

FINNISH CENTRE FOR PENSIONS,
STUDIES



Retirement trajectories in the Netherlands and Finland

**Institutional change, inequalities,
de-standardisation and destabilisation**

AART-JAN RIEKHOFF



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**Retirement trajectories
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ACADEMIC DISSERTATION

To be presented, with the permission of
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Even more than retirement, earning a PhD is about the trajectory towards receiving the title and not about the final transition from one having one degree to attaining another. Also, this trajectory is deeply socially embedded. In other words, a PhD is not and should not be something you obtain on your own: it is largely dependent on the people that surround you and enable your work. Even though it would be impossible for me to thank everyone by name, now that my trajectory is almost complete, it is time to thank some of the most important people that have contributed in one way or another.

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In Tampere, May 2018

Aart-Jan Riekhoff

SUMMARY

In contrast to most research that studies retirement as a single transition or state, this thesis focuses on retirement as a longitudinal process of transitions into and out of the labour market, i.e. as a trajectory, in the Netherlands and Finland. Sequence analysis is used in this thesis to identify broad typologies of retirement trajectories in these countries. This approach enables, on one hand, taking into account the structuring effects of institutions such as early exit pathways and pension systems. On the other hand, it permits the analysis of individual variations in retirement behaviour within an institutional context.

The present study concentrates on three main aspects. First, it investigates the types of retirement trajectories that have occurred in the Netherlands and Finland and how these trajectories have been shaped by early exit pathways and pension systems in their national institutional contexts. Second, it looks at the gender and socioeconomic differences related to the take-up of these trajectories in both countries. Third, it analyses whether extending working lives has coincided with trajectories becoming more dissimilar (i.e. de-standardisation) and more complex (i.e. differentiation or destabilisation) across time.

The register data from various administrative sources used in this study were collected from Statistics Netherlands (Articles I and IV), the Finnish Centre for Pensions (Articles II and III) and Statistics Finland (Articles II and V). Individual sequences were constructed based on main sources of income (Articles I–IV) and main activity statuses (Article V). Background variables on gender, socioeconomic status, income, sector and work history were gathered from Dutch education and labour force survey data (Articles I and IV), Finnish Linked Employer-Employee Data (Articles II and V) and Finnish Centre for Pensions data (Article III). Sequence and cluster analysis were used to create trajectory typologies. Heterogeneity was calculated with a status entropy indicator for each point in time. Sequence complexity was calculated using Elzinga's turbulence indicator.

Sequence and cluster analysis on the Dutch sample (N = 2,277) born between 1943 and 1945 for the age bracket 56–66 resulted in seven distinct retirement trajectories: 'Late retirement' (20.4%), 'Early retirement' (11.3%), 'Premature retirement' (42.6%), 'Disability' (6.2%), 'Unemployment' (4.6%), 'Inactivity' (2.9%) and 'Drop-out' (11.9%). In Finland, eight distinct retirement trajectories were identified for the cohort born in 1948 within the age bracket of 57–65 (N = 55,971): 'Regular retirement' (42.3%), 'Long career'/'Late retirement'

(19.7%), 'Early retirement' (8.3%), 'Part-time retirement' (6.7%), 'Disability' (5.6%), 'Long-term disability' (4.3%), 'Unemployment' (10.5%) and 'Death' (2.6%).

The results showed strong associations of the retirement trajectories with gender and socioeconomic factors. In both countries and in line with previous studies, higher education reduced the risk of involuntary early exit in both countries. There were differences in the relation of socioeconomic status with the trajectories in both countries, especially in the cases of farmers and blue-collar workers. The Dutch study showed that immigrants were more likely to face involuntary retirement trajectories. The Finnish study also showed strong interactions of gender with socioeconomic factors, especially with education and income. Moreover, it showed that marital status affected women's retirement, but not men's.

Article III additionally suggested that income not only affects retirement trajectory, but that retirement trajectory also has an impact on changes in income before and after retiring. Using the same retirement trajectories as in Article II, the study showed that the Finnish pension system had the strongest redistributive impact on the incomes of employees who exited early through unemployment and disability pensions. Those who retired early or on a part-time pension were relatively well-off before and after retirement. Those who retired late had relatively high incomes before retiring, but experienced the most substantial drop in income when they became pensioners.

In the Netherlands, there has been some level of differentiation across cohorts in retirement trajectories between the ages of 59 and 65 among men and women born between 1940 and 1946 ($N = 12,843$). Overall sequence complexity was higher among men than among women, but increased at a parallel pace. There was no evidence for socioeconomic differences in complexity or in the pace of destabilisation. In the study on Finland, the sequence complexity of cohorts born between 1937 and 1948 was analysed for the age bracket of 51–65 ($N = 238,099$). Sequences were constructed *without* and *with* job changes. The findings suggest that late careers de-differentiated when not taking into account job changes, especially among the higher-educated. When transitions between jobs were included, the results showed a slight late-career destabilisation among men and the lower-educated, but a decrease in complexity among women and the higher-educated. There was no evidence for de-standardisation of retirement or late careers in the Netherlands or Finland. Longer working lives appear to have contributed to trajectories becoming somewhat more similar. This might be explained by the closing of early exit pathways and increases in employment.

Overall, the results support the importance of viewing retirement as a long-term trajectory rather than a single transition. Moreover, the study shows there are social inequalities in the opportunities for retirement, income from pensions, and stability and predictability in late careers. In times of extending working lives, it underlines the necessity for social policies addressing various parts of the life course in order to guarantee equitable opportunities in retirement for all groups in society.

TIIVISTELMÄ

Eläköitymisprosessi Alankomaissa ja Suomessa: institutionaalinen muutos, eroavaisuudet, epäyhdenmukaistuminen ja epävakautuminen

Useimmissa tutkimuksissa eläkkeelle jäämistä ja eläkettä tutkitaan yksittäisenä muutoksena tai tilana, mutta tässä tutkielmassa sitä tarkastellaan pitkäaikaisuun-
taisenä muutosten jatkumona työmarkkinoille ja työmarkkinoilta, eli prosessi-
na, Alankomaissa ja Suomessa. Tutkielmassa määritetään eläköitymisprosessin
laajoja typologioita näissä maissa sekvenssianalyysin avulla. Tämän menettelyn
ansiosta voidaan huomioida instituutioiden, kuten aikaista työelämästä poistu-
mista koskevien ratkaisujen ja eläkejärjestelmien, rakenteelliset vaikutukset. Li-
säksi sen avulla voidaan analysoida institutionaalisessa kontekstissa esiintyviä
yksilökohtaisia eroja eläköitymisessä.

Tässä tutkimuksessa keskitytään kolmeen pääasiaan. Ensinnäkin siinä tutki-
taan Alankomaissa ja Suomessa toteutuneita eläköitymisprosesseja ja sitä, mi-
ten aikaista työelämästä poistumista koskevat ratkaisut ja eläkejärjestelmät kan-
sallisissa institutionaalisissa konteksteissaan ovat muokanneet näitä prosesse-
ja. Toiseksi siinä selvitetään sukupuolten välisiä ja sosioekonomisia eroja, jotka
vaikuttavat näiden prosessien valintaan molemmissa maissa. Kolmanneksi siinä
analysoidaan, onko ajan myötä tapahtuneen työurien pitenemisen ja prosessien
erilaistumisen (eli epäyhdenmukaistumisen) ja monimutkaistumisen (eli erilais-
tumisen ja epävakautumisen) välillä havaittavissa yhtäläisyyksiä.

Tutkimuksessa on käytetty useista eri hallinnollisista lähteistä saatua rekis-
teritietoa, joka on kerätty Statistics Netherlands viranomaiselta (kohdat I ja IV),
Eläketurvakeskukselta (kohdat II ja III) ja Tilastokeskukselta (kohdat II ja V). Yk-
sittäiset sekvenssit koottiin päätulonlähteen (kohdat I–IV) ja pääasiallisen työl-
lisyytilanteen (kohta V) perusteella. Tiedot taustamuuttujina olleista tekijöistä
eli sukupuolesta, sosioekonomisesta tilanteesta, tuloista, alasta ja työhistoriasta
koottiin Alankomaiden koulutus- ja työvoimatutkimustiedoista (kohdat I ja IV),
Suomen yhdistetystä työntekijä-työnantaja-aineistosta (kohdat II ja V) ja Eläke-
turvakeskuksen tiedoista (kohta III). Prosessien typologiat laadittiin sekvenssi-
ja ryhmittelyanalyysin avulla. Heterogeenisyys laskettiin käyttämällä indikaat-
torina tilan entropiaa kunakin ajankohtana. Sekvenssin kompleksisuus lasket-
tiin käyttäen indikaattorina Elzingan turbulenssia.

Hollantilaiselle otokselle (n = 2 277), johon kuuluvat henkilöt olivat synty-
neet vuosien 1943 ja 1945 välillä ja jotka kuuluivat 56–66-vuotiaiden ikäryh-

mään, tehdyn sekvenssi- ja ryhmittelyanalyysin tuloksina havaittiin seitsemän erilaista eläköitymisprosessia: ”myöhäinen eläköityminen” (20,4 %), ”aikainen eläköityminen” (11,3 %), ”ennenaikainen eläköityminen” (42,6 %), ”työkyvyttömyys” (6,2 %), ”työttömyys” (4,6 %), ”työmarkkinoiden ulkopuolella oleminen” (2,9 %) ja ”pois jättäytyminen” (11,9 %). Suomessa havaittiin kahdeksan erilaista eläköitymisprosessia vuonna 1948 syntyneelle, 57–65-vuotiaiden ikäryhmään kuuluvalle joukolle (n = 55 971): ”tavanomainen eläköityminen” (42,3 %), ”pitkä ura” / ”myöhäinen eläköityminen” (19,7 %), ”aikainen eläköityminen” (8,3 %), ”osa-aikainen eläköityminen” (6,7 %), ”työkyvyttömyys” (5,6 %), ”pitkäaikainen työkyvyttömyys” (4,3 %), ”työttömyys” (10,5 %) ja ”kuolema” (2,6 %).

Tuloksissa havaittiin eläköitymisprosessien selkeä yhteys sukupuoleen ja sosioekonomisiin tekijöihin. Aiempien tutkimustulosten kanssa yhdenmukaisesti ylempi koulutustaso vähensi vastentahtoista aikaista poistumista työelämästä molemmissa maissa. Sosioekonomisen statuksen ja prosessien välisessä suhteessa oli eroja molemmissa maissa erityisesti maanviljelijöiden ja työntekijöiden tapauksessa. Alankomaissa tehdyssä tutkimuksessa havaittiin, että maahanmuuttajien eläköityminen tapahtui muita todennäköisemmin vastentahtoisesti. Suomessa tehdyssä tutkimuksessa havaittiin myös selkeä yhteys sukupuolen ja sosioekonomisten tekijöiden, erityisesti koulutuksen ja tulojen, välillä. Lisäksi se osoitti, että siviilisääty vaikutti naisten mutta ei miesten eläkkeelle jäämiseen.

Lisäksi kohdasta III voitiin päätellä, että sen lisäksi, että tulot vaikuttavat eläköitymisprosessiin, myös eläköitymisprosessi vaikuttaa siihen, miten tulot muuttuvat eläkkeelle jäämisen jälkeen. Kohdassa II käytettyjä eläköitymisprosesseja käytettäessä tutkimus osoitti, että Suomen eläkejärjestelmä tasasi tuloja voimakkaimmin niiden palkansaajien osalta, jotka poistuivat työelämästä aikaisessa vaiheessa työttömyys- tai työkyvyttömyyseläkkeelle. Aikaisin tai osa-aikaisesti eläkkeelle jäävät olivat melko hyvin toimeentulevia ennen eläkkeelle jäämistä ja sen jälkeen. Myöhään eläkkeelle jääneiden tulotaso oli melko korkea ennen eläkkeelle jäämistä, mutta heidän tulotasonsa laski kaikkein merkittävimmin eläkkeelle jäämisen yhteydessä.

