Time for Retirement
Studies on how leisure and family associate with retirement timing in Sweden
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Abstract
Retirement transition is a major life event in later adult life. Its timing is important for older individuals for economic, personal and family reasons, as well as for aging societies contemplating a comprehensive plan for population changes, including sustainability of the labor force, pension system, and welfare services such as eldercare. This thesis explores retirement timing in contemporary Sweden, which serves as an interesting case study because of its aging population, high labor force participation of men and women, universal pension system and generous welfare services. The overarching aim of the thesis is to investigate how relationships in the private sphere associate with retirement timing by focusing on leisure engagement, family relations and intergenerational ties.

The thesis consists of an introductory chapter and four empirical studies. The purpose of the introductory chapter is to place the four studies in context by focusing on the Swedish population structure, labor force participation and pension system and by highlighting some of the central theories and empirical findings related to retirement transition.

Study I addresses leisure engagement before retirement and retirement timing, and how engagement in leisure changes after retirement. The study finds that retirement timing varies by both the type of preretirement activity domain and the level of engagement. For instance, occasional or frequent engagement in dance and music postponed retirement compared to no engagement in these activities. The study also finds that patterns of leisure engagement after transition into retirement tend to be a continuation of the corresponding preretirement patterns.

Study II investigates the association between grandparenthood and retirement timing. The results show that grandparents at different life stages are more likely to retire compared to non-grandparents, but there is also variation among grandparents, and the more complex the family situation, the more likely grandparents are to retire.

In Study III, the focus shifts to the relationship between survival of elderly parents and retirement timing. The study finds that parental survival is positively linked to retirement timing and that the effects are stronger and more consistent for women than for men, in particular when only one parent is still alive. Additionally, women have a higher propensity of retiring in the immediate period after parental death, especially when the father is widowed. In contrast, men have a higher propensity of retiring when either the mother or father has been widowed for some years.

Study IV examines married couples’ propensity to coordinate retirement. The study finds that the likelihood that spouses will coordinate their retirement decreases as their age difference increases but that age differences have a similar effect on retirement coordination for couples with a larger age difference. The study also finds that coordination is largely gender neutral in opposite-sex couples with age differences, regardless of whether the male is the older spouse.

The thesis shows that, compared to wealth or health predictors of retirement, factors concerning the private sphere are also most relevant in non-trivial ways to large shares of retirees in Sweden. Increased knowledge of these relationships is important both for individuals’ retirement planning and for decision-makers’ and policy-makers’ planning and organization.

Keywords: retirement, leisure, grandparenthood, elderly parents, marriage, Sweden.

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Linda Kridahl
To my future self
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Finally, I would like to thank Fredrik Kridahl, my partner in crime, for endlessly being supportive and encouraging. Even if you often have been away, I have always felt your support and love from distance. I found this short text in one of our many email conversations from this period. Obviously, it is not Shakespeare, but it is the axiomatic truth written in a few simple lines.

You are the one that makes my high  
From early mornings to late at night  
My love for you will never end  
You are my heart’s best friend

Linda, November 20, 2017
List of empirical studies


Sammanfattning

Att pensionera sig är för många individer ett stort beslut och det har betydande påverkan på den ekonomiska situationen och det kan dessutom ha stora konsekvenser för andra områden i livet. Tidpunkten för pensionering är också viktig utifrån ett samhällsperspektiv eftersom det påverkar arbetsmarknaden och arbetsmarknadspolitiken. Det är också relevant för planeringen och organisationen av pensionssystemet och andra välfärdstjänster, såsom vård och omsorg, för äldre individer.

Avhandlingen undersöker tidpunkten för pensionering bland kvinnor och män i Sverige idag. Sverige är ett intressant land att studera i fråga om pensionering utifrån dess åldrande befolkning, hög andel arbetskraftsdeltagande kvinnor och män, utvecklingen av det allmänna pensionssystemet och generösa välfärdstjänster. Huvudfokus i avhandlingen är sambanden mellan faktorer från den privata sfären, dvs. fritidsaktiviteter, familje- och intergenerationala relationer, och pensioneringstidpunkt.

Avhandlingen består av ett introduktionskapitel och fyra empiriska studier. Syftet med introduktionen är att sätta de fyra studierna i en kontext, däribland Sveriges befolkningsutveckling över tid, arbetskraftsdeltagande över tid, pensionssystem och utträdesålder över tid, samt ett urval av teoretiska perspektiv och tidigare forskning om vad som påverkar pensioneringstidpunkten.


Givet att de aktiviteter individen engagerar sig i före pensioneringen blir de aktiviteter individen engagerar sig i i den andra studien det intressant att se hur engagemangsnivån förändras efter pensioneringen. Studiens andra syfte är därmed att undersöka hur engagemanget i fritidsaktiviteter före pensioneringen förändras efter tidpunkten för den. Datamaterialet studien bygger på är den återkommande enkätundersökningen Levnadsnivåundersökningen (LNU) från 1981 till 2010. Resultaten visar att det till viss del finns ett positivt samband mellan fritidsaktivitetstyper och utträde ifrån arbetslivet, speciellt
när det gäller engagemang i dans och musik. Resultaten visar även att individer tenderar att aktivera sig på samma engagemangs nivå efter pensionering som före den, och även att det var en större sannolikhet att öka sitt engagemang om individen redan engagerade sig i aktiviteten före pensioneringen än om individen inte engagerade sig i aktiviteten. Dock visade resultaten en viss variation mellan olika aktivitetstyper.


pension för individer som har äldre föräldrar i livet. Resultaten visar ett mönster där individer som har äldre föräldrar i livet går senare i pension om de också har syskon.


Avhandlingen i sin helhet visar att, utöver faktor såsom individers ålder, ekonomiska resurser och hälsa, finns separata relevanta samband mellan faktorer från individens privata sfär och pensioneringstidpunkt i Sverige. De separata studierna visar också att det finns vissa specifika grupper som har en ökad sannolikhet att gå tidigare i pension, vissa tillsynes tidigare inte synligjorda i svensk pensionsforskning. För att kunna förutse påverkan av arbetsmarknadsutträde på individ- och samhällsnivå, är det viktigt att hänsyn till dessa tas.
Introduction

This thesis explores retirement timing in contemporary Sweden. The summative purpose of the four empirical studies included in the thesis is to broaden the knowledge on how relationships in the private sphere associate with retirement timing. The thesis centers around three topics: leisure engagement, family relations and intergenerational ties. In particular, the studies focus on retirement timing in relation to leisure engagement before retirement, whether postretirement activities are a continuation of preretirement activities, several dimensions of grandparenthood, survival of elderly parents, and retirement coordination of married couples. Each of these topics are of importance for older individuals’ economic, personal and family circumstances, as well as relevant for aging societies in order to comprehensively plan for structural population changes, including the sustainability of the labor force, pension system, and welfare services, such as eldercare.

Most women and men have some individual influence on their retirement transition, and are able to plan and decide upon retirement, but, of course, not all individuals have the privilege of fully deciding when to retire. A retirement decision is a complex decision involving many institutional, individual, family and demographic dimensions. It is not always obvious how the predictors influence retirement timing, and the same factors can influence both early and delayed retirement for different groups. Previous research has shown that the most important factors that explain the timing of retirement transition are age, economic resources and health. One of the many contributions of this thesis is that it shows that, in addition to these factors, private sphere factors, such as leisure engagement and intergenerational ties, have an independent impact on retirement transition. By widening the knowledge on retirement transition, is helpful for researchers, policymakers, employers and individuals to understand the many forces that interplay on older employees’ decisions.

Sweden is an interesting case study of retirement timing for several reasons. First, Sweden has one of the oldest populations in the world (Kinsella & He, 2009). Studying the determinants of retirement transitions is therefore important because individuals may spend many years as retired due to the 21st century’s changes in the population structure, e.g., the increasing number of older individuals and healthier older employees. From a labor economic perspective, long retirement phases are not desirable, as retirement changes the employees’ role from being a contributor (by, e.g., paying income taxes) to being dependent on the pension system and pension benefits. Adding to the
complexity of the retirement transition is that retirement has become a gradual and flexible process, where individuals can retire part time or even return to employment after being fully retired (Quinn, 2000).

Second, it is possible to include both women and men, as Sweden has had some of the highest rates of women participating in the labor market for several decades, and the levels of economic equality and gender equality have been relatively high compared to those in other countries (Gottschalk & Smeeding, 1997; Sundström, 1997). The early studies on retirement mainly focused on men’s retirement, but with the increasing participation of women in the labor force in many Western countries, in particular the Scandinavian countries, decreasing numbers of life-long homemakers and shorter work disruptions due to childrearing, retirement research has included women and couples.

Third, Sweden’s universal and gender-neutral pension system allows women and men relatively independently decide about their own retirement (Sundén, 2006, 2006). Various incentives, benefits, and regulations have allowed individuals to retire at different ages and not at the normative retirement age, and the structure of the system makes it relatively easy for individuals to predict their pension.

Fourth, Sweden has a relatively generous social welfare system, which, for instance, minimizes the obligations of adult children to care for their parents or grandparent’s obligations to care for grandchildren when mothers with young children participate in the labor market. It is therefore likely to assume that older individuals engage in intergenerational care due to solidarity or/and self-interest.

The thesis contributes to the literature on retirement by investigating leisure engagement, family relations and intergenerational ties in four separate studies. Study I examines leisure engagement before retirement and retirement timing, as well as whether engagement in leisure activities changes after the retirement transition. Engagement in leisure is measured through participation in several leisure activities that are popular in Sweden. The study finds an overall weak association between leisure activities and retirement timing, except for engagement in dance and music. However, it is noteworthy that when the effect of period is excluded, but other central predictors of retirement timing are included, most of the examined leisure activities revealed a positive associated with retirement timing. The results also indicate that leisure engagement patterns in retirement tend to be a continuation of preretirement leisure engagement patterns.

Study II investigates retirement timing in relation to grandparenthood in Sweden. The study finds that grandparents at different life stages have an elevated probability of retiring compared with non-grandparents, but there are also variations among grandparents, and the more complex the family situation is, the higher the risk of retiring is.

Study III investigates the association between the survival of parents and retirement timing in Sweden. The study finds evidence that parental survival
positively linked to retirement timing and that the effects are stronger and more consistent for women than for men, particularly with only a mother or father alive. Additionally, women have a higher likelihood of retirement in the immediate period after parental death, particularly when the father was widowed. Men tend to react less to close parental death. Instead, men have a higher likelihood of retirement when the mother has been a widow for more than one year. Moreover, siblings seem to moderate the effect of retirement, and the patterns are most noticeable and robust among women.

The purpose of Study IV is to examine married couples’ propensity to coordinate retirement in Sweden. The results show that the likelihood of couples retiring close in time decreases as their age difference increases but that age differences have a similar effect on retirement coordination for couples with large age differences. Additionally, the study finds that retirement coordination appears to be largely gender neutral in opposite-sex couples with age differences regardless of which gender is older.

The outline of the introductory chapter is as follows. The first section gives a short description of the consequences of a graying population in terms of the rectangularization of the life curve and mortality compression. This section also gives an overview of the development of the Swedish population over the last half century, particularly among older adults. This is followed by separate sections on trends in labor force participation in Sweden by gender, an outline of the current and pre-reform pension system, trends in retirement age, and trends in older employees’ labor force participation. The chapter also includes a section where the most common theories on explaining retirement transitions are presented and discussed. Thereafter, there is empirical evidence on predictors of retirement timing. As retirement timing is closely related to what may occur after retirement, one section discusses life after the retirement transition. Moreover, the four studies in the thesis are based on survey and register data; therefore, one section is dedicated to briefly presenting these materials. Moreover, the timing of retirement is often difficult to operationalize; hence, after the data section, different ways of defining retirement timing are presented. The section ends with summaries of the four studies, an afterword and suggestions for further research.
The aging population

Improvements in health and declines in death and birth rates have led to changes in the aging population of the developed world over time (Christensen, Doblhammer, Rau, & Vaupel, 2009; Kinsella & He, 2009; Oeppen & Vaupel, 2002). The life curve has become increasingly rectangular as medical science has found means of protecting individuals from diseases. If early mortality declines sharply and most individuals die late in life, this leads to the rectangularization of the life curve. Individuals survive to a similar age and die within the same age period at the end of the life span, which has been termed compressed mortality. The survival curve will never be fully rectangular, as there are other causes of death that can occur earlier in life, and not all individuals reach old ages due to selective mortality and the deaths of disadvantaged individuals at younger ages (Mackenbach, Kunst, Cavelaars, Groenhof, & Geurts, 1997). Consequently, cohorts of older individuals may appear healthier and generally better off than they would if there was no selection effect (Zajacova & Burgard, 2013). The additional years are not necessarily related to a delay of biological decline, but rather to what has been called manufactured survival, where individual survival is a result of medical and environmental progress (Olshansky, Carnes, & Grahn, 1998).

