of having a lower salary is highest (58 %) for the 64-year-old age group, the probability of being part-time unemployed is highest (23%) for the 61-year-old age group.

Individuals who experience unemployment or change of employer in the last 5 years are less likely to have a low salary or be part-time unemployed, compared to those who have not changed employer or experienced unemployment in the last 5 years. Older workers who change sector are more likely to have lower wages and part-time unemployment compared to those who re-employed in the same sector. The hotel and restaurant sector has the highest likelihood of a pay reduction among the re-employed, while the health and social care sector has the highest likelihood of part-time unemployment.

## 6.4 Study 4

The results of *Study 4* show that older workers are more likely to be hired in establishments with a higher proportion of older employees. Both the share of employees with primary education and the share of employees with higher education in the establishment, increase the probability of

hiring older workers. The share of employees with primary education has a stronger effect than the share of employees with higher education. Sectors that are largely publicly-owned – health (54%), education (52%) and public administration (51%) – have the highest probability of hiring older workers. These sectors are followed by transport (50%), then cultural and personal services (47%). The sectors least likely to hire older workers are information and communication (27%), trade (30%), manufacturing (33%), and hotels and restaurants (34%). The share of older workers in the total labour force in the municipality increases the likelihood of hiring older workers by the establishments. Surprisingly, high demand in the local labour market (municipality) is negatively associated with the hiring of older workers. Establishments in the municipalities with lower unemployment and higher vacancy rates are less likely to hire older workers compared to establishments in the municipalities with higher unemployment and lower vacancy rates. Establishments in small rural areas are also less likely to hire older workers compared to establishments in bigger municipalities.

The results for the proportion of older workers employed in relation to the size of the establishment (number of employees) among those companies that have employed at least one older worker are mostly in line with the binary model of hiring older workers. The share of older workers and primary education increases the number of employees hired in relation to the size of the establishment. However, the proportion of higher-educated workers in the establishment reduces the number of older workers employed relative to size. While establishment within cultural and personal services and agriculture hire a higher number of older workers relative to the size of the establishment, manufacturing and financial activities hire the lowest number of older workers relative to the size of the establishment. While the *share of older workers in the total labour force* in the municipality is associated with the number of older workers hired, local labour market conditions and municipality type are not.



# Chapter 7

## Discussion

This thesis aimed to contribute to the academic understanding of inequalities in employment and labour market exit in late working life. Using Swedish registers, it examined inequalities in employment and labour market exit in late working life, the link between labour market attachment during mid-life and labour market exit, between age-related disadvantages in unemployment and re-employment, and between establishment characteristics and the hiring of older workers. The results show that inequalities in employment and exit are structured by age, gender, and education level, and are associated with individual life courses, labour market employment opportunities, and establishment characteristics.

Results from *Study 1* showed that a significant proportion of women with primary education (32%) were already out of the labour market before the age of 61, showing that inequalities in participation and exit from the labour market start several years before the statutory retirement age. Moreover, the indicators of benefit receipt and employment trajectories show inequalities not only in labour market participation and exit, but also in benefit dependency, labour market attachment, and employment trajectories. It is clear that individuals' employability, workability, and flexibility in the labour market, in terms of changing employment type or ability to exit and re-enter, are structured by gender and education level. For example, although both women and men with low education tend to exit the labour market early, women with low education are more likely to experience disability-related breaks, while men with low education are more likely to experience unemployment breaks. In contrast, men with higher education are more likely to exit by pension receipt or to be self-employed. This signals that men with higher education have high

workability and employability, a low risk of disability or unemployment, and high flexibility to change employment or exit.