Alankomaissa 59–65-vuotiaiden eläköitymisprosesseissa on ollut havaittavissa jonkin verran erilaistumista vuosina 1940–1946 syntyneiden miesten ja naisten välillä (n = 12 843). Sekvenssin kompleksisuus oli yleisesti ottaen suurempi miesten kuin naisten keskuudessa, mutta sen kasvunopeus oli molemmilla samanlainen. Kompleksisuudessa tai epävakautumisen nopeudessa ei todettu sosioekonomisia eroja. Suomea koskevassa tutkimuksessa sekvenssin komplek-

sisuutta vuosien 1937 ja 1948 välillä syntyneiden joukossa tutkittiin 51–65-vuotiaiden ikäryhmän (n = 238 099) osalta. Sekvenssit koottiin *ilman työpaikan vaihtoja* ja *työpaikanvaihdot huomioiden*. Löydösten perusteella työurien loppuosan erilaistuminen väheni erityisesti korkeasti koulutettujen keskuudessa, kun työpaikan vaihtoja ei huomioitu. Kun siirtymät työpaikasta toiseen huomioitiin, tuloksissa havaittiin lievää työuran loppuosan epävakaantumista miesten ja alemmin koulutettujen keskuudessa, ja kompleksisuuden vähenemistä naisten ja korkeammin koulutettujen keskuudessa. Merkkejä eläkkeen tai työuran loppuosan epäyhdenmukaistumisesta ei havaittu Alankomaissa eikä Suomessa. Työurien pidentyminen näyttää vaikuttaneen siihen, että prosessit ovat muuttumassa enemmän toistensa kaltaisiksi. Selittäviä tekijöitä saattavat olla aikaista työelämästä poistumista koskevien ratkaisujen poistaminen ja työllisyyden parantuminen.

Yleisesti ottaen tulokset tukivat ajatusta, että eläkettä tulisi tarkastella pitkäaikaisena prosessina. Lisäksi tutkimus osoittaa, että eläköitymismahdollisuuksissa, eläketuloissa sekä työurien loppuvaiheen vakaudessa ja ennakoitavuudessa esiintyy sosiaalista epätasa-arvoa. Työurien pidentyessä se korostaa sellaisten sosiaalisten käytäntöjen tarvetta, jotka huomioivat elämänkaaren eri vaiheet ja takaavat tasapuoliset eläkemahdollisuudet kaikille yhteiskuntaryhmille.

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LIST OF ORIGINAL PUBLICATIONS

- I A.J. Riekhoff (2018) Institutional and socioeconomic drivers of work-to-retirement trajectories in the Netherlands. *Ageing & Society* 38(3): 568–593. <https://doi.org/10.1017/S0144686X16001252>. Reprinted by permission of Cambridge University Press.
- II A.J. Riekhoff and N. Järnefelt (2017) Gender differences in retirement in a welfare state with high female labour market participation and competing exit pathways. *European Sociological Review* 33(6): 791–808. <https://doi.org/10.1093/esr/jcx077>. Reprinted by permission of Oxford University Press.
- III A.J. Riekhoff and N. Järnefelt (2018) Retirement trajectories and income redistribution through the pension system in Finland. *Social Forces* (ahead of print publication). <https://doi.org/10.1093/sf/soy028>. Reprinted by permission of Oxford University Press.
- IV A.J. Riekhoff (2016) Destandardisation and differentiation of retirement trajectories in the context of extended working lives in the Netherlands. *Economic and Industrial Democracy* (ahead of print publication). <https://doi.org/10.1177/0143831X16669593>. Reprinted by permission of SAGE Publications.
- V A.J. Riekhoff (2018) Extended working lives and late-career destabilisation: A longitudinal study of Finnish register data. *Advances in Life Course Research* 34: 114–125. <https://doi.org/10.1016/j.alcr.2018.01.007>. Reprinted by permission of Elsevier Ltd.

1 Introduction

For the past two decades or so, almost any scientific publication on pensions and retirement in the industrialised world has started with the following premise. As our populations age and life expectancy continues to increase, people must work longer and retire later in order to keep pension systems, as well as the welfare system as a whole, sustainable. This is set against a background in which, especially in Europe, the effective retirement age has in many countries been much earlier than the official pension age. With the baby-boom generation entering retirement and decreasing fertility rates among younger generations, the ratio of workers to uphold the social system and pensioners drawing from that system is becoming threateningly small. Hofäcker (2010) has called this the ‘two-faced pension crisis’.

Both in the public debate and as the vast body of academic retirement literature, reasons for these problems, as well as a broad variety of solutions, have been offered aplenty. The consensus, however, seems to be that we will have to work longer and that we eventually and inevitably will be working longer. Policy measures have already taken major steps in this direction in the past two decades. First, opportunities for early exit have been increasingly closed off. Second, many governments introduced reforms that aim at extending working lives even more. The pension age is increasingly being linked to life expectancy and, for example in the Netherlands and Finland, will gradually increase over the next few decades. Third, many countries have embarked on policies of ‘active ageing’, under the assumption that simply forcing people to continue working will not suffice.

Reforms, however, have mainly addressed the ‘pull factors’ of retirement, i.e. the opportunities and attractiveness of the social security and pension system that draw older workers away from the labour market, but not necessarily the ‘push factors’ of retirement, i.e. the conditions on the labour market that enable older workers to stay there (Ebbinghaus 2006). This is not without consequence: extending working lives can have unwanted side effects, especially in an age of globalisation and economic crisis (Anxo, Ericson and Jolivet 2012; Blossfeld, Buchholz and Hofäcker 2006). Postponing retirement can cause uncertainties and insecurities. As people grow older, health issues become more common and more likely to affect their work. Work can become physically or mentally too heavy a burden at a certain age. Age discrimination by employers and adverse labour market conditions might make it difficult to retain a job or find a new one.

Moreover, financial penalisation of early exit and incomplete pension accrual histories can drive pensioners into poverty.

More importantly, these social and economic consequences of extended working lives are not likely to be distributed equally throughout society. Some older workers will be in comfortable and secure jobs with the option of performing meaningful work for many years in good health. Others will be in precarious jobs with bad working conditions, struggling with ill health. Some will have the financial means to decide on their preferred timing of retirement, regardless of the effect it will have on the level of their pension benefits. Others will be forced to continue working until the statutory pension age, or even beyond, to make ends meet in their retirement years. In other words, there is a high risk that conditions for work and retirement will increasingly be determined by gender, social class, education and income when everyone is forced to continue working longer.

Although the need to extend working life has arisen in most industrialised countries, there are differences in its outcomes in national institutional contexts. First, there are differences in the extent to which reforms have been passed and various strategies implemented (Blossfeld, Buchholz and Hofäcker 2006; D'Addio, Keese and Whitehouse 2010; Ebbinghaus 2006). Some countries have kept policies based on employment exit in place or reversed them. In France and Poland, for example, earlier decisions to increase the pension age have been revoked. In contrast, other countries have emphasised policies of employment maintenance. The Nordic countries have had a relatively late retirement age for many years, but at the same time have a relatively strong tradition of 'active ageing' strategies in place to keep the older workforce employed.

Second, national welfare states function differently in providing a buffer against the risks that accompany changes in the labour market and retirement (Blossfeld, Buchholz and Hofäcker 2006). There are different extents to which and different ways in which welfare states organise social safety nets and opportunities to continue working for older workers when they become unemployed, sick or disabled before reaching pension age. Moreover, pension systems function differently in the way that they redistribute pension wealth or persist, or even increase, income differences among the older population.

Whereas the articles in this thesis are single-country studies on the Netherlands and Finland, the aim of the thesis, and especially this summary chapter, is to take a comparative or differential life-course approach (Mayer 2005). Classical life-course approaches concentrate either on within-country differences in terms of class and gender or on historical changes in life courses over time. On the other

hand, the comparative life-course approach aims at comparing life-course patterns in different countries (see also Chapter 4). In the presence of different institutional contexts, single-country studies have limited potential in identifying the exact role that national institutions and policies play. At the same time, studies that incorporate too many countries in multilevel models or compare welfare regimes run the risk of overlooking national nuances and specificities. Moreover, the availability of internationally comparable and sufficiently detailed data is limited.

Therefore, this thesis looks at the Netherlands and Finland only. These are two countries that are usually grouped into different welfare state regimes (e.g. Continental vs. Nordic), but at the same time share many similarities (see Chapter 4 below). These countries are compared not as representatives of certain welfare regimes, but a careful analysis of their differences and similarities enables us to gain a deeper understanding of to what extent individual factors on one hand and institutional contexts on the other explain retirement behaviour.

1.1 Research questions

In the light of the above-mentioned considerations, the focus in this thesis is on three issues that have been addressed separately in previous studies, but so far have been largely neglected in combination with each other. First, retirement is rarely a single transition from a career job to old-age pension. The pressure to continue to work longer, greater insecurity on the labour market, and the existence of competing exit pathways causes retirement to be more and more of a process of movements in and out of work and social security schemes (Denton and Spencer 2009; Fasang 2012). In this thesis, the concept of ‘retirement trajectories’ is applied to capture these movements over a longer period of time in the late career and the years preceding retirement. I use sequence analysis as a central method in identifying those trajectories. This leads to the first research question:

1. What types of retirement trajectories can be identified from the Netherlands and Finland with the help of sequence analysis?

Second, the thesis analyses inequalities in individuals’ opportunities and the risks of these retirement trajectories. The connection to the trajectory approach is important, because there are inequalities in society with respect to who is forced to work longer, who experiences greater insecurity in the labour market, and who will have access to which early exit pathways. Two of the articles analyse

the socioeconomic and gender differences in the take-up of various retirement trajectories (I for the Netherlands, II for Finland). Article III analyses whether retirement trajectories are related to inequalities in income trajectories in Finland. Hence, the second research question is:

2. What are the gender and socioeconomic differences related to retirement trajectories in the Netherlands and Finland?

Third, reforms in the early exit pathways and pension systems have been aimed at extending working lives and deferring effective retirement ages in both countries. Whereas these reforms have been partly successful in both countries, little is still known about potential side effects. One of the potential side effects is that, with the relative security of early exit and defined benefit pensions removed, retirement has become more individualised and less predictable. Studying retirement as a trajectory that comprises a longer period of time allows closer analysis of how both structural changes in the ageing population and institutional reforms have made individual retirement trajectories more heterogeneous (i.e. de-standardisation) and more complex (i.e. differentiation or destabilisation). Article IV analyses the de-standardisation and differentiation of retirement trajectories in the Netherlands. Article V analyses the destabilisation of late career patterns in Finland. The third research question is as follows:

3. Have extended working lives contributed to the de-standardisation and destabilisation of retirement and late career trajectories?

1.2 The structure of this thesis

The remainder of this thesis is organised as follows. Chapter 2 provides a brief overview of various concepts of retirement and how various disciplines look at retirement. I also discuss some of the main themes that are found in the current retirement literature. In Chapter 3, I outline the trajectory and sequence-analysis approach to retirement in this thesis. In Chapter 4, I describe the economic and institutional contexts of retirement in the Netherlands and Finland. Moreover, I argue why comparing the two countries makes sense. Chapter 5 discusses the data and methods. The results of the articles are summarised in Chapter 5, whereas Chapter 6 discusses them in a comparative context and concludes with a future agenda for retirement policies and retirement research.

2 State of the art in retirement research

Retirement is studied in various academic (sub)disciplines, each with their own conceptual and methodological standards. Without attempting to provide an exhaustive and complete overview of the literature, the aim of this chapter is to identify some of the major issues that retirement research has addressed and to sketch a background for the thesis. Some of the challenges and shortcomings in the previous literature are discussed, while suggesting some potential innovations. I address the following issues. How do various studies define and operationalize retirement? What mechanisms lead to retirement? At what unit level (micro, meso or macro) should retirement be analysed, within what timeframe and how? How are the opportunities for and outcomes of retirement distributed in society?

2.1 What is retirement?

When studying retirement, there is somewhat of a 'dependent variable problem'. This is because there is some contention about what retirement is, exactly, and how it can and should be measured. Retirement is usually referred to as a withdrawal from paid employment and entrance into an old-age pension, generally taking place at a somewhat older age (Denton and Spencer 2009). It is one of the major transitions in the tripartite life course, where at a younger age people make a transition from education to employment and, at a later age, from work to retirement (Kohli 1985). The timing and mode of retirement has become institutionalised as a result of pension programmes and statutory pension ages and thus more similar for most people most of the time.