Considering the process of the rectangularization of life expectancy and compressed morbidity, four scenarios of what may occur in the future have been suggested. These scenarios are presented in Figure 1 (Fries, 2003). The present scenario is that people live relatively long lives and have many unhealthy years at the end of their lives. In a second scenario, life expectancy increases, with the morbidity starting at the same age as in the first scenario. This suggests that individuals are sick or disabled over a longer period, which has been termed expansion of morbidity. In the third scenario, the onset of morbidity is somewhat delayed compared to the first scenario, and the onset of morbidity occurs later. Hence, individuals are sick or disabled for a shorter period of time. In the last scenario, which is called compression of morbidity, the life expectancy is slightly or not at all increased compared to the first scenario, but the onset of morbidity is later in life. Consequently, lives are shorter but individuals have more healthy years at the end of their life and will suffer
from diseases or disabilities that come with old age over a period of fewer years (Breyer, Costa-Font, & Felder, 2010; Fries, 1980, 2003; Lee, 2003; Li et al., 2007; Westendorp & Kirkwood, 2007).

Figure 1. Possible scenarios of the evolution of morbidity

Source: Fries (2003, p. 456)

Sweden’s population is aging

Sweden is one of the first countries that experienced a graying population and has currently one of the largest shares of individuals aged 65 and older (Kinsella & He, 2009; Vaupel & Lundström, 1994). For instance, the share of individuals aged 65 and older has increased from 13.4 to 19.8 percent during the 1968-2012 period and is expected to increase to 25 percent in 2060. In addition, the remaining life expectancy at age 65 has dramatically increased over the years (see Figure 2), changing from 18.6 years to 21.5 years for women and from 14.6 years to 19.1 years for men over the 1960-2016 period. This trend is expected to increase to 25.3 years for women and 23.6 years for men by 2060. Furthermore, men are narrowing the gap to women in life expectancy, and the age gap has decreased from 4 years difference to 2-1.5 years difference (Statistics Sweden, 2015).
Figure 2. Life expectancy at age 65 for women and men in Sweden from 1983-2016 and a forecast from 2017-2060 (years)

Source: Statistics Sweden (2015)

Graying population and retirement age

The increasing life expectancy and health improvements imply that individuals are healthier around the ages when retirement typically occurs. For instance, Kinsella and He (2008) reported that remaining life expectancy after retirement changed from from 14.9 years to 22.9 years for women and 11.9 years to 17.8 years for men in Sweden over the 1970-2004 period. However, this is calculated based on the average age of retirement, which has fluctuated over time.

During the 1980s-1990s and early 2000, the changing demographic structure created a need to revise retirement ages and pension regulations around the world, and Sweden was no exception. It has been roughly ten years since the implementation of the new pension system, and the debate is still ongoing (SOU 2012:28; SOU 2013:25). Depending on how the demographic structure of the population develops, the scenarios presented in Figure 1 will have different implications on labor force participation in late adulthood, retirement ages, length of retirement, and public pension benefits. For instance, in the second scenario, the pension benefits must last longer, while at the same time, the medical costs and care increase as the consequences of aging intensify. In the third scenario, individuals may be healthy longer and, hence, will be able to prolong labor force participation, either full time or part time, which will contribute to the cost later in life. There has been an overall decrease in deaths at ages 65-79 in Sweden (Christensen et al., 2009; Statistics Sweden, 2015). Indeed, previous empirical findings have found that individuals will be able to work longer because of the onset of disability problems (Gordo, 2011). However, the effects of disease or disability problems differ based on the type...
of disease or disability, as some may not constrain labor force participation, whereas others do. Additionally, there are social class and gender differences in the number of reported health problems (Fors, Lennartsson, & Lundberg, 2008), as well as age-specific differences (Modig, Virtanen, Ahlbom, & Agahi, 2016), which suggest that not all groups of individuals will be able to prolong working life, even if severe disability is generally postponed. Moreover, previous studies have found mixed results of whether health has improved. For instance, studies in Sweden have found that self-reported health has improved over time (Modig et al., 2016), the incidence of cardiovascular diseases, such as ischemic stroke, has decreased (Modig, Andersson, Drefahl, & Ahlbom, 2013; Rosengren et al., 2013), and the prevalence of dementia has been relatively stable (Qiu, Strauss, Bäckman, Winblad, & Fratiglioni, 2013). In addition, the severity of disabilities generally increases with increasing age, and most old individuals have difficulties performing daily life activities and are dependent on care (Jacobzone, Cambois, Chaplain, & Robine, 1999).

To situate retirement in the context of the aging population is important, but there are also other crucial consequences of the aging population that have indirect or direct implications for retirement ages. For instance, the delayed onset of a severe disability may result in older individuals having better life quality and enjoying life in more meaningful ways than before. Additionally, the oldest generations may still be alive when their adult children enter the retirement phase, which may create a greater dependency of younger generations to care for their older family members.
Trends in labor market participation in Sweden

Before the 1960s, the dominating family model in Sweden was the male breadwinner model, in which wives took care of the family and household and husbands were the sole wage earners. In cases where women engaged in paid labor, they often left the labor market when starting a family (Stanfors, 2014). Thus, the Swedish female labor force participation was rather low and fluctuated at approximately 30 percent in the 1920 to 1965 period (Silenstam, 1969).

Over time, the number of women in the labor force has dramatically increased. Figure 3, displays employment rates for women and men of ages 16 to 64 and 55 to 64, separately, in Sweden over the 1970-2016 period. As is shown in Figure 3, the employment rates of women aged 16 to 64 increased to 60 percent in 1970. In the same year, employment rates of men aged 16 to 64 was close to 90 percent.

Continuing, the curves for women and men aged 16 to 64 in Figure 3 show that until the economic crisis in the 1990-1994 period, employment rates for women have exhibited a rather dramatic increase, while men were rather stable. The crisis reduced the employment rates for both women and men. After the crisis, the employment rates increased, but not to the same levels as before the crisis. In addition, there was a drop in employment rates during the second economic crisis in 2007-2008. At the end of the period, women are catching up on men with 75 percent of women aged 16 to 64, and 80 percent of men aged 16 to 64 participate in labor force.

Traditionally, mothers have reentered the labor force after childrearing in Sweden. Therefore, women in the upper middle-ages have had relatively high employment rates also in the older cohorts (Stanfors, 2014). Figure 3 displays employment rates for women and men aged 55 to 64. The curve for women aged 55 to 64 shows that the employment rates have increased from 44 percent to approximately 74 percent, with a dip during the economic crisis in the 1990s. Men have a different pattern; men had a decreasing trend until 1990s, thereafter a slow increase starting in the mid-1990s. In the later period, the employment rates have been rather similar between women and men at these ages, and the trends are relatively parallel between genders.
In summary, the Swedish labor force has not “returned” to previous levels as before the crisis in the early 1990s. The Swedish state supports female labor force participation (Korpi, 2000), and the traditional family model where the husband is the main breadwinner has changed to a dual-earner model over time. Women and men have been almost equally participating in the labor force in Sweden since the mid-1980s. The share of women working is higher at the end of the period than in the mid-1970s, but the share has not entirely caught up with that of men.

**Explaining gender differences in labor force participation**

The gender differences in labor market participation may be explained by women’s and men’s different family obligations, social and family policies, and the gender-segregated labor market (Correll, Benard, & Paik, 2007; Hinze, 2000; Nermo, 1996).

Directions in the Swedish family policy can partly explain women’s gradually increased labor force participation since the early 1970s. For instance, the individual taxation in 1971 was a strong incentive for women to engage in paid labor (Gustafsson & Jacobsson, 1985). In addition, the introduction of parental leave in 1974 and the increased availability of public childcare have also encouraged, in particular, married women’s labor force participation (Stanfors, 2014). For instance, the percentage of children under the age of six...
registered at publicly financed pre-school has dramatically increased from 15 percent to 82 percent over the 1975-2009 period (Skolverket, 2010).¹

Moreover, women are often the primary caregivers for children, and having children tends to influence mothers’ work hours but not fathers’ work hours (Boye, 2008; Sundström, 1991). Sweden’s women, particularly mothers with young children, are more often working part time, and working part time has been more common among women in Sweden compared to other countries (Rosenfeld & Birkelund, 1995). Overall, part time work has decreased from 45 percent to 30 percent for women during the 1987 to 2013 period, and men have had a small increase in part time work, from 6 percent to 11 percent during the same period (Statistics Sweden, 2014). In addition, mothers take the largest share of parental leave and temporary leave when children are sick (Swedish Social Insurance Agency, 2012). Overall, there are large cohort differences. For instance, it is less common among women born after 1945 to fully leave the labor market due to childrearing compared to earlier cohorts. Younger cohorts also have a more gender-equal division of household and work labor in unions, which may additionally enhance women’s labor force participation and wages.

The family-friendly labor market has made working life more comparable to family life in Sweden and in the other Nordic countries, compared to other countries (Gornick & Meyers, 2010). However, women in Sweden are disadvantaged in various of ways, although, not as much as in other countries (Aisenbrey, Evertsson, & Grunow, 2009; Correll et al., 2007; Sigle-Rushton & Waldfogel, 2007). For instance, wages tend to be lower among mothers with young children relative to men and childless women (Sigle-Rushton & Waldfogel, 2007), and extensive period of family leave may have a negative influence on their upward career mobility (Evertsson, Grunow, & Aisenbrey, 2016). Other contradicting findings show that part time employment or parental leave does not necessary lead to a wage penalty among women in Sweden (Albrecht, Edin, Sundström, & Vroman, 1999; Bardasi & Gornick, 2008). In addition, gender segregation in the labor market has decreased over time, but women more often engage in low-income work in the public sector and female-dominated occupations (Grand le, 1991, 1997; Nermo, 1996). Consequently, women generally receive lower wages than men. The wage gap has decreased over time, but there is still a substantial difference between women’s and men’s wages. For instance, the wage gap slowly decreased from 18 percent to 13 percent during the 1975-2012 period (OECD, 2017).

Trends in labor force participation across countries

Sweden is an interesting case to study because of its generous family and social policies and overall high gender equality (European Institute for Gender Equality, 2017; Korpi, 2000). Largely, women in Sweden, particularly

¹ According to the Education Act (1985:1100), municipalities should guarantee all children aged one to five a place in a publicly financed pre-school at any time between the hours of 7 am and 6 pm on weekdays.
married women and mothers with young children, have been participating in the labor force and having their own income for many decades; therefore, they have been covered by social security services and had payroll contributions to their public pension. Due to diverse institutional settings, women, in particular mothers, and men are not equally participating in the labor force across countries. To show how trends in labor market participation differ between countries, Figures 4 and 5, below, show the employment rates for women and men aged 55 to 64 in Sweden, Norway, France, Germany, Spain and the United Kingdom. The choice of countries is based on a few criteria. First, the countries represent different gendered policy institutions, which influence whether and how women participate in the labor market. Using Korpi’s (2000) family policy typology, it is possible to categorize the countries into three groups. Sweden and Norway represent a dual-earner support with female- and family-friendly policies, with for instance, generous parental leave and preschool options. France, Germany and Spain represent a general family support, which is the traditional model where men are the sole breadwinners and women engage in household labor. For instance, in these countries, public childcare services are limited. The United Kingdom is characterized by market-orientated support, which means that families must buy most of the social and childcare services. In relation to retirement timing, this is important because women may be disfavored in terms of social rights, such as pensions, which are typically conditioned on economic activity. Second, these countries have also adopted different social insurance models. Sweden and Norway belong to the encompassing model, together with other Nordic countries. Here, all citizens are insured within the same structure of programs, with for instance a universal flat rate benefit for all citizens and an earnings-related benefit for those who are active in the labor force. Spain, France and Germany belong to the state conservative/corporatist model, which is based on employment contributions and is less universalistic compared to the encompassing model. The United Kingdom belong to the basic security model, which offers a low flat rate benefit for all citizens, and individuals are encourage to save for a private pension (Korpi, 2000; Korpi & Palme, 1998). Third, these countries also differ in legislated retirement ages and pension systems, which will be briefly discussed in a further section.