Results from this thesis further reveal that individuals' employability, workability and flexibility are influenced by many factors and actors, including labour market conditions, working conditions and sectors, and that these factors are not only present in late working life, but accumulated over the life course, in accordance with life course theory. Results from *Study 2* indicate that an individual's labour market history is associated with the timing of labour market exit, but that different career-stages are associated with exit in different directions. While low labour market attachment at age 30 and between the ages of 50 and 59 is associated with early labour market exit, low labour market attachment at ages between 40 and 49 is associated with late exit. As suggested in the compensation hypothesis (König, Johansson, et al., 2019), career discontinuities may lead to late exit due to insufficient pension accumulation, which accords with the results of this study showing low labour market attachment at age 40 and later labour market exit. On the other hand, low labour market attachment at other stages (the ages of 30 and 50-59) is associated with early exit. Heisig and Radl (2017) suggest that individuals have difficulties to recovering from career shocks at later stages of their career, which could lead to discontinuities potentially affecting their employability and hence, being associated with early exit from the labour market. In addition, Thern and colleagues find that low attachment during mid-life is associated with unemployment and disability in late working life, which is consistent with our results showing that low attachment at all career stages is associated with work-related benefits in the year of labour market exit (Thern et al., 2022). In addition, individuals with low attachment and more precarious employment may be more vulnerable to unemployment shocks resulting from lower pension accumulation, employability, workability, and flexibility to change employment type or career; and they eventually exit earlier, with guarantee pension at the age of 65 or work-related benefit receipts before 65. Once again, the results of this thesis indicate that inequalities in late working life employment cannot be explained solely by working life duration or participation but are also exacerbated by the precariousness of employment and stability of individuals' labour market attachment.

Further, the results from *Study 3* showed that unemployment and employment outcomes are structured by the chronological age of older workers. The link between chronological age and employment opportunities can be generated by the employability and workability of

older workers, age discrimination, skills mismatch, types of job, and labour market regulations. In addition, a disincentive effect due to a lack of job opportunities, or types of job for those willing to work, may contribute to labour market exit or transition to self-employment after unemployment. Indeed, the *Study 3* results indicate that a higher chronological age is associated with a re-entry into self-employment. Again, employment opportunities in late working life are also influenced by flexibility and opportunities after employment shocks, such as the ability to switch to self-employment after unemployment. Moreover, and in line with the results from *Studies 1* and *2*, the results from *Study 3* suggest that older workers might have worse opportunities in terms of quality of employment compared to younger workers, indicated by the negative association between age and downward mobility after re-employment. The results show that older workers with at least one job change or unemployment experience during the previous five years are more likely to be re-employed after unemployment in old age and less likely to have lower wages or part-time unemployment compared to those who have not experience unemployment and job change. This could be due to a correlation between employability and previous experience of re-employment. Other explanation is that older workers with stable employment history could be more likely to exit voluntary in the case of limited job opportunities, with a higher risk of part-time unemployment and lower wages. A contributing factor could also be that they might have higher pension accumulation as a result of their stable employment history, and hence the financial ability to exit.

Finally, results from *Study 4* show that the employment of older workers is also structured by establishment characteristics, including employee composition, sectoral affiliation, and the local labour market, thus underlining the role of the labour market in the hiring of older workers. Older workers are less likely to be employed in establishments with a lower proportion of older workers. This could be related to a higher risk of age discrimination when the difference between an individual's age and the average age in the organisation is higher (Naegele et al., 2019), or to the type of employer and occupation where older workers are systematically hired more, leading to age segregation in the labour market. Both a greater share of lower- and higher-educated (as opposed to secondary-educated) employees in these establishments is linked to a greater likelihood of hiring older workers. The greater likelihood of hiring older workers in establishments with proportionally more primary-educated employees could be due to the prevalence of temporary and low-paid employment of older workers in such establishments, while the reasons for others having more higher-

educated employees could be less discrimination and more experience-intensive jobs (i.e., those that value and require experience). Surprisingly, high labour demand in municipalities is linked to a lower likelihood of hiring older workers. This could be due to a skills mismatch there. Although an increase in the hiring of older workers implies better re-employment chances for them, it could also imply their precarious employment. This is supported by the results on sectors in *Studies 3* and *4*. For example, individuals in the education and health sectors have the lowest probability of being unemployed, but once unemployed they are the most likely to exit from the labour market. On the other hand, re-employed individuals in the health and education sectors (who could have been moved from other sectors) are more likely to be part-time unemployed and are indeed more likely to be hired compared to older workers in the other sectors (*Study 4*). Furthermore, people working in the manufacturing and information and communication sectors are the least likely to have part-time unemployment (*Study 3*) and these sectors are least likely to hire older workers (*Study 4*). On the other hand, there are sectors where unemployment and hiring rates are consistent. For example, employees in hotels and restaurants are more likely to be unemployed, more likely to have a lower salary at re-employment, and establishments in this sector are less likely to hire older workers. Interestingly, unemployed workers in this sector are less likely to exit the labour market compared to the other sectors, suggesting that they may be less likely to have sufficient pension accumulation than individuals employed in the other sectors. While hotels and restaurants have slightly younger older workers (early 50s), public and health services have slightly older ones (early 60s). This illustrates the complexity of the voluntary, involuntary and advantage/disadvantage dimensions of exit and re-employment in late working life – given limited re-employment opportunities, downward mobility, precarious employment and exit opportunities or risks – indicating that similar employment and exit outcomes could be generated with both advantages and disadvantages.