Other studies have argued that retirement is not just a single transition from work to old-age pension. Instead, retirement is often a series of discernible movements in out of the labour market (Denton and Spencer 2009). Retirement can be sudden or it can be a gradual process. Some might make a clear transition from a full-time career job to full retirement. Others might start to work part-time in the years preceding retirement or take-up a partial pension if possible. Also, a 'bridge job', i.e. often a less demanding job during the time between exiting a career job and entering old-age pension, can be an option. Retirement can be permanent or temporary. Whereas many older workers exit the labour market, never to return, there are also those who 'un-retire' to continue working in a different capacity, e.g. as a self-employed person. Retirement can mean exit through the

old-age pension system, while people who are inactive, long-term unemployed or disabled have often *de facto* retired, with neither the option nor wish to return to paid employment.

Hence, the consensus in much of the literature has become that retirement is a process rather than a single event (Moen 2003; Shultz and Wang 2011). Psychological studies have emphasised that retirement is more than a set of observable movements: it is also a mental adjustment process (Van Solinge and Henkens 2008). Feldman and Beehr (2011) distinguish between three phases in retirement decision making, where one first imagines the possibility of retirement, then decides to retire, and finally actually makes the transition. Hence, even before taking any concrete steps, a person already starts to detach from the labour market by thinking about retirement. Moreover, retirement is a multidimensional process that is embedded in the individual life course (Damman, Henkens and Kalmijn 2015). It is dependent on individual work, health and family histories and takes place in the context of work communities, being a family member and being part of other social networks.

Moen (2003) has suggested that the stage of the life course between career building and old age should be called 'midcourse'. However, as she also acknowledges, this life phase is not for everyone, but only for those who can retire on a voluntary basis and in a planned fashion. Retirement can also be involuntary when it is the result of forces outside of one's own control, such as poor health or job displacement (Dorn and Sousa-Poza 2009; Szinovac and Davey 2005; Van Solinge and Henkens 2007). At the same time, not everyone can retire according to their own wishes or plans. Often, financial factors play a role when retirement must be postponed. Still, the process-like nature of retirement also applies to involuntary labour market exit. Involuntary early and late retirement are often preceded by longer periods of poor health, sickness absences, a lack of work, or employment in precarious jobs. Moreover, involuntary early retirement can equally be followed by a return to work or bridge employment (Dingemans and Henkens 2014).

The ambiguity of the concept of retirement also has implications in measuring and operationalising retirement for empirical analysis. It is possible to distinguish between objective and subjective measures of retirement (Denaeghel, Mortelmans and Borghgraef 2011; Denton and Spencer 2009). Objective measures of retirement can be income-based, such as entitlements to pensions or other social benefits, or based on the number of working hours per week. An increase in the income received from pensions or a decrease in working hours would indicate a transition

to retirement. Subjective measures of retirement include 'self-reported' and 'self-defined' retirement, i.e. asking respondents whether they consider themselves retired or not.

Objective and subjective measures do not always overlap. For example, when asked, long-term unemployed older workers might consider themselves retired, although formally they are still considered part of the labour force. On the other hand, a person might be receiving pension benefits and working fewer hours, but still not consider themselves retired. This, again, illustrates the long-term process-like nature of retirement, which includes adjustments both in the labour market and in the person's own mind (Van Solinge and Henkens 2008).

In addition, one might argue that retirement is not a static concept, but that the understanding of what constitutes retirement has changed over time. Previous studies argued that, whereas in the post-World War II years retirement had been rather standardised with close to full employment among older workers and a single transition to old-age pensions at the state pension age, retirement has become a more heterogeneous phenomenon since the early 1980s (Hardy 2011; Henretta 2003; Kohli 2007; Kojola and Moen 2016; Moen 2010). There are several reasons for this. First of all, large groups of older workers increasingly withdrew early from the labour market, either through early retirement schemes or through unemployment and disability schemes (Ebbinghaus 2006). Hence, the timing and mode of retirement became more heterogeneous.

Second, women started to enter the labour market in many countries. With them also came different patterns of work and retirement. Women still have a lower attachment to the labour market in most countries (König 2017). They have longer career breaks due to child bearing and caring and more often work part-time. This may lead to lower pension accruals, which in turn affects their retirement behaviour. Many women have to work longer for sufficient pension accrual or retire earlier and rely on their spouse's income (Fasang, Aisenbrey and Schömann 2013; Finch 2014).

Third, and somewhat more recently, shifts from public to private pension provision have taken place in a majority of European countries (Ebbinghaus 2011; Van Vliet et al. 2012). Privatisation of pensions often entails an individualisation of both retirement opportunities and risks. This might mean a greater freedom of choice for some, but more restrictions for others. Related to this individualisation, there has been an observable trend toward new forms of retirement, such as gradual retirement, including part-time retirement and bridge employment, un-

retirement, re-retirement and shifts to self-employment beyond the statutory pension age (Bloemen, Hochguertel and Zweerink 2016; Hochguertel 2015).

2.2 Determinants of retirement

Retirement can be explained as the result of a complex set of interacting factors at the micro- (individual), meso- (firm, family, social environment), and macro- (national, institutional) levels. Various academic disciplines have traditionally emphasised the importance of certain factors. Epidemiologists focus on health factors, and economists attribute retirement behaviour to financial incentives, while sociologists emphasise the importance of social factors. The aim of this section is not present a systematic overview of the empirical retirement literature: to do so would be an insurmountable task. Nor is the aim to provide a chronological or historical overview of developments in retirement research (for a short overview of the evolution of retirement research see Shultz and Wang (2011); Hofäcker (2010) provides a critical discussion of the developments in social science research on retirement).

I select some of the most important single elements that have been studied in relation to retirement. I discuss those elements that have been found to exert influence in cross-national studies or in multiple single-context studies in order to identify some of the more universal mechanisms behind retirement. In Chapter 4, I will go deeper into the country-specific mechanisms that apply to the Netherlands and Finland in particular. Obviously, given the complexity of retirement, these elements should be seen in relation to each other. Some of the approaches explicitly combine micro- and macro-perspectives on retirement (Blossfeld, Buchholz and Hofäcker 2006; Hofäcker 2010). Still, I start with the macro-level, after which I introduce factors at the micro- and meso-levels.

2.2.1 *Macro-level studies*

In the field of economics, with a tradition dating back to the 1950s, the focus of retirement research has been on financial incentives that are offered by pension systems. In their influential study, Blöndal and Scarpetta (1999) showed how old-age pension systems and unemployment and disability schemes provide disincentives for employment among older workers. They found that, in most countries with options to exit before the statutory pension age, the benefits of one year of working less (meaning one year extra of pension benefit receipt plus

one year less of pension contributions) is not outweighed by the extra pension one would receive if one remained in the labour market for that extra year. This financial effect is stronger the earlier benefits are available and the higher the replacement rate of pensions (i.e. ratio of pension benefits against the last earned income). Gruber and Wise (1998) have called this ‘the implicit tax on work and labour force participation’.

The economic approach to retirement with an emphasis on pension systems has received ample criticism from macro-sociology and political economy (Ebbinghaus 2006; Hofäcker 2010). One of their main criticisms is that economic studies focus on the pull factors of retirement.¹ They mainly study labour supply and assume retirement is an individual decision based on weighing costs and benefits. Factors on the labour demand side, i.e. push factors, have been largely neglected. Changes on the production side – such as deindustrialisation, cyclical unemployment, rigid labour markets and the reluctance of employers to retain and hire older staff – have equally pushed workers into early retirement (Ebbinghaus 2006). In times of structural labour market changes, older workers have been found especially vulnerable. They are more likely to work in declining industries such as manufacturing and agriculture. Their skills are more likely to be outdated in tackling new work tasks, while their employers or they themselves might find investing in their training unprofitable (Blossfeld, Buchholz and Hofäcker 2006). Due to seniority wage systems, older workers are often more expensive, whereas they are perceived, correctly or not, as less productive (Van Dalen, Henkens and Schippers 2010). Still, demotion is usually impossible, and first-in-first-out rules make it more difficult to fire them.

It was exactly many of these push factors that contributed to the creation of a system of early exit for older workers. Often, these benefits only were introduced or made more generous after increasing labour market pressures on the demand side and in most cases a broad consensus existed between employers, trade unions and government to shed older workers to make room for younger generations and externalise the costs of economic restructuring (Ebbinghaus 2006; Hofäcker 2010). Exit pathways are defined by Kohli et al. (1991) as early retirement, disability or unemployment schemes that serve as a bridge between the exit from a career job and the entry into the regular old-age pension system. While often existing as such prior to becoming exit pathways, these institutions underwent conversion

1 Comparative studies on variance in the timing of retirement almost always assume that it takes place before statutory pension age. Therefore, these studies are almost exclusively about variation in early retirement and almost never about late retirement. For an exception, see Hofäcker and Radl (2016).

as they were redirected to serve the new purpose of alleviating labour markets (Casey 1987; Streeck and Thelen 2005).

Although by the mid-1990s early exit and low labour market participation became regarded as a fiscal and economic problem in many countries, reform proved to be difficult and met with resistance from unions and employers alike (Ebbinghaus and Hofäcker 2013). Both had vested interests in preserving the status quo. An 'early exit culture' had to some extent become ingrained in society, with established norms about the acceptability and necessity of early retirement (Radl 2012). Early retirement has in many cases become an acquired right for employees and a human resource management tool for employers.

Although early retirement is a phenomenon that has been occurring in almost all industrialised welfare economies, macro-sociological comparative studies have emphasised the differences between various welfare state regimes in the extent and type of its occurrence. Usually, four to five different regimes are identified in Europe (Blossfeld, Buchholz and Hofäcker 2006; Ebbinghaus 2006; Ebbinghaus and Hofäcker 2013; Hofäcker 2010). Among the later exit regimes, the *Liberal* or *Anglophone* regime (UK and Ireland) is characterised by flexible labour markets, privatised pension systems, and, as a result, little early exit. Retention policies such as life-long learning are provided by the market. In the *Nordic* or *Social-democratic* regime (Sweden, Denmark, Norway and to some extent Finland), early exit is also relatively rare. This is mainly due to active labour market and life-long learning policies in combination with restrictive pension policies. At the time of retirement, however, retirees are entitled to relatively generous universal pensions.

Early retirement has been more commonplace in the *Continental/Conservative* (the Netherlands, Germany, Belgium and Austria) and *Latin/Southern European* (France, Italy and Spain) regimes. Both have been exemplified by rigid labour markets, generous public pension provision and strong early retirement provision. The difference is that, in recent decades, countries in the former regime have been more able to introduce reforms that closed public exit pathways, shifting the bulk of the costs to private actors, as well as introducing more flexibilisation and activation measures in the labour market. This has made early exit effectively less attractive or even impossible. The Southern European countries have lagged behind in this sense. Finally, the differences between countries in the *East European* or *Post-socialist* regime are so large that it is hardly possible to group them together as a regime. Still, early exit has been common in many of these countries due to the economic restructuring that took place after the fall of communism.

2.2.2 *Micro-level studies*

Although macro-level studies can give a good account of retirement tendencies in countries and the effects of national institutions and cultural norms, retirement remains the result of a very individual decision-making process. As economic studies have shown, financial incentives can be an important factor in this. However, many more circumstances play a role in retirement planning, decision-making and the actual transition (Moen 2003; Shulz and Wang 2011). In the following section, I provide a non-exhaustive overview of some of the main individual-level factors that have been studied in relation to retirement behaviour. I also highlight some of the most important interactions between single factors. Where possible, my focus is on quantitative empirical studies that include several countries or on findings that have been replicated in more than one country.