Figure 4 shows that Sweden and Norway had a relatively high and stable increasing employment rates among ages 55 to 64 over time. Spain, France, the United Kingdom, and, in particular, Germany had a more dramatic increase from the late 1990s, followed by a more steep increase over the last 10 years. Moreover, male employment rates in Sweden and Norway was decreasing until the late 1990s, followed by a slowly increasing trend in the new millennium (Figure 5). In Spain, Germany, and the United Kingdom, the employment rates have been lower than in the Nordic countries. In particular, in France, the employment rates have been low, most likely due to generous early retirement incentives and a young mandatory retirement age.
It is interesting to put Sweden into the context of these countries. Although there are generally large differences in how women and men participate in the labor market in Sweden, particularly between cohorts, Sweden’s women and men have more similar employment rates among older individuals compared to other countries. Understanding the trends in employment rates is important as it produces different patterns of retirement behavior across countries and gender.

Figure 4. *Employment rates for women aged 55-64 in Sweden, Norway, Spain, France, Germany and the UK from 1970-2016*

Source: OECD (Labour Force Survey)
Figure 5. Employment rates for men aged 55-64 in Sweden, Norway, Spain, France, Germany and the UK from 1970-2016

Source: OECD (Labour Force Survey)
Sweden implemented the world’s first universal gender-neutral public old-age pension system in 1913. However, private pension solutions based on occupation had been implemented much earlier, but most citizens were not entitled to a pension until Sweden introduced the public pension. The public pension comprised two parts, one based on individual contributions and an income-tested supplement pension for those who had a very low pension. The benefits were paid starting at age 67 (for both women and men) and were calculated as a share of the sum of the individual’s contributions. Individuals who could not conduct work due to health problems were able to claim a disability pension (Elmér, 1960; Hort, 2014; Ottander & Holqvist, 2003).

The system was criticized because it produced unequal opportunities for individuals to contribute to pensions, and thus generated large pension gaps between high and low earners. The system went through various changes to make the pensions more equally divided. In the 1935 reform, the contribution-based pension was replaced by a universal flat rate pension, which was supposed to even out the inequalities in pensions and living standards across different groups of retirees. In addition, all retirees obtained the right to more generous income-tested pension supplements, which was provided for almost everybody over 67. However, the reform did not have the desired effect on the retirees’ living standards, and shortly thereafter, an increased universal flat rate pension benefit was implemented in 1948, in which all individuals received an equal pension benefit financed by the national budget when turning 67 (Elmér, 1960; Hort, 2014).

The pension reform in the late 1950s

The public pensions system was again reformed in 1959, with the first pensions paid in 1963. In addition to the flat benefit, which was part of the former system, an earnings-related benefit (ATP) was introduced covering all employees. The latter corresponded to 60 percent (up to a ceiling) of 15 years of the highest earnings during the 30 years of labor force participation. The pension rights also took into consideration transfers from social security, such as sickness and unemployment insurance, maternal cash benefits, and partial re-
irement. Individuals with a low or without ATP pension received a supplementary benefit. The contributions to the ATP had to be invested in funds, and the revenue in the end was the size of the total pension including the flat benefit, adjusted to the consumer price index. This meant that the benefits were higher than contributions when there was negative economic growth, and smaller when there was growth. Compared to the former system where pension benefits began at age 67, the implemented system gave employees some flexibility to decide when to start withdrawing their pension. The mandatory retirement age was still 67, but a new regulation made it possible to receive an early pension from age 63 and to postpone retirement to age 70 (Hort, 2014; Ståhlberg, Kruse, & Sundén, 2005).

The mandatory retirement age was lowered to 65 in 1976. The early pension age was lowered to age 60, but it was still possible to delay retirement up to age 70. Partial retirement allowed employees to reduce the number of working hours and receive pension benefits instead of the lost employment income (Hort, 2014). In addition, it was only in some occupations that employees received an occupational pension (Nilsson, 1985), but over time, trade unions have negotiated collective pensions schemas including regulations of eligible ages for pension for almost all employees. In the 1980s, most employees where covered by these occupational pension schemes (Ståhlberg, 1985). The occupational pension was a defined percentage of the employee’s salary, which the employers paid as a pension contribution for the employees.

Widows born before 1945 had the option to receive an additional survivor’s pension until age 65. This benefit changed in 1990, and instead all surviving partners (and children) younger than 65 are entitled to a survivor’s pension for 12 months. It was also possible to claim a (reduced) flat pension and supplementary pension from age 60 or retire through the disability insurance scheme, which was possible for individuals younger than 65 who could not perform gainful employment. Moreover, a part time pension was possible from age 60. To gain their full pension, the pension was calculated based on the 15 best years of the 30 years of labor force participation, suggesting that there were no economic reasons for retiring at age 65 or older. Additionally, the Employment Protection Act protected only employees younger than age 65, and older employees could more easily lose their employment (Hort, 2014).

New public pension system in the 1990s

The old public pension system had several problems; for instance, it was sensitive to economic and demographic changes, such as the increasing share of older individuals. Therefore, the Swedish Parliament passed a new pension legislation in 1998, which made the pension system a Notional Defined Contribution system. It is a defined contribution plan on a pay-as-you-go basis. The new system went into effect in 1999 but was gradually phased out during the 2001-2003 period, with the first benefits paid in 2001, although it will take

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2 Self-employed individuals have to pay their own contributions.
several decades for the benefits to be completely paid from the new system (Palmer, 2002; Sundén, 2000).

One of main features of the new system is that the previous mandatory retirement age has been replaced by a flexible retirement age, in which benefits can be started to be paid from age 61. The system comprises three main parts: 1) the public national pension covering all individuals, which includes income pension, premium pension and guaranteed pension, 2) the occupational pension and 3) the private pension (Figure 6).

Figure 6. The structure of the new public pension system introduced in the late-1990s

The income pension is replacing the former earnings-related supplementary pension. It is based on individuals’ life-long earnings. Of employees’ yearly income, 16 percent is credited to a notional account, and 2.5 percent is credited to the premium pension, which is a self-directed personal account and must be invested in funds. The premium pension is the revenue from the funds. Additionally, as compensation for lost income, pension rights can be earned through parental leave, sickness, disability and unemployment insurance, as well as military service, financial aid for studies and extra benefits for parents until their children’s fourth birthdays contributing to the income and premium pension. Moreover, in the former system, employees with low incomes during their earlier part of their working life had the possibility to increase their pension benefits by having higher incomes in the later parts of their working lives, which is not possible in the new system (Cronqvist & Thaler, 2004; Palme & Svensson, 2004; Palme, Sundén, & Söderlind, 2007; Sundén, 2006).

In addition, the new pension system ensures income security for individuals with non-existing or low lifetime earnings, by providing a guaranteed pension from age 65, which is financed by general tax revenues. The benefit is means-

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3 An individual chooses one or at most five of the independent domestic or international funds registered with the Swedish Pensions Agency. In 2000, there were 500 funds to choose from, and the number of funds has increased over time to approximately 800. It is possible to change funds over time, and if an individual does not want to actively select a government-run fund, the contributions will automatically be invested in a default fund, which resembles a savings account (Palme, Sundén and Söderlind 2007; Cronqvist and Thaler 2004).

4 An individual must have lived in Sweden for 40 years between the ages of 25-64 to be eligible for a full guarantee pension. Shorter living periods in Sweden lower the guaranteed pension. The minimum stay in Sweden that entitles to guaranteed pension is three years. Married or partnered individuals receive a slightly lower guaranteed pension than unmarried individuals (Palme and Svensson 2004; Sundén 2006; Sjögren
tested and is replacing the flat benefit in the former pension system (Palme & Svensson, 2004; Sundén, 2000, 2006). Guaranteed pensions are more common among women than men because women more often have worked more part time or had longer work disruptions compared to men (Statistics Sweden, 2011b). However, as younger cohorts reach retirement age, guaranteed pensions will be less common among women because, e.g., women in younger generations increasingly have higher income occupations, and family and work obligations are more equally shared in the younger generations, which influence pension size. Moreover, to decrease economic disparity, older individuals with low income may be entitled to housing allowances depending on the household earnings from age 65. Overall, statistics show that housing allowance was relatively common three-four decades ago, and that the share of retirees with housing allowance have been decreasing the last decades (Statistics Sweden, 2010).

The structure of the occupational pension is more or less the same as before the reform. One change is that it will become premium based instead of a defined benefit. However, it will take many years to fully implement this (SOU 2013:25). Almost all employees in Sweden are entitled to an occupational pension, as 95 percent of the labor market has some type of occupational pension scheme, which is a central agreement between the union and the employer’s confederation. How much an individual receives from the occupational pension is stated in the collective labor agreement. The aim of occupational pensions is to compensate income losses above the social security ceiling that the national public pension system does not cover. Currently there are five major collective labor agreements: employed by the state sector, employed by the municipalities and country councils, white-collar employees in private sector, and blue-collar employees in private sector. There are additional collective labor agreements that cover smaller areas in the labor market. In addition, in three of the four largest collective labor agreements, it is stated when an employee can go on early retirement, and how large the share of employment income the employee may receive during early retirement. Individuals, who have worked under several agreements, receive pensions from all. Moreover, an employee may receive a smaller share of occupational pension while being employed part time, but working after age 65 does not increase the occupational pension; instead, in most agreements, occupational pensions must be taken out before age 65. The size of the occupational pension varies much depending on the agreement, and is mostly important for those who have yearly earnings that are higher than the income ceiling in the public pension. Occupational pensions are increasing in importance for younger cohorts, and

Lindquist and Wadensjö 2009). The guaranteed pension is indexed to prices, which means that real wage growth will reduce the share of the guarantee in total pension income over time (Sundén 2000).

For detailed information of earliest and oldest entitled ages to receive occupational pension by collective labour agreements, see Table 1.3 in SOU 2011:05.
approximately one third of the total amount of pensions is associated with occupational pensions among men born in the 1940s, which is an eleven percent increase compared to men born in the 1930s (Palme and Svensson 2004; Sundén 2006; Lindquist and Wadensjö 2009; SOU 2011:05).

Moreover, it is possible to increase pension by saving an undefined amount in a pension savings bank account, an insurance company or in funds during ages 16 to 64 (Hort, 2014). Overall, more women than men save in a private pension. For most retirees, private savings will be less important at the oldest ages, as the savings are paid during a fixed period from age 65 (Statistics Sweden, 2011b).

When an individual decides to withdraw their pension, it is adjusted to a growth index and the estimated life expectancy for the successive cohorts. Not all individuals are entitled to all three main parts of the pension. For instance, not all individuals have private savings, and receiving an occupational pension requires employment before retirement (Sjögren Lindquist & Wadensjö, 2009; Sundén, 2006). Moreover, the structure of the system gives individuals more responsibility for managing their pension, regarding where to invest the premium pension, pension savings and the timing of when to start the withdrawal of benefits (Engström & Westerberg, 2003; Sundén, 2008).

Moreover, the phasing out of the new system has different implications for different cohorts. Cohorts born earlier than 1938 receive pensions from the old system, and cohorts born 1938-1953 receive pension from both systems. Individuals born in 1954 are part of the first cohort to receive an entire pension from the new system, which first occurred in 2015 when they turned 61. Individuals born before 1938 receive income-based supplementary pensions, which substitute for the old supplement benefit and flat rate benefit. In addition, as the system includes an automatic adjustment to increasing life expectancy, younger cohorts need to postpone retirement to receive replacement rates equal to older cohorts (Sjögren Lindquist & Wadensjö, 2009; Sundén, 2006). Moreover, a recent report from the Swedish Social Insurance Inspectorate (2017) reveals that among those born between 1936 and 1947, the largest share of pension income comes from income pensions and supplementary pensions. This share will be decreasing for every new cohort. Similarly, the share of guaranteed pension will be smaller for every cohort, particularly among women. Among the younger cohorts, the occupational pension will be increasing.