## 7.1 Contribution

By investigating the Swedish case of inequality and age-related disadvantages in late working life, this thesis contributes in several ways to the literature on inequalities in employment and labour market exit in late working life, and on active ageing policies for equal and prolonged work, from a labour economics and ageing research perspective.

First, it provides a comprehensive analysis of inequalities in employment and labour market exit, among gender and education

groups in late working life, by analysing different employment and labour market exit indicators and trajectories (*Study 1*). These employment and labour market exit indicators include non-linear exit timing in different age thresholds based on the Swedish social security and pension system, employment breaks, receipt of pensions, unemployment and sickness compensation (disability insurance) in the years of exit and employment breaks, as well as employment trajectories. By analysing various dimensions of employment in late working life, this thesis therefore provides not only understanding of late working life inequalities in Sweden, but also tools for other studies in this area to analyse different dimensions of inequality in late working life. It has contributed to the literature by showing that inequalities among gender and education groups in Sweden exist not only in the timing of exit but also in various employment patterns. It emphasises, too, that employment in late working life and labour market exit have dimensions of employability, workability and flexibility which could affect the voluntary or involuntary participation – and indeed the non-participation – of individuals.

Second, it provides evidence on the link between earlier life courses and labour market exit and benefit receipt in the year of exit (*Study 2*). This contributes to the literature by showing that different mid-life career stages are associated with the timing of the labour market exit in different ways. While low labour market attachment at the age of 30 and between the ages of 50 and 59 is linked to early exit, low attachment between the ages of 40 and 49 is related to late exit. Low attachment at all career stages is related to the receipt of work-related benefits (e.g., unemployment, sickness insurance) in the exit year. This study shows that the timing of the labour market exit is more than linear continuous or binary outcome. Individuals tend to exit at various ages with or without benefits partly depending on their previous life course and childhood conditions. Therefore, this study shows that even if individuals stay in the labour market due to pension accumulation, they are likely to be in receipt of benefits.

Third, it provides knowledge about age-related disadvantages in late working life in terms of unemployment risk, re-employment outcomes and downward mobility after re-employment (*Study 3*). The chronological age of older workers, especially comparing early 50s with those late 50s and 60s, is a strong predictor of their re-employment chances and downward mobility following re-employment. This study also shows, by following older workers with different ages, that individual characteristics have diverse employment outcomes linked not

only to gender and education but also to workplace attachment, and that the labour market is linked to the employment outcomes and exit of older workers.

Lastly, the thesis provides evidence on the link between Swedish establishments' employee composition, sectoral affiliation and local labour market conditions and their propensity to hire older workers (*Study 4*). It has contributed to the literature by showing the types and conditions of establishments that are more likely to hire older workers, as well as the role of age segregation, skill structure, skills mismatch, flexibility of work arrangements in hiring chances of older workers.

## 7.2 Policy implications

The results of this thesis lead to several policy implications by broadening the dimensions of inequalities related to employment and labour market exit, as well as the mechanisms of inequality in late working life. Policies for prolonged equal late work should focus not only on individual participation decisions and timing of exit, but also on the type of employment that individuals have, their employability and workability, as well as the structure of the labour market, not only in late work but also over the life course.

This thesis demonstrates that although certain groups, such as women with lower education, are at risk of early exit and exclusion from the labour market before the statutory retirement ages, there are several other employment risks and opportunities in late working life apart from early exit. These include job interruptions and involuntary exits, unemployment, changes in job type and downward mobility. Moreover, longer working lives and re-employment do not necessarily mean that workers are better off; older workers may find themselves in difficult situations due to temporary contracts, fewer hours, and lower pay than they would like to have. Policies should therefore also take into account the employment patterns and involuntary/voluntary structure of individual participation in order to tackle inequalities in late working life.