Poor **health** is one of the main predictors of an early labour market exit, while good health is one of the main enablers of a long career. Interestingly, whereas the effects of health on labour market and retirement behaviour are extensively studied in occupational and public health and epidemiology, their relation is often under-addressed in other social science disciplines. While the former fields deal with a broad variety of concepts, definitions and types of health issues, as well as operationalisation and measurement types, the latter often limit themselves to incorporating scales of subjective health. Measures of self-reported health induce the risk of ‘justification bias’: retired people report poorer health in order to justify their being inactive (Dwyer and Mitchell 1999). There is very little crossover between these disciplines: it is rare to find sociological studies citing public health studies and vice versa. In any case, empirical studies have confirmed the importance of health for retirement (Ilmakunnas and Riekhoff 2016). Poor health increases the likelihood of exit from work especially through the involuntary pathways, in particularly through disability schemes and to some extent through unemployment schemes (Reeuwijk et al. 2016; Van Rijn et al. 2014). This effect has been found not only in the case of physical poor health, including musculoskeletal and cardiovascular problems, but also with mental health issues.

There are great **gender** differences in retirement. In earlier research, retirement was considered mainly a male phenomenon, especially in male breadwinner societies. Women did not work or had only interrupted and sporadic careers and mostly relied on their husbands’ pensions, making their retirement behaviour too atypical and irregular to compare with that of men. Some studies still focus on the retirement of men only for the same reasons (Engelhardt 2012; Visser et al. 2016b). However, a growing body of literature analyses men and women

separately or focuses on women's retirement only. Although among the younger cohorts, women have entered the labour market in great numbers in almost all European countries, their retirement still remains subject to different forces. First, women tend to have shorter pension accrual histories due to career breaks for child bearing and caring. This might lead to them have to work longer than men (Finch 2014). Fasang, Aisenbrey and Schömann (2013) found that single women have a higher retirement income than continuously married women. Second, women are more likely to work part-time, which in some countries affects their pension accrual. Third, women are more likely to allow their husbands' retirement decision to affect theirs, especially in cases when the man is the main breadwinner. Given that wives are typically younger than their husbands, this means that women tend to retire earlier than men (Moen, Sweet and Swisher 2005; Radl 2012). Finally, Radl (2013) found that women are more likely to retire early due to the lower occupational positions they generally take up.

There is a strong social gradient in retirement. **Socioeconomic position** plays an important role in the mode and timing of retirement. However, each of its subdomains and key indicators – education, occupational social class and income – represents a specific dimension: they are not necessarily interchangeable (Adda, Chandola and Marmot 2003; Leinonen 2014: 19). **Education** has usually been acquired early on in the life course and does not only form skills, but also shapes attitudes and behaviours. Moreover, it is a strong predictor for the other two subdomains: occupational class and income. Most studies find that education is positively related to the labour market participation and later retirement of older workers (Engelhardt 2012; Radl 2013). Moreover, higher education has been found to lower the risk of exit through the involuntary pathways of unemployment and disability (Schils 2008). Studies on Finland (Järnefelt 2010) and Norway (Dahl, Nilsen and Vaage 2003) suggest that this effect is stronger for women than for men. Moreover, there are interaction effects between education and health. Those with lower education have a higher risk of poor health, and inequalities in health between those with lower and those with higher education increase over the course of life (Adda, Chandola and Marmot 2003; Leopold and Engelhardt 2011). Older workers with lower education have been found to be at increased risk of health-based exit from paid employment (Schuring et al. 2013)

Occupation and social class have profound effects on the timing and mode of retirement. Several groups stand out in the literature. The self-employed have been found to retire later (Engelhardt 2012; Hochguertel 2015; Radl 2013; Schils 2008). This is often for financial reasons, as pension accruals in many countries are not

organised as automatically as for employees. Hochguertel (2015), however, found that the labour market attachment is strong among the self-employed and that they can use the flexibility that accompanies entrepreneurship to their advantage in retiring later. Blue-collar or manual workers are typically more likely to retire early, especially through the involuntary pathways (Radl 2013). There are interactions with health here as well. Blue-collar workers who perform heavy physical work or are exposed to unhealthy working conditions are at a higher risk of early exit, especially through disability schemes (Haukenes et al. 2011; Leinonen 2014).

Level of **income** is largely dependent on education and occupation, but also has direct effects on retirement. As Blöndal and Scarpetta (1999) argued, early retirement is more common among those with a lower income: for them, the benefits of retirement are greater than the benefits from remaining in paid employment. However, in pension systems that are actuarially more neutral, early retirement is often penalised, meaning that pension benefits are reduced with early exit. This means that, for many lower income households, early retirement is not affordable. Those with higher incomes or more wealth can nevertheless afford to retire early and will be more likely to do so (Articles III and IV). There are possible interactions of income with health. Those in poor health might face a reduction in earnings, making it more attractive for them to retire early (Dwyer and Mitchell 1999).

In recent years, the effect of the **life course** on retirement has gained increased attention. Retirement is not just the result of a set of individual factors at the time of retiring. In addition to the professional sphere, also the family and social spheres affect retirement. Moreover, events occurring earlier on in life affect events in the later life course (Han and Moen 1999; Moen, Sweet and Swisher 2005). First, the length of working life affects the timing of retirement (Article IV). Under many pension systems, including the Dutch and Finnish ones, pensions are accrued according to the number of years spent working. Under certain circumstances, workers are able to retire earlier if a certain number of years have been spent in employment. Second, employment experiences earlier on in life affect retirement outcomes. Studies have found that precarious and unstable employment in mid-career can lead to earlier retirement (Raymo et al. 2010; 2011; Visser et al. 2016a) as well as to vulnerability in late career (Madero-Cabib 2015). Third, late-career employment and retirement patterns are closely interwoven with family history. Marriage, divorce and having children earlier in life affects retirement and retirement outcomes. These effects are gendered and stronger for women than for

men (Fasang, Aisenbrey and Schömann 2013; Finch 2014; Halpern-Manners et al. 2015; Madero-Cabib and Fasang 2016).

Finally, retirement takes place in a social context. Retirement intentions and behaviour are affected by the **spouse** (Henkens and Van Solinge 2002). This effect has been found to be stronger for wives: due to the typical age gap between them and their husbands, wives are more likely to retire earlier (Denaeghel, Mortelmans and Borghgraef 2011). Moreover, there are potential interactions with health and education. Having a partner in poor health can increase the likelihood of later retirement in order to compensate for lost earnings or lead to early retirement to take care of the spouse (Johnson and Favreault 2001). Higher-educated spouses have the potential effect of postponing the retirement of their partners as well (Denaeghel, Mortelmans and Borghgraef 2011).

2.2.3 At the meso-level: Work-related and company level factors

The conditions under which one works can affect the timing of retirement. Physically demanding and stressful work increases the likelihood of early retirement, whereas psychosocial factors such as autonomy, supervisor support, skill development and recognition can postpone the decision to retire (Dal Bianco, Trevisan and Weber 2015; Van Solinge and Henkens 2014). Supportive working conditions and workplace factors can mitigate the effects of poor health on retirement (Boot et al. 2014; Van Den Berg, Elders and Burdorf 2010; Virtanen et al. 2014).

The role of the employer is crucial in sustaining working lives. Employers often treat older workers differently than younger and middle-aged workers. This can be because of seniority-based wage structures that make older workers more expensive. Moreover, older workers' skills can be perceived as outdated and their knowledge of new technologies limited, while reductions in their physical and cognitive capacity are expected to obstruct them in performing certain tasks. This has an effect on company hiring policies as well as on retention policies. Age discrimination is not uncommon in recruitment processes, as older workers are seen as less productive (Van Dalen, Henkens and Schippers 2010). Especially unemployed older workers with lower qualifications are less likely to be invited for a job interview and subsequently offered a job (Oude Mulders et al. 2016; Schuring et al. 2013). As a result, although unemployment rates among older workers are usually lower than for other age groups, long-term unemployment rates are usually higher. Moreover, the occurrence of unemployment in late career is often a predictor of early retirement (Chan and Stevens 1999; Tatsiramos 2010).

In terms of retention policies, specific age-based human resource strategies can be roughly divided into three types (Van Dalen, Henkens and Wang 2014). First, employers can aim at promoting the exit of older workers either by dismissing them or by offering options for early retirement. Second, companies can implement accommodation practices through workplace measures that help older workers cope with the physical and cognitive challenges of their work. This can include, for example, reductions in workload or working hours. Third, employers can aim at development practices to increase the productive capacity of older workers and retain them. This means training them to upgrade their skills and knowledge of new technologies. Health promotion at the workplace and promoting exercise and healthy lifestyles might also fall within this category (Kuoppala, Lämminpää and Husman 2008).

Hence, while in theory there is ample room for an employer's manoeuvre in affecting the retirement behaviour of older workers, their actions are shaped and restricted by circumstantial factors. First, economic circumstances matter. During economic downturns, there have been strong incentives for employers to shed older labour by promoting exit (Ebbinghaus 2006). However, there are signs that, in the most recent recession following the financial crisis, labour market participation among older workers in Europe on a whole has remained stable or even grown (OECD 2013). Studies of the Netherlands and the United Kingdom have found that employers more often reverted to policies of accommodation in the form of increased flexibility in work hours and work processes (Beck 2013; Conen, Henkens and Schippers 2014). However, both studies also showed that investment in training older workers as an instrument of retention typically decreases in times of economic difficulty, whereas specific skills of older workers – even of some who had already retired – can be valued and put to use. Furthermore, under adverse economic conditions, employers have been found to be less likely to recruit older workers (Oude Mulders et al. 2016).

Second, the policies and regulations that are in place affect the behaviour of employers. Firms can only take the liberty they get from governments to influence the retirement behaviour of their employees. In this context, studies in various countries have observed a shift of the responsibility of retirement decision-making from central governments to the company level in recent decades (Conen, Henkens and Schippers 2014; Ebbinghaus 2006; 2011; Vickerstaff, Cox and Keen 2003). However, more recently, this has not necessarily meant an increasing freedom to decide, but rather a responsibility to keep older workers employed in the increasing absence of early exit routes. For example, in the Netherlands and since 2006,

employers bears the cost of any long-term sickness absence of employees and are responsible for finding suitable employment in case of (partial) employee disability (Vrooman 2010). In Finland, employers are financially penalised according to the proportion of their staff retiring on disability pensions, providing incentives to prevent the take-up of such pensions (Kyyrä and Paukkeri 2015). This has also affected company decisions of whether or not to hire older workers (Ilmakunnas and Ilmakunnas 2015).

Finally, the characteristics of companies determine the way they affect when and how their employees retire. Studies have found that the size of a company matters: workers in larger organisations have been found to retire earlier (Hofäcker, Hess and Naumann 2015; Naschold and De Vroom 1994), although larger companies could in theory have greater flexibility in adjusting the workplace for older workers and in the resources available for developing the skills of these workers (Schreurs et al. 2011; Van Dalen, Henkens and Wang 2014). One possible explanation is that, in countries with strong collective bargaining traditions at the company or sector level, larger firms are more likely to be covered by collective agreements that might include more generous provisions about early retirement (Article I). Other specific regulations might also vary according to company size, such as the experience rating in disability insurance in Finland (Kyyrä and Paukkeri 2015)

Similarly, the sector in which a company operates matters. Collective bargaining is stronger in some sectors than others, which has in the past led to more generous early retirement packages (De Preter, Mortelmans and Van Looy 2012; Naschold and De Vroom 1994; Schmitt and Starke 2016). In declining sectors, there could be a greater risk of collective dismissal, which increases the risk of early and permanent exit, especially among older workers (Jolkkonen et al. 2017). In sectors characterised by dynamic technological change, there can also be incentives for employers to hire and retain younger workers with more up-to-date skills (Ilmakunnas and Maliranta 2016). In certain countries, the public sector has stood out in particular as offering generous opportunities for early retirement (Debrand and Sirven 2009). At the same time, early exit resulting from layoffs is less common while the public sector often offers relatively comfortable conditions and better opportunities to continue working longer.