Retirement age regulations in the new system

The new system is more flexible in regard to starting pension withdrawal. It is possible to take 25, 50, 75 percent, or the entire part of the income pension starting from age 61, and it is not required to take the income pension and premium pension equally or at the same time. The structure of the income pension encourages postponed labor force exit, as additional time in paid labor
generates higher pension benefits (Sjögren Lindquist & Wadensjö, 2009; Sundén, 2006). However, studies have shown that this is not the case for all employees, as individuals with very low income would have a very small impact on their pension and other economic support by postponing retirement (SOU 2013:25). Moreover, there are some regulations that might constrain individuals from postponing retirement, and some of them were the same in the former system. For instance, sickness benefits are paid until age 65; thereafter the individuals are transferred to national old-age pensions. In addition, guaranteed pensions are paid from age 65; hence, the choice of retirement age is less flexible for those groups of individuals who have no or low lifetime income. The guaranteed pension replaced flat benefits in the former system, which could be received at age 60 (Hort, 2014).

Additionally, the collective labor agreements on occupational pension are important for employees’ labor force exit. For instance, employees need to start withdrawal of occupational pensions from age 65 according to most agreements, and working longer does not increase the occupational pension (Sundén 2006; Sjögren Lindquist and Wadensjö 2009). Thus, considering occupational pensions, there are no incentives to postpone retirement until after age 65.

There are also other regulations that may influence the individuals’ willingness and possibilities to postpone retirement by either continuing working in the same employment or finding new employment. For instance, individuals older than 67 are not covered by unemployment or sickness insurance or by the Employment Protection Act (1982:80). However, the part-time options and option to combine different pension parts make it possible for some individuals to continue labor force participation, who would perhaps leave earlier without the part-time option available. It also benefits those who would continue working full time, to reduce their working hours if needed (Sjögren Lindquist & Wadensjö, 2009; Sundén, 2006).

**Trends in gender gap in pensions**

The current pension system calculates pension benefits partly based on lifetime labor market wages, which makes it more female-friendly and women receive higher pensions compared to the former pension. Yet, women and low-income employees receive lower pensions compared to men and individuals with high income (Ståhlberg et al., 2005). To overcome this, there is a ceiling in the income pension, irrespective of labor market participation, but the inequalities are sustained. In addition, guaranteed pensions, widow pensions, survival pensions and housing allowances, and other benefits, have been used over time to try to neutralize the inequalities among not just women versus men but also among individuals of different social-economic positions and immigrant status, yet, the system is generating inequality across, e.g., gender.

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6 There are currently discussions to increase the age (see, for instance, Pensionsmyndigheten, 2016).
and social class. Taking inequalities in the Swedish labor market and pension system as an example, Figure 7 displays the gender gap in pensions among Swedish-born cohorts from 1930-1947 at age 65 and older over the 1995-2012 period using data from *Sweden in Time: Activities and Relations*. To calculate the gender gap, the mean of the sum of early and old-age pensions for women and men was calculated separately for each year. Thereafter, I calculated: 1 - (women’s pension / men’s pension) to get the gender gap for each year. Figure 7 displays at least two noteworthy patterns. First, older women’s pensions are 30 percent of older men’s. Second, the gap is somewhat narrowing over time, from 36 percent in the beginning of the period to 30 percent at the end of the period. According by a recent projection, the gap will continue to be narrower over time (The Swedish Social Insurance Inspectorate, 2017).

Figure 7. Gender gap in pension among Swedish-born cohorts from 1930-1947 at age 65 and older in the 1995-2012 period. The share between women’s earnings and men’s earnings.

![Gender gap pension (65+)](chart.png)

Source: Author’s own calculations based on STAR data

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1 *Sweden in Time: Activities and Relations (STAR)* is organized by the Stockholm University Demography Unit and compiled by Statistics Sweden. The data are presented in a separate chapter.
There are various ways to estimate and display trends in the retirement ages, which are mainly dependent on the data source. This section discusses trends in the average retirement ages in Sweden\(^8\) and a selection of European countries using data from the Organization for Economic Co-operation and Development, OECD\(^9\). The average retirement age is not the same as the mandatory retirement age, which is the statutory age when employees will receive old-age pension. Figure 8 shows, the average effective age of retirement for Sweden, women and men separately. The effective retirement age has fluctuated for both women and men over the 1970-2014 period. It was the lowest in the 1990s due to the relatively generous early retirement pension incentives before the reform in the late 1990s, particularly among women. Earlier studies using Swedish register data have found that most individuals who retired before age 65 did it through a labor market insurance program (Palme & Svensson, 1999, 2002). It was also common for employers to offer generous early negotiation pensions before age 65 and thus minimizing labor costs compared to when paying employee’s pension contributions, which is common to do in economic downturns (Bolin, Eklöf, Högård, & Lindgren, 2008; Hallberg, 2011; Hallberg & Eklöf, 2010). Overall, the average retirement age has decreased from 65.3 to 62.3 among women, and from 67.9 to 63.7 for men in the 1970-2000 period, thereafter remaining relatively stable for a few years. After the new pension was fully implemented starting from 2003, the average effective retirement age has increased for both women and men. The retirement age gap has fluctuated between one and two years, and during the new pension system, the retirement gap has been the widest with a small narrowing at the end of the period.

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\(^8\) The Swedish pension system was discussed in the earlier section, but as a reminder to the reader, the mandatory retirement age was 65 in Sweden over the 1976-2000 period, followed by a flexible retirement age from age 61.

\(^9\) The OECD calculates the average effective age of retirement as a weighted average of net withdrawals from the labour market at a given age. In order to abstract from compositional effects in the age structure of the population, labour force withdrawals are estimated based on changes in labour force participation rates.
Retirement ages across countries

To put Sweden’s trends of retirement ages into an international context, average effective retirement ages are compared to Norway, Spain, France, Germany and the United Kingdom during the 1970 to 2012 period, for women and men separately (Figures 9 and 10). There are several similar trends across countries over time, as well as variations, which partly depend on country-specific mandatory retirement ages, pensions and other social benefit regulations, institutional settings, as well as economic crises affecting countries in somewhat different periods as well as degrees. During 1970-2014 period, the lowest mandatory retirement age was for women in Germany and the United Kingdom, and the highest mandatory retirement age was in Norway, followed by Sweden and Spain. In addition, Germany and the United Kingdom had different mandatory retirement ages for women and men.¹⁰

Figure 8. Men’s and women’s average effective retirement ages in Sweden from 1970-2014

[Graph showing average effective retirement ages for men and women in Sweden from 1970 to 2014]

Source: OECD estimates based on the results of national labor force surveys, the European Union Labour Force Survey and national censuses.

Norway’s men had higher effective retirement ages compared to Sweden’s during the 1970s and mid-1980s, followed by a steep drop in retirement ages during the mid-1980s. Both Sweden and Norway had a long period of early retirement transitions until the early 2000s. After the introduction of the new public pension system in Sweden in 2003, the average effective retirement ages increased. Norway implemented a new pension system in 2010 (Stensnes & Stølen, 2007). The United Kingdom experienced a similar trend as those of Sweden and Norway, but average retirement ages were somewhat lower in the last two decades. France had a steep decreasing trend in the average retirement age.

¹⁰ For a list of the legislated mandatory retirement ages over time in OECD countries, see Olsson (2011).
age until 2007, where there is a minor shift upwards. The average retirement ages have decreased from retirement ages of approximately 67 at the beginning of the period to lower than 61 at the end of the period. Spain had also a decreasing trend but average retirement age is much higher compared to that of France. Both Spain and France had a very slowly increasing trend in the new millennium, with low retirement ages.

Next, as is displayed in Figure 10, women in Sweden were retiring earlier during the 1990s, and the trend is shared with, France and the United Kingdom. In the early 2000s, average retirement ages for women increased in all these countries. After the new public pension system was fully introduced in Sweden, the retirement ages sharply increased between 2004 and 2012. Norway has the highest mandatory age, which results in men working longer and women in Norway having the highest average effective retirement age compared to those in other European countries. Spain has a high effective retirement age, but that the numbers are somewhat misleading, as these are calculated on a rather small share of working women. Overall, women in Spain, in particular mothers, have very low employment rates over time (Cousins, 1994). Overall, the low retirement ages during the 1990s were due to generous early retirement incentives, and the period of low retirement ages has been extensively studied across European countries (Blöndal & Scarpetta, 1999; Gruber & Wise, 1999). The increase in the average retirement at the turn of the new millennium is partially a result of policy changes, as several countries, including Sweden, raised the lowest possible age for taking up an old-age pension, and early labor market exit options were fully or partially abolished (OECD, 2006).

It is important to situate Sweden into this context as it shows that different welfare models produce different retirement behaviors. Sweden is not the only country that had periods of low retirement ages but did not have the lowest-low retirement ages. Also, comparing countries also show that the countries face similar consequences related to individuals’ retirement behavior.
Figure 9. Average effective retirement age among men in Sweden, Norway, Spain, France, Germany and the UK from 1970-2014

Source: OECD estimates based on the results of national labor force surveys, the European Union Labour Force Survey and, for earlier years in some countries, national censuses.

Figure 10. Average effective retirement age among women in Sweden, Norway, Spain, France, Germany and the UK from 1970-2014

Source: OECD estimates based on the results of national labor force surveys, the European Union Labour Force Survey and, for earlier years in some countries, national censuses.
Older individuals in the labor force

The populations are aging across the majority of Western countries, and one of the consequences is that older employees need to stay longer in the labor force to contribute to the economy and to make the pension system affordable. In international policy forums and political interventions, efforts have been made to encourage longer working lives (OECD, 2006).

In Sweden, there have been discussions to raise the current earliest age of pension withdrawal and the upper age limit of the Employment Protection Act, which may prolong the working life. Overall, the percentage of those working between 65 and 74 increased by 60 percent over the 2006-2009 period (SOU 2012:28). Although the distribution is most likely positively skewed, the increase is not predominately due to increased employed individuals aged 65-66. Figure 11 displays the percentage of employees aged 67 who are registered as engaging in paid labor in a given year\(^\text{11}\), although how much or often they engage in work is unknown. Overall, the percentage of individuals employed at ages 66 and 67 has slowly increased since 2003, from 12 percent to 21 percent.

Figure 11. Percentage working at age 65, 66 and 67 among Swedish-born cohorts born in 1930-1945 over the period of 1997-2012

![Graph showing percentage working at age 65, 66, and 67 among Swedish-born cohorts born in 1930-1945 over the period of 1997-2012.]

Source: Author’s own calculations based on STAR data

The slow increase in labor force participation among older men can also be seen in other European countries, for instance in Norway, the United Kingdom, and Germany (Figure 12). Spain and France are lacking behind, and have

\(^{11}\) Data is derived from the register data collection Sweden in Time: Activities and Relations, which is presented in a separate chapter.
a low labor force participation rate among older men. Similar trends are displayed in Figure 13, where employment rates of women aged 65-69 are shown. Overall, older women have participated to a much lower extent in the labor market after age 65 in most countries except Sweden during the past decade, when approximately 20 percent of women and 25 percent of men were employed.