The results also show that individuals' labour market exit and participation are closely related to their employability, workability, and flexibility to change employment. These in turn are strongly affected by their invested skills, working conditions and the labour market structure. Policies for extending working life should therefore not only focus on

financial incentives but also address working conditions, lifelong learning, and flexible work arrangements in working life.

Moreover, employability, workability and flexibility of older workers are not only a result of late working life but are generated over the individual life course. Hence, policies that aim to contribute to longer working lives and reduce inequalities in employment and labour market exit in late working life should take into account disadvantages experienced over the life course as well as those generated in the labour market.

### 7.3 Transferability of results

Although this thesis investigates inequalities in employment and labour market exit of older workers in Sweden, its contribution and policy implications should also be of benefit to other industrialised countries. Its findings on the age/gender/education-based structure of inequality in employment and labour market exit; and on the role of older workers' employability and work flexibility, life course, age-related disadvantages, and establishment characteristics in the employment and labour market exit of older workers, are likely to be applicable to other countries. However, the magnitude of the factors, the level of participation and inequalities, the role of sectors and the characteristics of employers may differ depending on each particular country's social security system and labour market.

### 7.4 Limitations

The empirical findings in this thesis are based on Swedish routinely collected administrative registry data. Although the use of registers has many advantages, including national representativeness, the ability to follow individuals over time, the diversity and richness of individual characteristics, and the minimisation of self-reporting errors, there are several limitations in terms of the use of quantitative design as well as data limitations.

In administrative registry data, the motivations and intentions of individuals and employers are not fully observable. Although studies can imply certain patterns of involuntary exit, such as exit following unemployment, the hiring behaviour of employers, the intentions and motivations of individuals and employers are not strictly observable. In addition, the lack of experimental data, such as field experiments, could

lead to selection bias and over- or underestimation of the factors associated with labour market exit and employment of older workers.

Other limitations include lack of detailed information, as well as the risk of reporting errors in the months of income statements that employers provide. In the used registers, the earnings or registered unemployed days are reported annually, which made it difficult to identify the start and end of unemployment or exit within the year. Although the registers include information about the start and end month of employment for each employed person, it is not possible to observe whether they have breaks between these months and it was the case that several employers reported the end date of individuals in December, leading to an over-estimation of the employment of individuals. There is also a lack of data on the type of contract and number of hours worked by individuals. Although several strategies have been used to minimise reporting errors and to identify the labour market attachment and employment patterns of individuals, the measurement of employment and labour market attachment is limited due to scant information.

## 7.5 Conclusion

Due to the complexity of employment and labour market exit, there are still gaps in the understanding of inequalities in late working life, despite the existing rich literature. The overall aim of this thesis was to contribute to the understanding of inequalities by using the Swedish case, a life course perspective, and a focus on age-related disadvantages. It shows that inequalities in employment and labour market exit are structured by gender, age, and education, and are related to life course histories as well as labour market factors. Inequalities are not only related to labour market exit but also to employment patterns, including employment breaks, type of breaks, changes in employment type and downward mobility. Age-related disadvantages contribute to the exclusion of older workers from late working life, and these disadvantages are associated with establishments characteristics and labour market conditions. This thesis contributes to the literature and policies on late working life by showing different dimensions of employment and labour market exit inequalities, the differentiated role of labour market attachment at distinct stages of mid-life, the role of chronological age, and establishment's characteristics. The results of this thesis also imply that voluntary/involuntary dimensions of employment and labour market exit are linked to individuals' employability and workability, and to the possibilities of flexibility in

choices (in terms of changing employment, breaks and exit) available to them, which are in turn linked to their age, gender, and educational level. The employability, workability and flexibility of individuals are shaped by life course, dating back to childhood. Moreover, unemployment risks and re-employment opportunities are strongly linked to chronological age, as well as to employers' hiring decisions, shaped by establishment characteristics, which all contribute to inequalities in late working life.



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Linköping Studies in Arts and Sciences No. 868, 2023  
Division of Ageing and Social Change (ASC)  
Department of Culture and Society (IKOS)

Linköping University  
SE-581 83 Linköping, Sweden

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