2.3 Social and economic inequalities in retirement and the role of policy

Given that there are factors at various levels influencing an individual's retirement behaviour, it is clear that there are inequalities with respect to retirement in genders and social classes. First, there are inequalities pertaining to the freedom to choose the timing and mode of retiring. Studies have distinguished between voluntary and involuntary retirement (Dorn and Sousa-Poza 2009; Szinovacz and Davey 2005; Van Solinge and Henkens 2007). Voluntary retirement is retiring at the preferred moment of retirement. Involuntary retirement is when one prefers to continue working but is not able to, often as a result of disability or displacement. Radl (2013) has found that there are strong class divisions in voluntary and involuntary retirement. Especially low-skilled blue-collar workers are at risk of involuntary early retirement, whereas white-collar workers tend to have more opportunities for voluntary early retirement. He also found strong divisions between men and women, which he attributes to the finding that women more often tend work in lower occupations (Radl 2013). Hence, the class effect dominates the gender effect. Involuntary retirement has also been found to be related to having a history of insecure and precarious jobs (Raymo et al. 2011)

Moreover, there can also be voluntary or involuntary late retirement or *non-retirement*. A person might voluntarily continue working or retire very late if they are motivated to do so, even if they are eligible for a full pension. This can be the result of financial incentives, but also of having fulfilling work or appreciating the social structuring that work offers (Van Solinge and Henkens 2007). People may also be forced to continue working beyond their preferred or even statutory pension age. This is often for financial reasons: retirement is not an option because of the risk of deprivation. Again, there is a strong social gradient associated with non-retirement. Those who voluntarily defer retirement are often in comfortable and well-paid jobs and more likely to be found among the higher-educated classes (Radl 2013; Schils 2008). Those who are forced to defer retirement often have shorter work and contribution histories, and women and immigrants are especially at risk (Finch 2014). The element of involuntariness can be amplified by the higher likelihood of being employed in insecure and demanding jobs (Dingemans and Henkens 2014; Raymo et al. 2011; Scheurs et al. 2011).

In their recent work, Hofäcker and Radl (2016) extend the framework of push and pull factors, relating them to voluntary and involuntary types of retirement with 'maintain' and 'need' factors. Although distinctions between factors cannot always be made easily – they often work in conjunction – push factors usually

lead to involuntary (early) retirement, whereas pull factors allow for older workers' voluntary (early) retirement. However, in the times of reversal of early retirement, other factors are at play to keep workers in the labour market and prevent them from retiring early. There are positive maintain factors that promote the employability of older workers, including such measures as active labour market policies and life-long learning strategies. There are also negative need factors that coerce older workers to remain in the labour market, such as closing early exit routes, raising the official pension age and penalizing earlier take-up of old-age pensions.

Closely related to inequalities in choosing the timing and mode of retirement, the second type of inequality is that of retirement income. In both the Netherlands and Finland, as well as in most other industrialised countries, retirement income is the result of pension contributions and savings that accumulate over a person's working life. People with lower earnings over their life course will thereby accumulate a lower income to be available after retirement. Moreover, and as mentioned earlier, people with shorter work histories (e.g. immigrants) or longer breaks in their careers (e.g. women) are bound to end up with lower retirement incomes (Fasang, Aisenbrey and Schömann 2013; Ginn and Arber 1991; Gough 2001; Halpern-Manners et al. 2015; Madero-Cabib and Fasang 2016). Moreover, studies on *cumulative disadvantage* have pointed out that inequalities tend to increase over the life course. Those in a better starting position at a younger age, in terms of education, health, wealth or socioeconomic position, will be able to accumulate income at a higher rate throughout the life course than those at a lower position, thereby increasing income disparities at a later age (Crystal, Shea and Krishnaswami 1992; Dannefer 2003).

Pension systems have a substantial effect on the extent to which income inequalities exist or persist after retirement. First, the pension system can maintain income differences that existed before retirement, by making the level of pension benefits largely dependent on contribution history and the level of previously earned income. This is the *status maintenance* effect of pension systems. Second, the pension system can diminish income differences after retirement, by providing universal flat level benefits to all retirees. This is the *status levelling* effect of pension systems. Third, the pension system can increase income inequality after retirement, by individualising the responsibilities for saving and investing for pension income. This is the *status divergence* or *cumulative advantage/disadvantage* effect of pension systems.

Most pension systems combine all of these effects, especially as most pension systems consist of various tiers (Ebbinghaus 2011). Although not all pension

systems have all tiers, often a first tier provides a flat-rate universal pension benefit, a second tier provides earnings-related benefits and a third tier allows room for private savings and investments. The redistributive effect of the pension system depends on which tier dominates. *Nordic* or *Social Democratic* welfare states traditionally offer a larger share of universal flat-rate benefits, possibly topped up with earnings-related schemes and little need for private savings (Kangas, Lundberg and Ploug 2010). *Continental* welfare regimes have often emphasised earnings-related pension insurance schemes with minimum income protection for the poor and some room for private schemes (Bonoli 2000). *Anglo-Saxon* welfare states have traditionally offered universal but low-rate pension benefits, while heavily relying on occupational and private retirement schemes. In Chapter 4, I will discuss where the Netherlands and Finland fit in and what developments have taken place there.

2.4 Retirement in flux

Welfare regimes are not static and large shifts, especially towards privatisation of pensions, have taken place in recent decades (Ebbinghaus 2011). The privatisation of pensions belongs to the broader development of the individualisation of risks in the labour market and in retirement (Vickerstaff and Cox 2005). This trend towards the individualisation of risks can be seen as the result of several mutually linked macro-level developments. First, globalisation has increased the volatility of markets to economic shocks (Blossfeld, Buchholz and Hofäcker 2006). Older workers have been particularly vulnerable to the consequences of globalisation, as they have been more likely to work in industries, in particular manufacturing, that have been hit hardest. Moreover, they have been less likely than younger cohorts to be able to adapt to new technologies and the demands for new skills. Second, Western societies are ageing, leading to increasing pressures on pension and welfare systems, as there are increasingly fewer taxpayers to support a growing number of pensioners with a longer life expectancy.

Under the combined pressure of globalisation and ageing and in the era of ‘permanent austerity’, many governments have embarked on policies of retrenchment, recommodification and recalibration (Pierson 2001). Retrenchment includes cutting back on expenditure on social protection, while recommodification refers to the process of the increasing reliance of workers on (labour) markets for their livelihood, instead of provision by the state. Both have had a great deal of impact on retirement and the economic well-being of pensioners by reducing the

effects of pull factors and reinforcing need factors for remaining in the labour market (Hofäcker and Radl 2016). Although a certain recalibration of scarce resources towards active ageing and active labour market policies might have taken place in some countries, investments in maintain factors have not necessarily taken ground everywhere or withstood the economic tide (Boudiny 2013; Walker and Maltby 2012).

One of the risks of the restrictions in and financial disincentives to retiring earlier has been that older workers need to extend their working lives, with less regard to whether suitable jobs are available or whether their health, skills or personal situation allows it. In the Netherlands, for example, the exemption from job-search requirements for older workers has been lifted (Lammers, Bloemen and Hochguertel 2013), and special follow-up benefits for the long-term unemployed have been abolished. In Finland, unemployment pensions have been abolished (Kyyrä 2015). Similarly, retirement on disability benefits/pensions for reasons that are not strictly medical has become virtually impossible in both countries.

These changes could potentially lead to an individualisation of retirement risks (Vickerstaff and Cox 2005). This means that older workers increasingly have to depend on their own skills and financial resources to plan their own retirement and cope in the labour market, as the government is decreasing its support and guidance to those who are inclined to exit early and only incentivises exit at the statutory pension age or beyond. While potentially leading to a standardisation of retirement, i.e. everyone transitioning from work to retirement at the same statutory pension age, individualisation of retirement risks could also lead to a destabilisation of late careers. Whereas job displacement or illness previously would have irrevocably led to labour market exit, nowadays older workers and their employers will need to find ways to stay employed or become re-employed. This leads to an increase in movements in and out of jobs as well as social security.

This has also led to new types of phases in the retirement process, including part-time retirement, bridge employment, un-retirement and shifts to self-employment (Bloemen, Hochguertel and Zweerink 2016; Dingemans, Henkens and Van Solinge 2016; Hochguertel 2015). These moves can be voluntary, but there are signs that, especially among the lower social classes, they are more often labour market transitions born out of necessity and negatively affect well-being (Dingemans and Henkens 2014). Higher educated careers might also destabilise, but rather due to workers having skills that allow them to voluntarily switch jobs in anticipation of later retirement (Sanzenbacher, Sass and Gillis 2017).

To summarise, retirement is a complex phenomenon shaped by numerous factors at different levels. It is clear that there is a strong social gradient to retirement, regardless of the institutional context. Even in the most equal and redistributive Western societies, there are gender and social inequalities in retirement opportunities and outcomes.

3 A sequence-analysis approach to retirement as a trajectory

As argued in Chapter 2, there is a growing consensus in the literature that retirement cannot be seen as a single transition from work to pension and should be seen as a process in order to reveal the finer cogwheels in this process that may not necessarily be captured if retirement is studied as one transition alone. Moreover, the nature of retirement is multileveled, with factors mattering at individual, household, company and national levels. In spite of empirical developments in recent years to take into account this multiplicity of factors, limitations are often due to a lack of data that is longitudinal, multilevel, comparative and sufficiently detailed.

3.1 From transitions and states to trajectories

A majority of studies on retirement still use methods that only take into account individual factors and can only determine the likely timing of a single transition (e.g. using survival analysis) or how likely individuals are to be in a state of work or retirement (e.g. using logistic regression). This is problematic for at least three reasons. First, it reduces retirement to a single state or transition. Second, it ignores the fact that retirement can mean something other than not being in work and receiving a pension. Third, even if studies take into account the possibility of various types of exit as competing events (Schils 2008; Visser et al. 2016b), they do not take into account the interlinkages between transitions and the sequencing of events during the life course that lead to exit into the pension system as a final absorbing state. Therefore, although these methods might be accurate in predicting the timing of retirement as a transition from a certain state to another, they poorly capture the complexity that surrounds the process of retirement in a particular institutional context.

In this thesis, I follow others in moving away from analysing retirement as a single state or transition and look at sequences of transitions, or trajectories, instead (Calvo, Madero-Cabib and Staudinger 2017; Fasang 2010; Fasang 2012). Aisenbrey and Fasang (2010) have argued that, within the context of life-course theory, ‘the trajectory is the theoretically superior concept because it emphasises that single events should not be isolated from each other, but have to be understood in their continuity’ (p. 421). It allows a more holistic approach to the life course

or a particular phase of it. In the context of retirement research, the trajectory should be able to capture all of the events and transitions in an individual's late career that lead up to a permanent exit from the labour market.

In this thesis, I follow Fasang's (2010; 2012) definition of retirement trajectories as 'sequences of primary income sources within the age bracket during which old age pension entrance is theoretically possible', but with some reservations. Instead of primary income sources and depending on the data, it is also possible to look at statuses based on other criteria, such as reported main activity. In addition, as argued in the previous chapter, permanent labour market exit does not necessarily take place during the age bracket when old age pension entrance is already possible, but even earlier, e.g. through unemployment or disability. That also makes it difficult to decide on the right starting point for the age bracket. Moreover, in this definition, there are no clear criteria for the timing of the end of the trajectory. The trajectory can, but does not necessarily have to, end in an old-age pension. Non-retirement can also be the end state of a retirement trajectory. In the thesis articles, various starting and points of the age brackets are used, depending on their relevance in the national context at the time of the particular study. The basic criteria that were used are that the trajectories start when the major exit pathways become available and end when a majority of older workers have retired.

These sequences of statuses reflect not only individuals' movements in and out of the labour market, but also how institutions shape these movements. Regulations usually determine when a person is eligible for certain benefits or pensions and synchronise the timing of transitions. Therefore, exit pathways are reflected in individual trajectories. Nevertheless, individual trajectories are more complex than those pathways alone, because individual life courses differ and tend to diverge from the trodden paths (Fasang 2010).