Older individuals continue working after receiving a pension or without receiving a pension for financial reasons and non-financial reasons. For instance, financial reasons could be to increase future retirement pension entitlements, which would provide sufficient personal or household income. Non-financial reasons could be that job is rewarding and satisfying. Not all individuals may continue to work to higher ages, but those individuals who continue working up to higher ages are a select group. Past studies have found that it is mainly men, and those who are well educated and have advantaged economic circumstances, like self-employed and employers, and those who have better health who continue working past statutory retirement ages (Klevmarken, 2010; Komp, Tilburg van, & Broese van Groenou, 2010; Wahren-dorf, Akinwale, Landy, Matthews, & Blane, 2017). Moreover, in order for employees to prolong working life, workplaces must develop and adopt strategies that encourage older employees to continue working, for instance, through flexible work arrangements and job redesign. Also, keeping older employees employment longer is not only beneficial for the economy, but also for the employers (Patrickson & Hartmann, 1998)

Figure 12. Employment rates of men aged 65-69 in Sweden, Norway, Spain, France, Germany and the UK from 2000-2016

![Graph showing employment rates of men aged 65-69 in various European countries from 2000 to 2016.](source: OECD (Labour Force Surveys))
Figure 13. Employment rates of women aged 65-69 in Sweden, Norway, Spain, France, Germany and the UK from 2000-2016

Source: OECD (Labour Force Surveys)
Theoretical perspectives on retirement transition

The introduction of pension systems has formed a central life stage between adulthood and old age, i.e., retirement. In the late 1970s, Atchley (1976) created a theoretical model that aimed to summarize the progress of phases occurring before and after transition to retirement (Figure 14). According to the model, the process to retirement starts many years before the actual retirement transition, which is considered a vague event. With increasing age, retirement is recognized as a closely upcoming even that must be planned for, and individuals tend to be ambivalent to retire. Just after retirement transition, retirees are euphoric of the newly gained free time. However, when the honeymoon phase has passed and retirees face the reality of everyday life, they may experience emotional setbacks. By adaptation to, for instance, constrained economic conditions, retirees may adapt to the new life situation and view everyday life in a more realistic way. After reorientation and adaptation, the retirees enter a stable phase of life at retirement. Many retirees will eventually lose independence due to illness or disability, and finally death (Atchley, 1976). The model does not include a timeframe, which suggests that the length of the phases may be different for each individual. Moreover, it has been empirically evaluated in many studies over the years, and with mixed results. Only a few studies have been able to find these patterns of phases after retirement (Reitzes & Mutran, 2004); however, Atchley’s model can give a perspective of the various spheres that influence the decision to retire, which is not an easy decision regarding a move from one state to another. In contrast, it may be a very long process, in which the individual goes through several stages, before and after transitioning.

Figure 14. Atchley’s model of retirement phases

<table>
<thead>
<tr>
<th>Remote phase</th>
<th>Near phase</th>
<th>Honeymoon phase</th>
<th>Disenchantment phase</th>
<th>Reorientation phase</th>
<th>Stability phase</th>
<th>Termination phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preretirement</td>
<td>Retirement event</td>
<td>Retirement</td>
<td>Death</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Atchley (1976, p. 64)
For a long time, the life course was considered to be more or less universal with chronologized key events, most often age-graded: birth, school age, adolescence, young adulthood, post-parental, old-age, and death (Duvall, 1957; Hill & Rodgers, 1964). The demographic changes that have occurred over the last 100 years have changed the life trajectories and made them less uniform and more complex. Hence, models such as the one Atchley proposed, are hard to apply on life courses in contemporary times. For instance, the age of a first marriage or childbearing (Statistics Sweden, 2017, 2017), and enrollment in higher education has been postponed, as well as middle-aged and older adults are enrolling or re-enrolling in education. What has occurred is the life course has become increasingly de-standardized for both women and men (Settersten, 1999; Widmer & Ritschar, 2009), which means that the life course is flexible and, consequently, there are multiple pathways into and through retirement. Retirement transition has also become more blurred, as pension plans and labor markets have increasingly become individualized and flexible (e.g., flexible retirement ages, disability/early pension, and part-time incentives) (Lee & Mason, 2010; Shuey & O’Rand, 2006) Quinn 2000). In addition, bridge employment (Ruhm, 1990), labor force reentry (Reimers & Honig, 1993; Skoog & Ciecka, 2010), and changes in working hours further complicate who is defined as retired or, working and when the onset of old-age begins. Hence, the decision making for retirement has shown to extend over a considerable period (Ekerdt, De Viney, & Kosloski, 1996). Nonetheless, retirement transition is a major, and complex, life event in later adult life, which typically, but necessarily, ends individuals’ working life. It is a socially structured given, which older employees are more or less conscious about and need to cope with (Feldman, 1994; Kohli, 1986).

Explaining retirement timing

There are several theories explaining older individuals’ labor market participation and retirement behavior. This section describes and discusses three of the most commonly applied theories: the push and pull perspective, rational choice theory and life-course theory.

First, the push and pull perspective has often been applied in retirement research (Terry A. Beehr, Glazer, Nelson, & Farmer, 2000; De Preter, Van Looy, & Mortelmans, 2013; Lund & Villadsen, 2005; Noone, O’Loughlin, & Kendig, 2013; Shultz, Morton, & Weckerle, 1998; Stattin, 2005). Push factors have been defined as negative considerations (constraints), and pull factors have been defined as positive considerations (incentives). Both can be individual level factors or macro-level factors. What may be a push or pull factor is defined by the individual, and the individual’s perception of pushes and pulls is shaped by the context of personal, family and work characteristics. The basic idea is that there are pull or push factors that influence individuals’ actions and decisions, the theory is widely used in other research areas where there is some type of transition, such as migration (Stimson & McCrea, 2004).
Within the context of retirement timing, pull factors influence how individuals voluntarily decide to leave the labor market because retirement is perceived as equal or more gainful compared to work. This means that the pension benefits, such as early retirement programs, are crucial factors as individuals are pulled out of the labor market due to generous social benefit programs and financial incentives (OECD, 2006). Leaving the labor market can also be attractive for various non-financial reasons, for instance, the desire to pursue hobbies or leisure, or engage in family time. Caring obligations for a disabled spouse may also push an individual to retire (Dentinger & Clarkberg, 2002).

Regardless of individual preferences, not all individuals have the opportunity to decide on their own whether to retire or continue to work. Some individuals are involuntarily pushed out of the labor force, for instance due to poor health, unemployment, dislike of one’s job, or workplace and labor market characteristics. The literature shows that low socioeconomic groups are more vulnerable to push factors when approaching age of retirement than higher socioeconomic groups, in particular regarding very early retirement (Jensen, 2004).

Moreover, one combination of pushes and pulls can lead to a feeling that one has been forced out of a satisfying career (Williamson et al. 1992), while another combination of pushes and pulls can lead to a perception that one had an excellent career and has now willingly chosen to retire (Hardy & Quadagno, 1995). At the same time, the same combination of factors may have a different influence on different employees.

Second, rational choice theory suggests that individuals’ actions are rational, calculated, and, according to some theoretical strands, selfish (Friedman & Hechter, 1988). All actions (i.e., decisions) are rationally motivated, even those that may seem irrational to others. Individuals are selfish because they choose the option that gives them the greatest reward or satisfaction (Scott, 2000). Others argue that agents do not have to be selfish, but motivated by self-interest.

Critics of rational choice theory often argue that individuals do not have the perfect information to make rational choices. However, rational choice suggests that individuals act within specific constraints and based on limited information, which makes the information they have good enough to make rational choices, and hence, the decision will be rational (England & Kilbourne, 1990). Individuals base their choices on what has been called “bounded rationality” (Simon, 1955).

In relation to retirement decisions, rational choice theory suggests that individuals weigh the cost of leaving the labor force against the benefits of retirement and that they understand the consequences of their actions. For instance, individuals measure the value of work versus family and leisure time, and choose the option that gives them the greatest utility (Bengtson & Athen, 1993; Feldman, 1994; Moen, Sweet, & Swisher, 2005; Ruhm, 1996; Szinovacz & Deviney, 2000). Critics argue that rational choice does not take into
consideration what individuals want or their preferences and tastes, but it only
looks at the rationality behind individuals’ calculated actions to maximize
their utility. For instance, individuals may consider their expected postretire-
ment pension benefits before deciding when to retire (Fronstin, 1999; Honig,
1998). Individuals’ actions are sometimes impulsive, emotional or forced,
which does not make individuals the calculating and informed agents that the
rational choice theorists assume them to be (Hechter & Kanazawa, 1997).
However, retirement might most likely not be an impulsive action, and many
older employees do not retire because of generous pension provisions, but be-
cause of a lack of alternatives (van Solinge & Henkens, 2007). They may be
forced to retire due to poor health or reaching the age when retirement often
occurs, diminishing the calculating of choice between work and retirement
(Kalwij & Vermeulen, 2008; van Solinge & Henkens, 2007), yet to retire
would be explained as a rational choice by rational choices advocates.

A challenge of the application of the push and pull perspective and rational
choice theory is data limitations, in particular when using register data. Not
all survey data include information on motivations to retire or various prefer-
ences, which thus does not allow elaboration on what the most rational deci-
sion would be or why it is the most rational decision. Similarly, such data
limitations also do not allow elaboration on what pushed or pulled the indi-
vidual to leave or stay in the labor force. Instead, in such research designs,
researchers must rather make adequate theoretical assumptions based on ear-
lier empirical findings.

The third perspective is the life-course perspective, which emphasizes that
“individuals construct their own life course through the choices and actions
they take within the opportunities and constraints of history and social cir-
cumstances” (Elder, 1999, p. 961). There are two central concepts in the life-
course perspective: transitions and trajectories. Transitions are always embed-
ded in trajectories that give them distinctive forms and meanings, and trac-
jectories are shaped by past and future transitions. A trajectory is a line of devel-
opment over the life course, such as parenthood, work life, or retirement. Tra-
jectories refer to long-term patterns of behavior and are marked by a sequence
of transitions. Transitions are marked by life events, such as getting a first job,
having a first child, or the retirement transition, embedded in trajectories, and
they evolve over short time spans (Elder, 1994, 1999).

One principle of the life-course perspective is that individuals’ lives are
dependent on the lives of close family members, such as spouses, and on ver-
tical relations, such as those with parents, children, and grandchildren. An in-
dividual is typically connected to family members, friends, and significant
others, where social influences flow through these connections (Elder 1998).
In addition, the life-course perspective postulates that the work and family
spheres are closely intertwined. Specifically, the life courses of women and
men are different and generate gender-related work patterns (Elder, 1994,
In relation to retirement decisions, life-course theory explains that retirement decisions are not based only on individuals’ own current characteristics but are also influenced by the individuals’ family and work situation and the social relations within the family over the entire life course. Retirement is part of a life phase where past experiences matter; for instance, earlier family roles may constrain later family and work related roles (Elder, 1994; Szinovacz, DeViney, & Davey, 2001). For instance, individuals may retire due to caregiving purposes (Hayward et al. 1998), and as it is traditionally women that engage in the caregiving of family members over the course of life, it is also often women that retire due to caregiving obligations (Dentinger & Clarkberg, 2002). It is also possible that earlier social relations at the work place influence retirement timing.

While rational choice and push and pull theories take a snapshot to look at what factors influence retirement decisions, the life-course perspective focuses on the dynamic and temporal dimensions of individual lives and societal structure. In other words, a life-course perspective could be a movie that captures the unfolding of lives over time. One challenging aspect of the life-course perspective is that it is difficult to capture these temporal and dynamic dimensions of individuals’ lives. An ideal life-course approach and modeling would include long-term or lifelong observations, or at least snapshots from earlier life transitions and trajectories, as well as institutional dimensions. Many researchers use longitudinal data but often the information is more of a “cross-sectional” character (e.g., exceptions Alwin & Krosnick, 1991). Including a few snapshots from earlier transitions would perhaps not be defined as taking a life-course approach.

There are also other less applied theories, which can help to explain retirement transition, such as the disengagement theory. The disengagement theory assumes that the individual gradually and inevitably disengages from the society when growing old, while in the same time the society rejects the aging individual. This process is a natural preparation for death associated with satisfaction and inner harmony (Tornstam, 1989). However, the theory has been highly criticized for being controversial (Achenbaum & Bengtson, 1994). Nonetheless, it has been widely applied to different topics related to older individuals over the years (Mein, Higgs, Ferrie, & Stansfeld, 1998; Nimrod, 2007; Utz, Carr, Nesse, & Wortman, 2002). In relation to retirement transition, the theory suggests that individuals approaching late adulthood are ready to disengage from their occupation and working life (Prasad, 1964).

One of the shared features of the theoretical perspectives introduced here is that the pathways to retirement are diverse, complex and contingent.
Previous empirical findings on retirement timing

Retirement timing has been studied for many decades worldwide, and the literature can be traced back to the 1950s. In early retirement studies, the main study object was men, and sometimes a selection of working women. Along with women’s increasing participation in the labor force, and their gains of pension rights, women have been included in the retirement research.

Retirement timing is a multidisciplinary concept, and empirical findings on retirement timing can be found in, e.g., the sociological, demographic, economic, and gerontological literature. The retirement transition is a complex multifaceted decision, and past research has shown that many factors influence retirement timing simultaneously. This section makes a brief overview of some predictors of retirement timing, in order to put the thesis’s four empirical studies in a context of what has previously been done. This is in no way an exhaustive overview.