3.2 Sequence analysis: Measuring distances and identifying typologies

Even though every individual trajectory is unique in a way, it is usually possible to identify typical patterns in retirement. Sequence analysis is a method that is closely related to theoretical concept of trajectories. It can be used to group together the most similar trajectories and separate the most dissimilar ones, thereby creating trajectory typologies based on the most common sequences of statuses and transitions between statuses. Sequences can be defined as 'an ordered list

of items' (Abbott 1995: 94). Sequences differ in at least five meaningful aspects (Studer and Ritschard 2016). To illustrate these differences, Figure 1 shows seven various types of fictional retirement trajectories. Each trajectory is a sequence of ten annual states between the ages of 56 and 65. In this simplified depiction, there are three different states: employment (E), unemployment (U) and retirement (R). Trajectory (a) represents a 'standard' retirement trajectory in which a person is employed until retiring at a statutory pension age of 65.

Figure 1.

Hypothetical variation in retirement trajectories.

(a)	State	E	E	E	E	E	E	E	E	E	R
	Age	56	57	58	59	60	61	62	63	64	65
(b)	State	U	U	U	U	U	U	U	U	U	R
	Age	56	57	58	59	60	61	62	63	64	65
(c)	State	E	E	E	U	E	E	E	E	E	R
	Age	56	57	58	59	60	61	62	63	64	65
(d)	State	E	E	E	E	E	U	U	U	U	R
	Age	56	57	58	59	60	61	62	63	64	65
(e)	State	E	E	E	E	E	R	R	R	R	R
	Age	56	57	58	59	60	61	62	63	64	65
(f)	State	E	U	E	U	E	U	E	U	E	R
	Age	56	57	58	59	60	61	62	63	64	65
(g)	State	U	U	U	U	U	R	R	R	E	E
	Age	56	57	58	59	60	61	62	63	64	65

First, sequences differ by the *types of states* that are experienced. Trajectory (a) in which a person is permanently employed, differs fundamentally from trajectory (b), in which a person is permanently unemployed. In (a) there is no experience of unemployment and in (b) there is no occurrence of employment. The only state these two trajectories have in common is retirement at age 65. Second, sequences differ in the way that the *total time* spent in each state is distributed. Trajectories (c) and (d) experience the same three states, but the time spent in each state differs.

There is a substantial difference between experiencing one year or five years of unemployment.

Time plays a more specific role in sequence analysis as well. A third aspect of the variation in sequences is the *timing*: the age or date at which a particular state occurs. When analysing patterns of retirement, it is meaningful to distinguish between those who retire early (a) and those who retire late (e). Experiencing unemployment at a somewhat younger age may lead to a return to the labour market (c), whereas at a later age unemployment may become an exit pathway, leading to permanent withdrawal from paid employment (d).

Fourth, the *duration* of states may vary. In trajectories (d) and (f), individuals spend equal amounts of time in employment and unemployment, but one spends a long period of time unemployed (d) and the other has several shorter spells of unemployment (f). Whereas the former might indicate a relatively comfortable early exit through the unemployment pathway, the latter suggests a precarious and insecure late career. Their experience of unemployment and effects on retirement are likely to be different.

Finally, the *sequencing* of distinct states matters. A trajectory in which a worker quickly returns to employment after retirement (c) is different from a trajectory in which unemployment constitutes a ‘bridge’ to retirement or where shorter spells of unemployment and employment follow each other (f). Trajectory (g) represents the most extreme, but not impossible, hypothetical case of a person with the highly atypical sequencing of being unemployed, then retiring, followed by ‘un-retiring’ and taking up paid unemployment.

The parameters of sequence analysis determine which of these aspects matter more or less and which of these trajectories can be considered more different or more similar. Sequence analysis is a method rooted in the tradition of algorithmic exploratory data analysis (Aisenbrey and Fasang 2010: 424–425). Unlike methods in the tradition of stochastic data modelling, sequence analysis makes no assumptions about the processes that generate the data. However, the researcher, basing his or her work on theoretical considerations, must specify the terms and conditions that will define the distances between pairs of sequences.

In the social sciences, the most popular way to do so has been using optimal matching analysis (OM). OM uses an algorithm in which the researcher needs to specify transformation ‘costs’ for two types of operations to establish the pairwise distances between sequences. First, insertion and deletion (indel) costs specify the importance of whether a same state occurs in two sequences at all. If indel costs are low, two sequences with the same status occurring at any time are

considered relatively similar. If indel costs are high, it does not matter whether sequences have the same states if they do not occur at the same time. For example, in Figure 1, sequences (d), (f) and (g) would be relatively similar with low indel costs, because the same states occur. High indel costs would indicate that these trajectories are very different. Therefore, if the timing and order of states matter, indel operations should be disregarded or indel costs should be set high (Aisenbrey and Fasang 2010: 426).

Second, the costs of substituting one state with another are related to whether the timing of a state is similar for two sequences. The substitution cost of replacing one state, e.g. employment, in one sequence with another, e.g. unemployment, at the same point in time in another sequence, depends on the value attributed to it. Taking again the example of Figure 1, if substitution costs for employment and unemployment would be low, but for those two and retirement high, distances between sequences (a), (b), (c) and (f) would be relatively low. Sequences (e) and (g) would be more distant because of the occurrence of retirement in positions where, in the other sequences, employment or unemployment occur.

There are at least three ways to set substitution costs: by keeping substitution costs of all states constant, by linking substitution costs to transition rates and by customising substitution costs based on specific theoretical considerations. Linking substitution costs to transition rates means that if the calculated likelihood of transitioning from one state to another is higher, the substitution cost is lower. A customised substitution cost matrix can be used when there are strong theoretical arguments for why certain states are similar and others are not (Articles II and III).

OM has been criticised for several reasons. The first type of criticism is related to the setting of transformation costs, which can be used rather arbitrarily if not grounded in theory and can raise suspicions of data mining (Aisenbrey and Fasang 2010; Levine 2000). Second, OM can only directly address the first three aspects in which sequences differ (experienced states, total time and timing), but if the emphasis should be on duration of spells or sequencing of distinct states, OM does a poor job (Wu 2000). To address both issues, many innovations based on OM, but also different logics for measuring distances have been made in recent years (for an overview of difference measures and their performance, see Aisenbrey and Fasang 2010; Studer and Ritschard 2016).

After calculating the distances between sequences, it is possible to identify typologies with the help of cluster analysis. These typologies are useful because of the need to reduce some of the possible variation between individual sequences into more simplified categories that allow identification of common patterns and

characteristics (Studer 2013). One of the earlier criticisms of sequence analysis was about the lack of accepted validation measures in deciding on the optimal number of clusters (Aisenbrey and Fasang 2010; Wu 2000). In recent years, however, several innovations have become available to measure the quality of cluster solutions, based on the algorithm and cluster method used (Studer 2013).

3.3 Measuring heterogeneity of and complexity within sequences

Within sequence analysis, measures have been developed that enable the analysis of de-standardisation and differentiation of life-course trajectories. De-standardisation means that 'life states, events and their sequences can become experiences which either characterise an increasing smaller part of population or occur at more dispersed ages and with more dispersed durations' (Brückner and Mayer 2005: 32–33). It indicates an increase in heterogeneity *between* individual statuses at each particular point in time. Differentiation, or destabilisation, refers to the 'process where the number of distinct states or stages across the life time increases' (Brückner and Mayer 2005: 33). It indicates an increase in complexity *within* individual retirement trajectories. Both are measures that indicate a diversification of trajectories in the population (Aisenbrey and Fasang 2010; Fasang 2012).

Changes in the heterogeneity of sequences can be measured using a state distribution entropy indicator (Gabadinho et al. 2010). Entropy at any point in time equals 0 when all respondents are in the same state, and it is 1 when all cases are equally distributed among all state combinations (see Article III for more details on calculating the state distribution entropy indicator). In Figure 1, for example, entropy is lowest at age 65, when all but the individuals with trajectory (g) are in the state of retirement. Entropy is highest between the ages 61 and 63, when the distribution of individuals among the three states is more even: there is more heterogeneity among states in the population at those points.

Changes in complexity within sequences can be measured using Elzinga's turbulence index (Elzinga 2010; Elzinga and Liefbroer 2007). The turbulence index measures complexity within sequences by not only taking into account the variety of states, but also the time spent in various states and the variation in these durations (see Articles IV and V for more details on calculating the turbulence index). Sequence turbulence increases when longer periods of time are spent in different states: the more time is spent in one particular state, the less turbulent the sequence is (Elzinga and Liefbroer 2007: 233). In Figure 1,

for example, sequences (a) and (b) feature low turbulence due to the long spells spent in employment and unemployment respectively and only one transition to retirement at the end of the trajectory. Sequence (f) is the most complex, as it shows continuous transitions between short spells of unemployment and employment before reaching retirement.

3.4 After sequence analysis: Analysing differences and change

Depicting the results of sequence and cluster analysis in state distribution or sequence plots is a visually attractive way to present the different trajectory types. Moreover, each individual is assigned to certain cluster, which means that a categorical variable can be created for the types of trajectories. Methods using such variables can be rather descriptive by linking clusters to background variables, e.g. gender, class, race, health and income (Calvo, Madero-Cabib and Staudinger 2017; Fasang 2010). Categorical variables can also be used as both dependent and independent variables in more advanced analysis. With the clusters as a dependent variable, one can analyse the likelihood of entering each trajectory on the basis of a set of background variables, e.g. with the help of multinomial logistic regression (Articles I and II; Brzinsky-Fay 2008; Widmer and Ritschard 2009). Moreover, the cluster categories can be used as independent variables in different types of multivariate methods, e.g. as dummy variables in regression analysis (Article II; Visser et al. 2016a; Madero-Cabib and Fasang 2016).

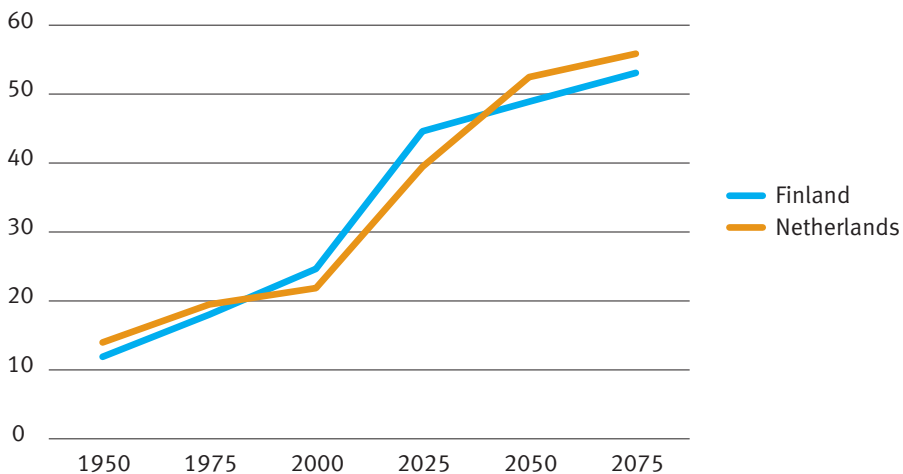
As status distribution entropy is a measure of heterogeneity of individuals at a certain point in time, it does not yield a value that can be assigned to an individual. It is possible to perform a descriptive analysis of changes in heterogeneity over time, i.e. (de-)standardisation, and comparisons between groups (IV; Calvo, Madero-Cabib and Staudinger 2017; Elzinga and Liefbroer 2007; Fussell 2005; Widmer and Ritschard 2009). The turbulence indicator yields a value for each individual sequence, which enables more advanced analysis of the determinants of trajectory complexity. Sequence complexity has been used as a continuous dependent variable in linear regression analysis, also to measure differentiation of patterns and trajectories over time (Articles IV and V; Bieman, Grunow and Fasang 2011; Van Winkle and Fasang 2017).

4 Retirement in the Netherlands and Finland

The populations of the Netherlands and Finland are among the most rapidly ageing in Europe (OECD 2015). Figure 2 shows the old-age dependency ratios, i.e. the number of individuals aged 65 or older per 100 persons of working age (aged 20–64) from 1950 and projected until 2075. It shows how the ratio of older persons has started to rapidly increase from 21.9 for the Netherlands and 24.7 for Finland in 2000 and will respectively reach 52.5 and 48.9 by 2050. Especially due to the central role of earnings-related pensions in both the Dutch and Finnish systems, population ageing puts considerable pressure on the sustainability of the pension systems, and reforms have been called for (Hinrichs and Lynch 2012).