Individuals’ decision to retire and the timing of retirement are embedded in social and organizational policy and practices, such as regulation of pension age (Barnes-Farell, 2003; French, 2005; Moen, 1996). Expected public and private pensions also affect retirement decisions (Coile & Gruber, 2007; Fronstin, 1999). In addition, economic resources and health status are major predictors of retirement timing (Karlstrom, Palme, & Svensson, 2004). Health has, in relation to retirement transition, been studied from many different aspects, including subjective health, sick-leave benefit usage, various diseases and disabilities. It is well known that poor health, in many forms, is influencing early retirement. For instance, depressed older employees are more likely to retire early than those without depression (Karpansalo et al., 2005). Health status is also highly intertwined with earnings and occupation, as well as social class.

Moreover, individuals are generally more likely to retire if they can financially afford it. However, individuals with small earnings, low education levels, low occupation status and low social class tend to retire early, as it is most likely those individuals who have had highly physically demanding occupations with low autonomy in the tasks and poor health (Adams, Prescher, Beehr, & Lepisto, 2002; Blekesaune & Solem, 2005; Radl, 2013). Also, studies have found that working class individuals tend to retire earlier than those of the service class (Blossfield, Buchholz, & Kurz, 2011). However, it is also
those individuals who may need to continue working to achieve greater pension contributions. Individuals with high earnings, greater occupation status and higher social class may be able to afford to retire early, but they may also engage in occupations that are more rewarding, not only economically but having occupational prestige. They may also have a greater social pressure to continue working up to higher ages, disregarding their health status. Moreover, older employees may also feel forced to retire due to various situations in the workplace that push the employees out of labor (Dennis & Thomas, 2007; Tougas, Lagacé, Sablonnière, & Kocum, 2004). Long-distance commuting has also shown to influence the retirement transition (Bäckström, Sandow, & Westerlund, 2016). Additionally, individuals with long unemployment spells, in particular at older ages, also have a higher tendency to retire earlier (Beehr & Bennett, 2008; Drobnič, 2002).

Other factors influencing individuals’ retirement decision are attitudes toward retirement and work. For instance, individuals who have greater job satisfaction are less likely to retire (Axelrad & McNamara, 2017), as well as those who feel committed to their workplace (Schmidt & Lee, 2008; Taylor & Shore, 1995).

Women and men participate differently in the labor market, and they most often have different family roles and commitments, which generate gender differences in retirement timing (Lee, 2005). Women have been shown to retire earlier than men, which is often due to having low-income occupations or family obligations. However, these effects differed substantially based on, e.g., education level, economic status, family background, and country context (Ni Léime, 2017; Radl, 2013).

The retirement decision has been shown to be a family matter influenced not only by the spouse but also by other family members and relatives. Married and unmarried individuals may not necessarily have the similar retirement behaviors, but the influence of relationship status on retirement timing varies greatly across genders (Drobnič, 2002). For instance, married couples tend to coordinate retirement timing (Ho & Raymo, 2009). Wives tend to follow their husbands (Henkens & Solinge, 2002). Also, greater marital satisfaction enhance retirement potentially as it may be an source of social and emotional support (Reitzes, Mutran, & Fernandez, 1998). There are also various of spousal characteristic that influence retirement, such as size of spouse’s pension benefits and income. Some studies have found that spouse’s earnings matters for retirement timing (Blau & Riphahn, 1999), whereas other studies have not found no effect of a spouse’s income on retirement intentions (Henkens, 1999).

Furthermore, some studies have also emphasized that having young children most often postpones retirement due to economic dependency of the children (Dentinger & Clarkberg, 2002; O’Rand, Henretta, & Krecker, 1992; Talaga & Beehr, 1995). Family size may also increase financial pressure on mothers and fathers, which discourages retirement for both. Hence, the number of
children and age at first birth are also important factors in relation to retirement timing (Choi, 2002). Moreover, the role of caregiving is also central for retirement timing, particularly among women (Talaga & Beehr, 1995; Zimmerman, Mitchell, Wister, & Gutman, 2000). For instance, retirement timing has been shown to be influenced by grandchildren, particularly among women, as grandparents are valuable caregivers (Van Bavel & De Winter, 2013). Other family-related circumstances that influence retirement transition are care for elderly parents (Bolin et al., 2008; Hatch & Thompson, 1992; Moen, Robison, & Fields, 1994).

In addition, past studies have found that various of other engagement may influence timing of retirement transition. For instance, earlier findings show an upcoming trend of retirees, mostly upper middle class, who, after retirement, choose to temporary move to a country with a more favorable climate during on part of the year and the rest of the year they live in their home-country (King, Warnes, & Williams, 1998), which may motivate them to retire earlier.

In summary, previous empirical findings show that the retirement transition is anchored in long-term work and family commitments. There are also various late-life events and situations that mitigate or reinforce the influence of the enduring impacts of early personal, family and work characteristics. For instance, late-life disability may be a strong influence in early retirement, even among those high earners who in a situation without disability would be keener to postpone retirement. Therefore, to fully understand retirement transitions, both institutional and individual characteristics must be observed, which are traced simultaneously over an extended period of biographical time.
Life after the retirement transition

What is central to have in mind in the studying of retirement transition is that retirement is for most individuals the start of a new life phase, which many look forward to beginning (Laslett, 1987; Rubinstein, 2002). Late life has dramatically changed over the 20th century, and older individuals have generally become healthier and wealthier and are more likely to live longer. As retirement transitions often occur in the early or mid-60s, retirees have relatively many years left to live before the onset of the more severe age-imposed disability and finally death. These demographic and societal changes have consequently led theorists and researchers to recognize a new late life stage, “the Third Age” (Hubbard, 1976; Laslett, 1987, 1989), mainly applying to cohorts born after the Second World War (Gilleard & Higgs, 2007; Laslett, 1987). This stage typically begins after retirement transition, when individuals are post career and family rearing and, therefore, have fewer obligations. It is often portrayed as a time when individuals can more extensively engage in hobbies, leisure activities, travelling, family, friends, or in voluntary work, which previous empirical studies have continuously confirmed. For instance, Jonsson, Kielhofner and Borell (Hans Jonsson, Kielhofner, & Borell, 1997) studied how women and men aged 63, living in a suburb in Stockholm, and who were about to retire, anticipate their retirement as part of a longitudinal 10-year project on the retirement process. One of the employees said:

“Well, I think that I’ll do well filling up my retirement and my leisure time. And I can’t say that it won’t be nice. I guess I can look forward to when I can be engaged in my leisure activities.” (Quote from Jonsson, Kielhofner and Borell 1997, p. 54)

Indeed, past studies have found that on average, older adults are more satisfied with their lives than either middle or young adults (Mroczek & Spiro, 2005). Linking to the research project by Jonsson et al. (1997), Jonsson (2005) did a follow-up study on the same women and men but after retirement transition. One of the retirees confirmed their own retirement expectations, after transitioning to retirement:

“...well you have prepared for this time, you have planned what to do and what activities to be occupied in. In addition, that has come true, just as I thought it should be.” (Quote from Jonsson 2005, p. 171)
However, critics have argued that “third agers” comprise predominately healthy and wealthy men (Bury, 1995; Gilleard & Higgs, 2002). Therefore, the positive picture of the third age and “third agers” may be somewhat skewed as older adults may not be healthy, or wealthy when entering retirement and thus may not be able to afford to engage in various non-work activities. For instance, past findings have revealed that individuals with greater socio-economic resources are less likely to experience retirement-related change in leisure satisfaction than individuals with lower socio-economic resources (Pinquart & Schindler, 2007). Studies have also shown that retirees, in particular women, continue to have burdening obligations after leaving the labor force, such as taking care of a spouse, grandchildren or elderly parents (Dow & Meyer, 2010; S. Lee, Colditz, Berkman, & Kawachi, 2003; Lumsdaine & Vermeer, 2015; Ulmanen & Szebehely, 2015). Leaving the labor force, may also have a negative impact on retirees’ health, as, for instance, losing the work role may negatively influence psychological well-being (Kim & Moen, 2002), yet empirical findings have found that retirement can have both beneficial and adverse effects on health (Insler, 2014; van der Heide, van Rijn, Robroek, Burdorf, & Proper, 2013).

Although retirement may be portrayed as a joyful event and a time for leisure and family for many older individuals, the period from retirement transition to death is, of course, not all positive. For instance, in a qualitative study by Robinson et al. (2011) on the experience of becoming retired in the UK, one of the retirees said:

“You’re retired, the future is death. Being retired you’re history.”

(Quote from Robinson, Demetre, & Corney, 2011, p. 251)

In one perspective, retirement may precede old age. Most older individuals who survive to very old ages will irreversibly become frail, demented or disabled with increasing age (Baltes & Smith, 2003). Past studies have therefore distinguished between the young old and the oldest old (Neugarten, 1974; Suzman, Willis, & Manton, 1992), and between the third age and fourth age (Baltes & Smith, 2003; Laslett, 1994). There is no clear cut-off age when the third age ends and when the fourth age begins; the boundary is dynamic and may vary across countries, but some researchers have suggested age 85 (Baltes & Smith, 2003; Suzman et al., 1992), which is approximately the mean age of receiving help with activities of daily living in Sweden (Hellström, Anderson, & Hallberg, 2004).
Sweden is a highly interesting case to study retirement timing due to the access to its high quality longitudinal data. The studies in this thesis make use of two data types, survey data and administrative population register data. Study I uses the longitudinal Swedish Level-of-Living survey, and Studies II-IV use Swedish administrative population register data. Below is a short description of the two data sources, as well as the advantages and disadvantages of the sources. The section also includes a discussion on how retirement has been operationalized in the four studies and how other researchers have done.

Swedish Level-of-Living survey
The Swedish Level-of-Living survey, LNU, is a nationally representative sample of the Swedish population aged 18–75 years. The survey is one of the longest running longitudinal social science surveys in the world. The first survey was conducted in 1968, followed by surveys in 1974, 1981, 1991, 2000 and 2010. These surveys followed a panel over time, while adding younger individuals and immigrants to maintain the nationally representative character of the sample. When respondents from the panel reach 75, they are transferred to another study, SWEOLD, which includes people aged 76 and older. This makes it possible to study individuals from their young adulthood to very old ages. Both LNU and SWEOLD include data on many life domains, such as questions about working life, family relations, health, leisure participation, and other living conditions. The data are complemented by register data. Most of the questions are identical iterations, which makes it possible to observe changes over time. For some years, additional LNU data are available for children and partners. The data are collected by Statistics Sweden, and maintained by the Swedish Institute for Social Research at Stockholm University (www.sofi.su.se). It is a data source of high quality and has been used for numerous studies on various topics. In addition, it has a great set up for studying retirement timing as it has a wide range of variables that previously have shown to be important for retirement timing.

Study I in this thesis focuses on leisure engagement before retirement and retirement timing, as well as whether engagement in leisure activities changes after retirement transition. It uses a panel that had at least two waves in 1981, 1991, 2000 and 2010. It is very useful to use the panel, as it is possible to
follow individuals over time and makes it easier to study underlying factors for different outcomes, such as how leisure engagement earlier in life is associated with retirement timing. The data include a wide range of detailed questions on leisure engagement, and thus capture to a great extent the diversity of leisure engagement patterns among the Swedish population. The questions are nearly identical in all of the iterations, thereby facilitating comparisons over a very long period of time. The range of leisure activities has been used in several studies, and it is representative of the most popular leisure activities for the Swedish population. In this study, it is the first time that questions on leisure activities from the 2010 wave were used.

Swedish administrative population register data

Sweden has been a forerunner of population records and has had records since the 17th century. At that time, the records were collected by the church and comprised mainly births, deaths, marriages and divorces. Over time, the records have been widely expanded and comprise a large variety of records, such as earnings, education, hospitalizations, parental leave use, deaths, biomarkers, and drug prescriptions. The records are collected by various administrative authorities, institutions, hospitals, organizations and agencies.

Studies II-IV in this thesis use the Swedish administrative population register data drawn from the collection of registers Sweden in Time: Activities and Relations (STAR), organized by the Stockholm University Demography Unit and compiled by Statistics Sweden. It covers the entire Swedish population in a given year. The data is of high quality, and it is possible to follow individuals for several decades. Each person has a unique identification number, which makes it possible to link different registers. The identification number is generated by Statistics Sweden, which has the key that links each individual to their personal identification number. Using the identification number generated by Statistics Sweden, it is possible to follow each individual through various life events. For instance, the data include several central demographic events, such as births, deaths, marriages, divorces, education and migration. These events are accurately registered by year and month of the event if it occurred in Sweden. The data also contain a large amount of socio-economic information, such as labor-market earnings, pension benefits, education, social-security benefits, and occupation. Some information is accumulated over one calendar year (e.g., the number of days with sick-leave benefits), and some information is recorded with exact date of occurrence (e.g., exact date of marriages and deaths).

By using the multigenerational registers, it is possible to link family members and generate large vertical and horizontal generational family trees, for instance linking children to their parents or siblings, or linking spouses (Statistics Sweden, 2011a). Overall, it is not possible to link partners in cohabiting
couples. Until 2011, it was only possible to link unmarried individuals if they had children together\(^{12}\). When two individuals have children together and are registered at the same property (share the same unique property number), they are considered to be living together. This method is a common and validated means to estimate cohabiting parents in Swedish register data (Thomson & Eriksson, 2013). Moreover, it is possible that those registered as divorced, never married and widows/widowers are in a relationship or live together with a partner but not with the other parent of the child(ren), which suggests that the registers underestimate the number of individuals who cohabitate, and there is no information of so-called LAT-relationships (live-apart-together).

For this reason, it can be problematic to study cohabitating couples without shared children using the registers. In Study II, which focuses on grandparenthood, this information would be of value, as it may be significantly different to live with a partner compared to living without a partner, particularly from an economic perspective. Moreover, as the registers include only individuals registered in Sweden, children born abroad by Swedish citizens and never registered in Sweden will be therefore missing.

There are several benefits of using register data. First, there is no need to wait for the data to be collected. Second, there is small risk of error in the data. For instance, individuals’ earnings are reported to the National Tax Agency by employers, the National Pension Agency or the Swedish Social Insurance Agency. Third, it is possible to study entire populations and subgroups as the number of observations often are large enough for statistical analyses.

Operationalization of retirement timing

When thinking about retirement, most people probably define retirement as withdrawal from paid labor. Although this is not wrong, this definition is not precise. In many cases, it is difficult to estimate the timing when in the individuals’ life the transition actually occurred, and the transition to retirement is not always clear-cut. Some individuals retire permanently, but some retire from one occupation, and begin a new career or they retire gradually.

The retirement literature applies a variety of definitions, and there is no harmonized definition in the retirement literature, which researchers have discussed for several decades. However, there are, to my knowledge, only three studies that discuss this in detail (Denton & Spencer, 2009; Ekerdt & Deviney, 1990; Lazear, 1986). Determining how to define retirement is highly conditioned on the available data, as well as on the research question. In neither the survey data nor register data is it self-evident how to define an individual’s retirement status.

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\(^{12}\) Since 2011, Sweden has had a new household register, which includes information on all citizens’ residential addresses. This register makes it possible to study all cohabiting couples, as well as many other housing-related topics. However, during this study, this data source was not available.
Survey data

Denton and Spencer (2009) conducted a meta-analysis on applied measures of retirement timing mainly in Canadian and American studies. They found that the social science literature contains a wide range of definitions of retirement timing, or indicators of retirement, often based on one criterion. In a study on joint retirement among U.S. couples, Gustman and Steinmeier (2000) defined retirement by the amount of hours worked per week. When studying retirement exits in Germany, (Drobnič, 2002), defined retirement as when an individual declares to be retired responding to a multiple answer question that, he or she was not employed full time or unemployed. De Preter et al. (2013) used a similar definition in their comparative European study where they investigated how retirement decisions are influenced by work or by the interplay between work and familial, educational, and leisure life. Nordenmark and Stattin (2009) used Swedish survey data to study reasons for retirement and psychosocial well-being and defined retirees by the age at which they reported to have retired. These four examples may seem to be rather straightforward but are dependent on the respondents’ subjective perception of being retired.

Considering retirement as a process, individuals will, at some point, consider themselves as retired, even if the retiree is still engaging in paid labor. It is possible to nuance the definition by applying more than one criteria when defining respondents as retired. For instance, (Drobnič, 2002) additionally conditioned the definition by conditioning retirement as not being engaged in full-time employment or unemployment. Another disadvantage with using self-defined retirement is that it cannot be fully integrated with work histories, if there is no work history in the survey data. Additionally, it does not take into account withdrawal of pension benefits, which often is the primary indicator of retirement transition.

In Study I in this thesis, which is based on the survey data (LNU), retirement timing is used both as an outcome, and as independent variable. In the survey, the respondents state the year of retirement. Thereafter, the age of retirement is calculated by subtracting the year of retirement by the year of birth. One major benefit of using retirement year in the survey is that it is the self-experienced transition to retirement, and the researcher does not have to impose hers or his presumptions. However, the respondent might forget the accurate date when of retirement, particularly if the transition occurred many years earlier. Similar to surveys with multiple answer questions, this measure might also be somewhat problematic if respondents do not have any possibility of nuancing their response; here, they are either retired or not retired. However, it is well known that individuals often continue to work part time, or decide to re-enter employment after their first retirement.
Administrative register data

There is a large body of literature, predominantly on Sweden and the other Nordic countries, that uses administrative register data to study the retirement transition. In these studies, retirement transition has often been estimated using individuals’ annual earnings from the labor market and social benefits. For instance, Johansson, Laun and Palme (2014) use information on income from labor to define the year of labor force exit. They define a employee as retired if the employee has not been employed for two consecutive years and the retirement age is the age in the last year of employment. Palme and Svensson (2004) applied two measures to estimate full-time retirement. An individual was defined as full-time retired the first year when their income from a variety of pension and social benefits exceeded 80 percent. They concluded that the second measure, earnings-from-labor definition of retirement, was most useful, and therefore continued the analyses using this measure to describe the transition to full-time retirement. Örestig, Strandh, and Stattin (2013), use survey data compiled with register data on earnings. They applied a similar definition as Palme and Svensson (Palme & Svensson, 2004), but excluded those receiving disability pensions. They defined an employee as retired when he or she received 80 percent or more from old-age pension or, occupational pension in relation to the total sum of income for at least two consecutive years. In addition, Statistics Sweden (2011) conducted a report on the transition from working life to retirement among those cohorts born between 1930 and 1940. They defined the age of retirement, as the age when the employee received pension benefits that equaled or exceeded 50 percent of annual earnings for the first time. Stenberg et al. (2012), Svensson et al. (2015) and Bäckström et al.(2016) used yet another definition and defined retirement as the first year the annual income from pensions exceeded income from annual labor earnings. Stenberg et al. (2012) did additional robustness checks with alternative definitions, for instance, the first year when pension benefits were higher than 0, Bäckström et al. (2015) also tested alternative definitions of retirement transition, a pension income, which exceeded 40 percent, alternatively, 60 percent of total income. Both Bäckström et al. (2016) and Stenberg et al. (2012), conclude that none of their alternative definitions changed their main results. International studies that used register data have applied similar measures. For instance, Bleksaune and Solem (2005), who used Norwegian register data, defined retirement by a sufficient drop in work-related income. Additionally, Statistic Canada’s standard definition of a retired person is when the person is 55 or older, is not in the labor force, and receives 50 percent or more of his or her total income from pension-like sources (Bowlby, 2007).

Studies II and III in this thesis are based on administrative population registers where the outcome is retirement transition. Study IV uses the same data, but the outcome is on the difference in years in retirement timing between spouses. Before calculating difference in years in retirement timing, we had to separately estimate the timing of retirement for each spouse. In all three
studies, retirement timing is defined as the first year when pension is equal to or exceeds 50 percent of the total yearly earnings, including old-age public pension, early pension, unemployment benefits and employment income. Unemployment benefits are included in order to not underestimate labor market activity, as individuals may receive unemployment benefits during a transition period from employment to retirement. Old-age pension benefits are the sum of the income pension, premium pension, occupational pension, supplement pension, flat benefit, private pension, guaranteed pension, and part-time pension. Using this measure, it is not possible to estimate how much the individual actually engages in paid labor or retirement. It is possible that the individual has a very low employment income compared to pension. In addition, as earnings are updated once per year, December 31st, it is therefore not possible to know when during the year the individual retired, only that the individual has retired sometime during that year. It is also not possible to estimate the length of time they have received their pension or during what periods over the given year.

There are several benefits of using register data when defining retirement timing. First, register data may be considered to be more objective compared to survey data, which are more reliant on respondents’ perceptions. Using individuals’ earnings to define retirement also indicate how these individuals are linked to the labor market compared to using, for instance, a self-assessed definition. Second, it is useful to have annual updated information in cases where accuracy is important and the information can change substantially over time (e.g., level of income and sources of income), yet, the latter may also be a negative aspect of using register data when defining retirement. It may be difficult to use earnings information, as many individuals receive pensions while remaining in the labor force and continuing to work. Third, the Swedish pension system has various pension policies (age eligibility of receiving benefits) and parts of the pensions (e.g., occupational pension, private pension), which further complicate the definition. Using earnings information may also be sensitive to changes over time, particularly changes in the generosity of pension benefits and type of benefits, such as early retirement regulations. In addition, when studying retirement transitions over time, it is also important to be sensitive to changes in regulations on eligibility ages when defining retirement. For instance, until 2001, the mandatory retirement age was 65, and after the new system was introduced, the retirement age has become flexible from age 61. This implies that in the former system, age 62 would be considered as early retirement, whereas in the new system it might not be.
How retirement is defined is not only central for the research design but also for employees, employers and policymakers. It may have consequences on what conclusions are drawn from the empirical evidence and for which populations’ retirement behaviors they explain. It would be beneficial to have a harmonized definition of retirement timing, to be able to compare retirement patterns over time and across different populations, or data sets. However, using a variety of definitions of retirement timing in both survey data and register data, is informative, as individuals’ labor market exits are not identical. For instance, some survey data include the question whether the respondent is retired, which ignores other activity statuses the respondents simultaneously may engage in. Using this measure can also be problematic, as it is not a good indicator of the respondent’s potential economic contribution, but more a subjective indicator of how the respondent defines him or herself. The respondent could be engaged in paid labor while being on partial retirement. From an economic perspective, earnings information may be of greater value. Hence, retirement research benefits from using both subjective and objective indicators of retirement transitions, which can complement each other and reflect both individual’s perception, and the individual’s attachment to the market economy and dependency on the pension system. A benefit of using both register data and survey data is that it is possible to complement previous studies, and, for instance, tests by national level associations that have been positively linked to retirement timing in survey data or qualitative studies. For example, previous research has found a positive link between grandparenthood and retirement timing using self-reported retirement age, and Study 2 in this thesis confirms these findings on a national level with an earnings-related measure of retirement.
Summary of the empirical studies

Study I
Retirement and Leisure: A longitudinal Study using Swedish Data
Kridahl (2015)

This study explores the relationship between leisure engagement and retirement timing, and how engagement in leisure activities changes shortly after retirement in Sweden. The study uses Swedish Level-of-Living survey collected between 1981 and 2010. The sample consist of 2875 individuals born between 1915 and 1952. The definition of engagement is based on a quantitative estimation of the frequency of a particular activity (i.e. never, sometimes, or often). Results from the factor analysis revealed five leisure activity domains: cultural activities, social relationships, political activity hobbies and study circles, dance and music and gardening and church activities. Engagement in leisure activity domains before retirement is explored in relation to retirement timing using discrete-time survival analysis, that is, complementary log–log models. For investigating engagement in leisure activities before and after retirement, multinomial logistic regression is used. Results from binary models reveal that engagement in leisure before retirement was associated with retirement timing. However, with the inclusion period of retirement, leisure engagement did not retain its significance. The only association that remains is dance and music; i.e. engagement in dance and music was associated with a postponement of retirement. The specific leisure activities which were related to earlier retirement were frequent engagement in cultural activities and in gardening and church activities; whereas the activities which were associated with a postponement of retirement were social relationships, political activities, study circles, hobbies, dance and music, and modest levels of engagement in gardening and church activities. The second explored association was that of leisure activities before and after retirement, using a subsample that included only those who had retired. The overall pattern indicating that individuals tend to have the same level of engagement before and after retirement. Individuals were more likely to increase their engagement after retirement if they had sometimes engaged in the activity domains before retirement. To conclude, the study’s findings indicate that individuals do not enter retirement with the same tendency to be active. Also the findings show that it is important that people are exposed to leisure activities before retirement if the aim is to encourage them to participate in activities after retirement.
Study II
Retirement Timing and Grandparenthood in Sweden: Evidence from Population-Based Register Data
Kridahl (2017)