Figure 2.

Old-age dependency ratios in Finland and the Netherlands.



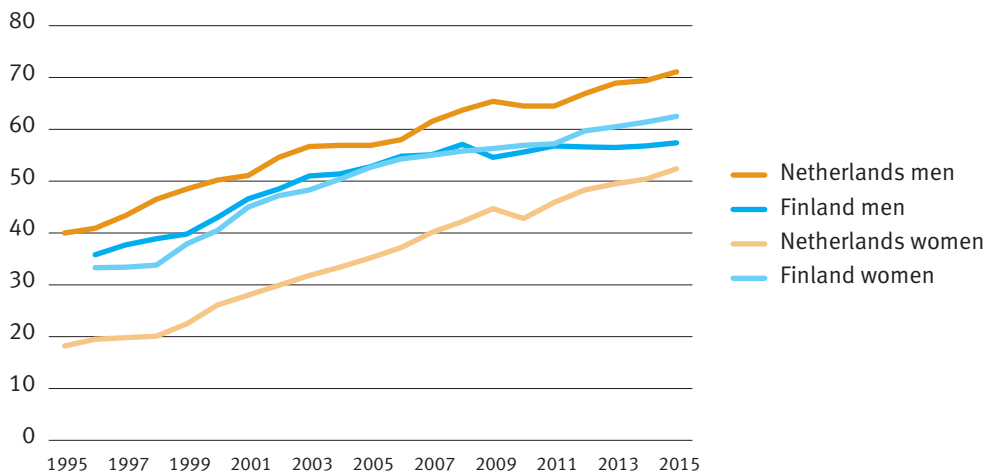
Source: OECD (2015).

This pressure has largely been recognised by policymakers in both countries and led to reforms in pension and retirement systems of these countries over the past few decades. In both countries, the reform of early exit through early retirement schemes, disability and unemployment have made it less possible – or at least financially less attractive – to retire before the statutory pension age. This has contributed to increases in labour market participation among older workers in both countries. Figure 3 shows the increases in employment rates for Dutch

and Finnish women and men in the 55–64 age group since the mid-1990s. In the Netherlands, employment rates for men rose from 40.0 per cent in 1995 to 71.1 per cent in 2015; for women the increase was from 18.2 per cent to 52.2 per cent. In Finland, male employment rates rose from 35.8 per cent in 1996 to 57.4 per cent in 2015, while female employment rates rose from 33.3 per cent to 62.5 per cent during the same period.

Figure 3.

Employment rates for men and women aged 55–64 in Finland and the Netherlands (1995–2015).



Source: Eurostat.

These similar pressures on the pension system and developments in labour market participation provide the starting point for analysing changes in retirement and late-career trajectories in the Netherlands and Finland. In the next section, I will sketch the analytical framework for comparing retirement in both countries. The remainder of this chapter is devoted to describing the relevant national demographic, institutional and labour market developments that have shaped transitions from work to retirement in the Netherlands and Finland in the past two to three decades. The aim is to provide the background for the thesis articles and allow comparisons between the two countries to be drawn in the right context. At the end of this chapter, I will summarise the most important similarities and differences between the two countries and illustrate why comparing them rather

than treating them separately reinforces the contribution of this thesis to the existing literature.

4.1 Differential life courses

This thesis takes a comparative life-course approach to retirement. Whereas classical life-course approaches concentrate either on within-country differences in terms of class and gender or on historical changes in life courses over time, the comparative life-course approach aims at comparing patterns of life courses in different countries (Hofäcker 2010; Mayer 2005). This approach allows accounting for differences in outcomes that are due to macro-level factors such as national institutions and policies, while differentiating for class, gender and their interaction. What remains is inter-individual variation that can be considered universal. Mayer (2005: 23) has also termed this the *differential life course approach*.

Comparative life-course research requires scrutiny of specific life-course patterns and their context in two or a few countries. Hence, it is a step away from single-country studies. However, its aim is neither to compare as many countries as possible nor to compare whole welfare or production regimes. In such cases, details and precise mechanisms might be lost in search of generalisation. Moreover, when comparing groups of countries as regimes, there is a risk that many of the within-regime country differences are lost (Mayer 2005). For example, although often counted to the same Nordic welfare regime, the differences between some institutional arrangements in Sweden and Finland are still great, despite the many similarities. At the same time, Finland might, for example in terms of labour market and pension policies, be closer to some continental European countries.

Hence, comparative or differential life-course sociology aims at comparing specific countries while linking distinct policy fields with clearly defined life-course outcomes (Madero-Cabib and Fasang 2016). In the field of retirement patterns and income, studies have compared for example Germany and the UK (Fasang 2012; Fasang, Aisenbrey and Schömann 2013) as well as Germany and Switzerland (Madero-Cabib and Fasang 2016). When conducting comparative social science research, the selection of countries can be based on the smallest common denominator, i.e. choosing countries that seemingly present the greatest contrast by belonging to different welfare and production regimes (e.g. Germany and the UK). Another strategy is to select countries that are mostly similar, but

differ on one or a few specific aspects. This allows controlling for the common factors while analysing how much variation in outcomes can be attributed to the factors that vary. Madero-Cabib and Fasang (2016), for example, chose this approach by studying economic well-being in retirement in two countries with strong male-breadwinner contexts (Germany and Switzerland) that also differ strongly in their pension systems.

The approach taken in this thesis is closest to the ‘most similar systems design’ and focuses on two countries only: the Netherlands and Finland. The first major risk, however, in conducting comparative research on two countries lies in the selection of cases. One important source of selection bias is choosing the countries that the researcher knows best. Whereas it can be a strength to know certain countries in detail, it becomes problematic when attempts are made to fit the theory to the cases rather than the other way around (Peters 1998). Moreover, a common criterion for selecting cases is on the basis of the dependent variable. However, when analysing two countries in which a successful reform of early retirement occurred, for example, one leaves out those cases in which there was no early retirement or there was no successful reform. The second risk, related to the first, is that there are only two cases and a large number of variables. This leads to a great deal of extraneous variance: the observed relation between dependent variable Y and independent variable X might actually be due to other economic, political, historical or cultural factors related to each of the countries (Peters 1998; Ragin 1989).

These risks are dealt with in several ways in this thesis. First, the risk of extraneous variance is reduced when binary comparison focuses on a single policy or process instead of comparing an entire system (Peters 1998). Second, a reduction in variables can be used to mitigate the small-N problem (Ragin 1989). Third, this requires a strong embedding in theory in order to identify the relevant factors that matter. Comparative life-course sociology offers a solid analytical framework for comparing the two countries in this thesis. The thesis focuses on a specific life-course phase, i.e. retirement. The empirical sub-studies make use of a limited number of explanatory variables, especially gender and socioeconomic factors, which are largely comparable in the two countries. The selection of these variables was based on theory and built on previous literature. When the relations between the explanatory variables and outcome variables are different for the two countries, an explanation was sought in the variation in policies and institutions at the national levels.

4.2 The Netherlands

4.2.1 *Old-age pension system*

The current pension system in the Netherlands finds its origins in the AOW (*Algemene Ouderdoms Wet*) act from 1956. Occupational pensions had been in place before World War II, but were fragmented and foresaw a limited role for government. After the war, an Emergency Pensions Act came into force, providing universal benefits to everyone over 65 years of age. It then took ten years before the AOW came into effect, as the Confessional parties disagreed with the Liberals and Social Democrats about the administrative authority: corporatist bodies or the state. The decision was finally made in favour of the latter (Anderson 2007).

The Dutch multi-pillar pension system consists of the near-universal flat-rate AOW and publicly regulated and subsidised earnings-related occupational pension benefits. The AOW is residence-based: everyone lived in the country between the ages of 15 and 65 is entitled to a pension. Accrual is diminished for each year of not having been a resident. Starting in 2014, the statutory pension age of 65 was increased by three months every year until 2018, after which it will increase by four months every year. The aim is an increase in the pension age to 67 by 2021, after which it will be tied to life expectancy. The AOW is financed by wage-earner contributions and functions as a pay-as-you-go (PAYG) system with shortfalls financed by general revenues. Individuals receive around 70 per cent of the net minimum wage and couples around 50 per cent each.

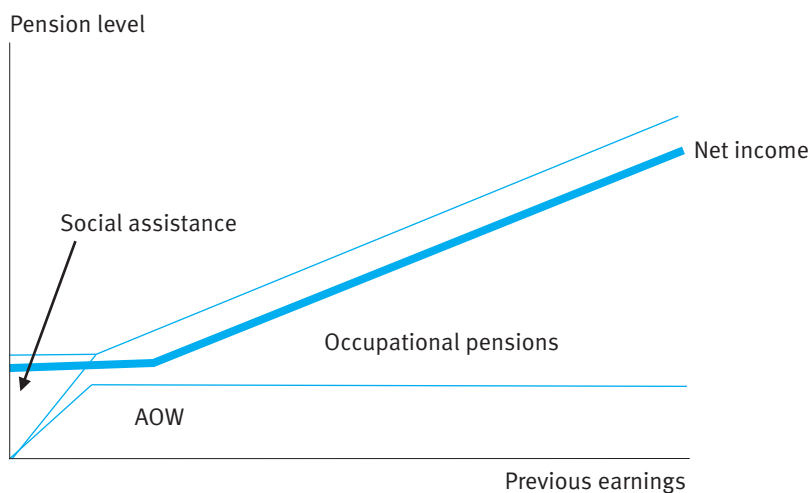
Supplementary pensions are accrued through pension funds that are related to employment. They can be industry-wide pension funds, company-based or restricted to certain professions only. Usually, 35 to 40 years of employment are needed to accrue a full pension. Coverage is wide, as supplementary pensions are quasi-mandatory: in 2010, about 90 per cent of wage earners were covered. Contributions are regulated by collective wage-bargaining agreements and are typically shared by employees and employers, the latter usually contributing the larger part. Supplementary pensions are capital funded. Most occupational pension schemes are defined-benefit and, including the AOW, amount to 70 per cent of the final level of earned wages (Anderson 2007; 2011).

Figure 4 stylistically shows the level of net pension income relative to previous earnings. The AOW provides a universal flat-rate pension basis for all who have resided in the Netherlands for 50 years, independent of previous income. It is topped up by the supplementary pensions, which are related to previous earnings. Both the AOW and occupational pensions are subject to taxes, which means the

net income from both pensions is lower than their total gross amount. At the lowest end of the income scale, for example in the case of insufficient AOW and occupational pension accrual, social assistance can be obtained to provide a minimum income level.

Figure 4.

Composition of individual pension levels relative to previous earnings in the Netherlands.



4.2.2 Early exit pathways

Economic downturns as a result of the oil price shocks in 1973 and 1979 led to alarmingly high unemployment rates in the Netherlands by the end of the 1970s. Whereas workers in their mid- and late careers were often well protected by permanent contracts and strict employment protection legislation, youth unemployment soared. Early retirement for older workers soon became an instrument used to alleviate youth unemployment. The idea was that, for every older worker retiring, a job became available for a younger worker (Fleischmann and Koster 2016; Van Oorschot 2007). The first early retirement schemes were introduced in occupational pensions in the mid-1970s. Although first restricted to certain sectors and companies only, they were soon introduced into most collective labour agreements. Early retirement was a solution that was considered acceptable by the government, employers and trade unions alike (Ebbinghaus 2006). Although the economy began to recover by the mid-1980s, partly due to the wage moderation

agreed upon by the social partners in 1982, the growth of early retirement schemes continued, as it had become ingrained in the expectations of employees and part of a set of HR tools used by employers (Henkens and Kalmijn 2006).

Most VUT (*Vervroegde Uittreding*) schemes, as these early retirement schemes were called, offered relatively generous benefits of 75 to 80 per cent of previous earnings and the option to retire between the ages of 58 and 60. AOW benefits would then become available at the age of 65. Accrual of old-age pension rights continued as normal, and the benefits were funded on a PAYG basis; hence, there was no penalisation for early exit. As VUT premiums were exempt from taxation, the government was *de facto* subsidising early retirement. By 1995, about 80 per cent of all employees were covered by VUT schemes (Van Oorschot 2007).