This study investigates retirement timing in relation to grandparenthood in Sweden, in particular being a grandparent, age and gender of the grandparent, years since transition to grandparenthood, number of grandchildren, number of grandchild sets, and age of the youngest grandchild. This study uses Swedish population registers. The study population is the entire population born from 1935 to 1945 with at least one child. This study employs discrete-time survival analysis using complementary log–log functions. The study finds that grandparents retire earlier than non-grandparents, even after controlling for well-known predictors of retirement timing. This study found no strong evidence that grandmothers exhibit different retirement behavior than grandfathers. This study finds that grandparenthood has an independent association with retirement risk and is not merely a reflection of age. Also, the study finds that grandparenthood influences retirement among those younger than 61, and those older than 65. Moreover, the results show that grandparenthood influences very early and late retirement for those who have been grandparents for at least a few years but not for those retiring at ages 61-64. The more time that a grandparent has been a grandparent, the more complex the grandparental role can become, such as the birth of multiple grandchildren, which may enhance the risk of retirement. The number of grandchildren tends to increase the propensity to retire, but this study also reveals a higher propensity among grandparents with four or more grandchildren. Furthermore, an increasing number of grandchild sets have a gradual association with earlier retirement. In addition, the combination of various characteristics of the middle generation and the grandchildren increases with multiple grandchild sets, consequently enhancing earlier retirement. Moreover, the findings show that the older the youngest grandchild is, the earlier the grandparent retires. Although the results do not show a large difference by age, grandparents with a grandchild younger than six years of age, and in particular younger than three, are less likely to retire earlier than those with older grandchildren. The study finds evidence that grandparents at different life stages have an elevated propensity of retiring compared with non-grandparents, but there are also variations among grandparents, and the more complex the family situation, the higher the propensity of retiring. The motivation to retire among grandparents does not seem to be primarily driven by care needs; rather, it is driven more by their own needs to engage with grandchildren and their perceptions of time constraints. The results are discussed in relation to social policy as well as individual perceptions of grandparenthood, the family situation and labor force participation.
Study III
Parental Survival and Retirement Timing in the Swedish Population
Kridahl and Silverstein (2017)

This study investigates the association between retirement timing and the survival of parents in Sweden. In particular, we examine how cohorts near retirement age respond to having both parents alive, one parent deceased, or two parents deceased. We also expected the propensity to retire would be higher in the immediate period after parental death. As women’s retirement timing may be more sensitive to family demands compared with men’s retirement timing, we expect to find gender differences. This research also contributes to a broader understanding of family demands for parent care by considering the availability of siblings as a moderator of the competition between work and parental needs. Data was derived from Swedish population registers for women and men born in 1940-1945. This study employs discrete-time survival analysis using complementary log–log functions. The study finds evidence that parental survival was positively linked to retirement timing and that the association is stronger and more consistent for women than for men, particularly for women with only a mother or father alive. Additionally, women have a higher propensity of retirement in the immediate period after parental death, especially when the father was widowed. Men tend to react less on close parental death when the other parent was widowed. Instead, men had a higher propensity of retiring when either the mother or father had been widowed for some years. Moreover, siblings seem to moderate the effect of retirement, and the pattern was most noticeable among women. The findings indicate that individuals with parents who were vulnerable due to widowhood are able to work longer when they were from larger families, a finding consistent with a caregiving explanation. That the relationship is more evident among women provides support for the conclusion that care provision for parents motivates labor force disengagement in the form of retirement. The findings are robust to the inclusion of numerous control variables and sensitivity analyses, lending confidence to the conclusion that parental survival has a unique, but relatively small, influence on retirement timing. The analyses using the restricted population produced similar results as those using the full population, which lends even more credibility to our findings. As Sweden has generous welfare services, including extensive elderly care, it is not surprising that the effect is minor. The different patterns of women and men in this study may be an indication of the different motivations sons and daughters have to provide support and care to their older parents.
Study IV
Retirement Coordination among Married Couples: An Analysis using Swedish Administrative Registers from 1990 to 2012
Kridahl and Kolk (2017)

The study investigates the association between age differences and retirement coordination among married couples in Sweden. In order to investigate couples with small and large age difference the study introduces the term “retirement coordination”, which measures the degree to which couples coordinate their retirement to minimize the gap between their retirement years. The study employs Swedish population registers. The study population consists of couples in which both spouses are born between 1930 and 1947 and who married after 1967. The study uses linear regression. The stepwise approach indicates that age difference is strongly associated with retirement coordination. The likelihood of couples retiring close in time predominately occurs among couples closer in age, but the likelihood does not proportionally increase with increasing age difference. In addition, the study finds a largely similar effect of age differences on retirement coordination regardless of the magnitude of the age difference and regardless of which spouse was older. The latter indicating that retirement coordination appears to be largely gender neutral in couples with age differences. The study also provides the first evidence of retirement coordination among same-sex couples. Male same-sex couples retire closer in time than opposite-sex couples. Future research will have to confirm this study’s findings using larger statistical samples of same-sex couples. Overall, the study finds that one in three married couples retires within 0-1 year. The study finds that age difference is very important for retirement coordination and that retirement coordination is not only occurring in couples of the same ages or with small age differences. The proposed definition of retirement coordination, the difference in years in retirement timing, is an important contribution to the literature on couples’ retirement behavior and allows us to study the degree of retirement coordination among all couples, including those with larger age differences. The study provides several useful insights on retirement behavior among married couples. First, it is important to use a wider definition of retirement coordination, as a narrower definition may miss couples with large age differences but who still coordinate retirement. Second, the study demonstrates the importance of age differences to understanding the phenomenon of retirement coordination. Third, it is important to incorporate couples with different sex compositions, as same-sex unions are increasing in number and gaining rights in many family-related areas around the world. To conclude, knowing the demographic characteristics of older couples, especially considering age differences, make it possible for researchers and policy makers to more accurately predict labor force exits.
The thesis has contributed to the retirement research by investigating how engagement in leisure activities, family and intergenerational ties associate with retirement timing. Overall, none of the four studies claims any causal relationship to retirement timing. What the studies instead show is that, in parallel to socio-economic factors and age, none-economic factors in the private sphere have a non-trivial influence on retirement timing and that certain groups of individuals, such as grandparents and women with aging fathers, have a higher propensity to retire. What is additionally interesting is that some associations to retirement transition found in earlier studies using survey data, are here confirmed when investigated with register data. In a way, it confirms the purpose of being able to generalize empirical findings to entire populations by using samples of populations.

The purpose of this thesis was to study what motivates older employees to retire mainly using data that do not take into account individuals’ feelings, thoughts or attitudes. However, a large body of literature has already done that, particularly qualitative studies. While working on the introductory chapter, I found this quote in a qualitative interview study by Lo and Brown (1999), in which they examined the adjustment and adaption to retirement from paid work. The quote is from a man who was about to retire in a few months. I believe it ties to the thesis’s studies and is a good summary of some of the personal perception of retirement transition, such as worries about finances and health, as well as the anticipation of the additional time to spend with spouse and family and on leisure activities. It is an interviewee’s highly personal statement, which may not be generalized to a larger population, but nonetheless is worth reading as an epilogue to this thesis.
“Many people worry about money, and I guess people need good advice on what to do with their superannuation, property and so on, and it’s a wise thing to get such advice from a knowledgeable, trusting person. Healthwise it’s also a time for all those check ups, to see how the body is getting along. You know you may need glasses, or medication for blood pressure, or some other therapy. One big change in your life is that you will certainly spend more time with your partner—if you’re lucky enough to have a wife and family. Like so many things in your life, you and your partner help each other prepare and adjust to changes, and hopefully find happiness.

My biggest fear about retirement is the actual farewell—the afternoon tea party—as I’ve seen so many farewells. The staff often say let’s have a whip round and collect some money to buy a farewell present for ‘old Joe’. He’s been great to work with. On the other hand, I’ve heard such remarks as, ‘They will have his farewell in a phonebox. Even that may be too large.’ The farewell is so final, not a catastrophic event, but certainly breaks all work ties. I guess it’s necessary, but I’d rather fade away like the old soldier really. By the way, retirement, once you come to accept it that is, is when you start looking forward to a new lifestyle. You have more time for your garden, family and self. You look inward at yourself, try and connect to your spirituality and gain some contentment. Once resolution and acceptance of retirement comes, you start to look at your work colleagues in a new way, without competition or rivalry, knowing during your time that you did your best. Well, mate, thanks for asking me about my feelings about retirement, but remember it is just another step in life’s process and progression” (Quote from Lo & Brown, 1999, p. 32).

Further research

Studying retirement will never be “old” or off-topic as populations’ structures, labor markets, family division of labor, social security systems, individual’s preferences and attitudes are continuously changing, not only in Sweden but also around the world. Some changes rapidly occur, and some take many years. The thesis’s four studies investigated relatively new topics in the Swedish context, and they provide context for further research. For instance, Study I shows the importance of studying what types of leisure activities promote early or postponed retirement. The findings show that different leisure activities before retirement may lead to different retirement trajectories, but the overall small sample size made most of the results non-significant. However, an interesting continuation of this study would be to investigate younger cohorts who have had a stronger interest in leisure and value leisure activities more than older cohorts. In Sweden, there is an increasingly applied concept in everyday life termed “egentid” (“own-time”), a third sphere parallel to work and family life. In this sphere, individuals want to maximize the time where they are free to do what they want and balance this with both work and family obligations. Presumably, this trend may lead to younger cohorts valuing leisure time and leisure activities differently when approaching retirement ages.
than older cohorts have done (Diener & Seligman, 2004; Pentland & McColl, 2008). In line with having an enjoyable life outside the workplace, there is an increasing trend that work should be rewarding and challenging as well as a nice place to go, not only from a psychological perspective but also a physiological one. For instance, an increasing awareness of human resources and management, as well as an ergonomic workplace, may influence the desire and ability to work longer.

Study II and III in the thesis reveal that there is a need to include extensive measures of family ties and family characteristics when studying retirement timing. For instance, the findings indicate that grandchildren and elderly parents matter for retirement timing. Along with increasing life expectancy, an increasing number of older employees will have elderly parents alive at the retirement transition compared to the period when the studies in the thesis were conducted. Therefore, it is important to further investigate how cohorts born in the 1950s and later are approaching retirement in relation to the survival of their parents using register data. A larger share of living elderly parents allows, for instance, to profoundly explore the geographical distance between elderly parents and adult children (similar to set up as Svensson et al., 2015) or include more information associated with elderly parents, such as their socio-economic status or country of birth, in studies. In addition, it would be particularly interesting to study when diverse and large groups of immigrants reach retirement ages. These topics also provide a framework for studies that investigate how social and economic inequalities are related to family circumstances to determine both retirement timing and post-retirement work.

The thesis uses two data sources, in which retirement timing was defined in two different ways. By using these two measures of retirement timing based on two different data sources, this is a small indication of how complex the retirement process is, and researchers must be careful when analyzing results. How researchers choose to define retirement is inevitably related to individuals’ perceptions of when the retirement transition occurs, as well as the employment income and timing of the withdrawal and the amount of pension benefits. Hence, for future studies, it is crucial to investigate how these retirement definitions overlap and whether different definitions influence empirical results differently. The retirement transition has become a gradual and flexible process in which individuals can retire part time or even return to employment after being fully retired, adding to the complexity of the retirement decision. The increasing share of older employees and retirees, who re-enter the labor market after transitioning to retirement, makes these investigations highly central. Without evaluating who is defined as retired, makes it is difficult to study engagement in post-retirement work. The data quality of register data and the access of longitudinal survey data make Sweden a valuable case study.
References


SOU 2011:05, SOU 2011:05 Tjänstepensioner och utträde från arbetslivet. §.


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