Aside from exit through early retirement schemes, disability insurance benefits have functioned as an alternative exit pathway since the 1980s. The duration of the earnings-related WAO (*Wet Arbeidsongeschiktheid*) benefits were age-dependent: up to six years for those aged 58 and older. After expiration, the earnings-related benefit could be replaced by a flat-rate benefit. Recipients of benefits were exempt from job-seeking requirements. The replacement rate of benefits was relatively high – 80 per cent at one point – while pension rights accrual continued, even while receiving such benefits (Van Oorschot 2007). With medical screening not being too strict in many cases, this made the WAO an attractive exit option for workers, while at the same time it was relatively easy for employers to shed older workers through this scheme (Fleischmann and Koster 2016).

A third, less attractive exit pathway was through unemployment benefits called ‘WW’ (*Werkloosheids Wet*). The level and duration of these earnings-related benefits was dependent on contribution history: workers received up to 70 per cent of previous earnings. Older workers could qualify for an extension of the benefits to bridge the period until eligibility for (early) retirement. Moreover, between 1987 and 2003, three and a half years of flat-rate ‘follow-up benefits’ were available after the maximum period of five years of earnings-related benefits expired (Van Oorschot 2007). Unemployed older than 57.5 years old were exempt from job-seeking requirements. However, the WW scheme was less attractive than the WAO, as pension rights did not continue to be accrued.

4.2.3 Exit pathway reforms, 1997–2017

By the mid-1990s, labour market participation among older workers in the Netherlands had hit an all-time low, and the effect of the exit pathways was

undeniable (Hartlapp and Kemmerling 2008). To illustrate: in 1995, 42.5 per cent in the age group of 55–65 was in one of the exit pathways. Among them, 23.5 per cent were receiving disability benefits, 13.3 per cent were receiving early retirement pensions and 5.7 per cent were unemployment benefit recipients (Ebbinghaus 2006: 138). Successive Dutch governments implemented a series of reforms throughout the 1990s and 2000s to limit early exit through these pathways. Table 1 summarises the major reforms.

Table 1.

Major reforms in Dutch early exit pathways, 1997–2017.

Year of reform	Exit route	Type of reform
1997	Early retirement	Replacement of generous VUT early exit arrangements by more actuarially neutral pre-pension schemes
2002	Sickness and disability benefits	'Gatekeeper improvement law': enhanced screening to reduce the influx of workers claiming sickness and disability benefits
2003	Unemployment benefits	Abolishment of 'follow-up benefits' that extended the period of entitlement for those over 57½
2004	Sickness and disability benefits	Adoption of stricter criteria for assessing disability
	Sickness and disability benefits	Shift of responsibility for an employee's sickness absence from state to employer for the first two years of sickness.
	Unemployment benefits, social assistance	Abolishment of exemption from job-search requirements for those over 57½
	Early retirement	Introduction of 'life-course scheme'
2006	Sickness and disability benefits	Comprehensive reform of disability benefits system and introduction of new 'law on work and income according to labour potential'
	Early retirement	Abolishment of tax exemption for pre-pension schemes
2008	Unemployment benefits	Tightening of requirements to take up work that does not match one's qualifications
2012	Early retirement	Abolishment of 'life-course scheme'

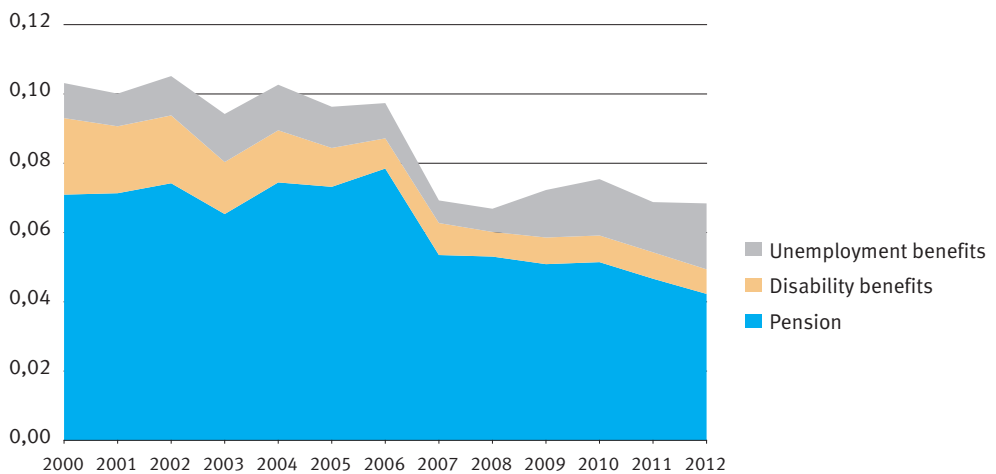
Source: Article II.

To stop early retirement and to make the system more financially sustainable, the government, together with employee and employer organisations, decided to phase out the VUT schemes in 1997. They were to be replaced by pre-pension schemes. These pre-pensions are capital funded instead of PAYG, have lower

replacement rates and are actuarially more neutral. Drawing one is possible from the age of 55, but the earlier the take-up, the lower the rate of the pre-pension and the greater the permanent reduction in old-age pension. Pre-pension premiums and benefits were still tax deductible until 2006, when the government abolished this rule and made early retirement even more unattractive (Van Oorschot 2007). Figure 5 shows that, following these reforms and particularly after 2006, there was a large decrease in the percentage of people receiving pension benefits between the ages of 55 and 64. Studies have found that a decline in VUT schemes and the introduction of pre-pensions have led to increased labour market participation among older workers and an increase in the effective retirement age (Euwals et al. 2010; Visser et al. 2016b).

Figure 5.

Dutch population receiving pensions, disability and unemployment benefits as a ratio of the employed population, ages 55–64.



Source: Statistics Netherlands.

Further attempts were made to reform early retirement, but they stranded prematurely. In 2004, a ‘life-course scheme’ (*Levensloopregeling*) was introduced that allowed workers to save part of their salary for unpaid leaves and early retirement. This life-course savings scheme was supposed to be converted into a ‘vitality scheme’ (*Vitaliteitsregeling*) that was agreed upon by the social partners and would have allowed older workers to change careers, downgrade or retire part-time in the context of the rising of the pension age to 67. This scheme, however, never

saw daylight, and the life-course scheme was abandoned in 2012 (Fleischmann and Koster 2016). Since then, no formal schemes that offer opportunities for early retirement have been put in place.

Especially the take-up rates of disability benefits were cause for concern among policymakers, also because the cost of these benefits was mainly the responsibility of the state (and not the employers, as with the VUT schemes). In the late 1980s, then Prime Minister Lubbers proclaimed that ‘the Netherlands is ill’, and the phrase ‘Dutch Disease’ gained a new meaning in this context internationally. However, incremental reforms in the 1980s and 1990s such as lowering the replacement rate from 80 to 70 per cent in 1987 brought some fiscal relief, but they were unsuccessful in stopping the inflow (Kuipers 2006).

More proliferate reforms of disability benefits began in the 2000s. In 2002, the ‘gatekeeper improvement act’ (*Wet verbetering poortwachter*, or ‘Wvp’) was introduced, which increased the role of medical screening to prevent inflow to sickness and disability benefits. Further reforms of the WAO followed in 2004, when a set of stricter criteria was adopted to assess eligibility for benefits. Moreover, the financial responsibility for a worker’s first two years of sickness was shifted from the state to the employer, increasing incentives for employers to find suitable work for employees in poor health.

Finally, in 2006, the whole disability benefit system was overhauled. The WAO was replaced by the WIA (*Wet Werk en Inkomen naar Arbeidsgeschiktheid*), which emphasised workers’ *ability* to work instead of their *disability*. The severeness of disability is divided into three categories. Workers assessed to be less than 35 per cent disabled receive no benefits. People who are between 35 and 80 per cent disabled receive a partial disability benefit if they can prove that they and their employers did their utmost to find suitable work for a period of two years. Persons who are more than 80 per cent disabled receive full disability benefits with a replacement rate of 75 per cent of previous earnings for a maximum period of five years, after which a new assessment takes place. Figure 5 shows that after 2002 the proportion of older workers on disability decreased and remained stable after 2006 and until 2012. In their study on the health sector, Euwals et al. (2012) found that the reforms in disability benefits contributed to a delay in the timing of labour market withdrawal among older workers.

While unemployment benefits were already the least attractive exit pathway, further incentives were introduced into the system to increase the outflow from unemployment among older workers. Follow-up benefits were abolished in 2003, and from 2004 onwards workers older than 57.5 were no longer exempt from job-

search requirements (Lammers, Bloemen and Hochguertel 2013). Lastly, in 2008, changes were made in the unemployment benefits system requiring workers (of all ages) to accept work that does not necessarily match their qualifications. Studies have shown that older Dutch workers have more difficulty in finding work when they become unemployed (De Graaf-Zijl and Hop 2007) and are more likely to enter into sickness or disability schemes (Lammers, Bloemen and Hochguertel 2013). Moreover, Figure 5 shows that there was no downward trend in unemployment benefits among the population of 55–65 between 2000 and 2012. This might be due to the recession that hit the Netherlands after 2008, causing an increase in overall unemployment. It is also possible that, as access to the early retirement and disability pathways has become more restricted, older workers more often end up drawing unemployment benefits as a substitute.

4.2.4 Labour market for older workers

When the opportunities for exit are largely closed off to older workers, it means that there should also be opportunities for them to stay in the labour market longer. This entails the availability of jobs, but also policies in place that enable the retention of older workers and extending their working lives. When looking at the labour market conditions for older workers in the Netherlands, a few things stand out.

The attitude of employers towards older workers has been relatively negative (Conen, Henkens and Schippers 2011; OECD 2014a; Van Dalen, Henkens and Schippers 2010), and this is reflected in their retention and recruitment policies. Although retention policies showed an improving trend throughout the 2000s, recruitment showed no such trend and was heavily dependent on the business cycle (Conen, Henkens and Schippers 2011). This means that if they lose their jobs, older workers have a hard time finding new work which would previously have led to early exit but now results in long-term unemployment. Two structural characteristics of the Dutch labour market contribute to this. First, wages in the Netherlands are highly seniority based, making older workers more expensive than younger workers, regardless of their productivity (OECD 2014a). Second, incumbent long-tenured workers' jobs are well-protected by law. This creates disincentives for employers to fire or hire older workers and at the same time reduces older workers' labour market mobility.

In terms of retention policies, Dutch employers tend to use more passive accommodation policies than activating development policies. Conen, Henkens and

Schippers (2011) found that employers predominantly took permissive measures to retain older workers, such as granting them additional leaves or allowing for part-time work. Very few offered older workers opportunities to adjust through training, and in these terms the Netherlands lags behind the OECD frontrunners such as the Nordic countries, Switzerland and the UK (OECD 2014a). Demotion is rare and difficult to implement on a practical level. The government and social partners have introduced several initiatives over the years to promote older worker employment, training and mobility and to combat age discrimination (Fleischmann and Koster 2016; OECD 2014a). However, they have, rather, taken the form of management by speech and best-practice guidelines. Employers have been generally weary of top-down imposed initiatives because of the costs they might entail (Conen, Henkens and Schippers 2011).

The Netherlands has been a male-breadwinner society for a long time. Female labour market participation was low until the 1980s: women were expected to stay home and take care of the children and the household. This was also reflected in the pension system, as the AOW pension was based on the husband's earnings and work history. In 1985, an act was adapted in accordance with the EU Equal Treatment Directive, and AOW benefits were individualised. Still, until recently there was a direct incentive for women to retire earlier if they had an older husband who retired at the age of 65 in the form of a supplement to the AOW if the spouse did not work (Anderson 2011).

Since the 1980s, labour market participation among Dutch women has grown spectacularly, as also reflected in Figure 3. Still, much of this rise can be attributed to an increase in part-time employment. In 2014, almost 80 per cent of employed women between 55 and 64 years old held a part-time job of 34 hours per week or less, compared to 30 per cent among men (Fleischmann and Koster 2016). This has repercussions on their pension accrual, however. After a lifetime of working part-time, women tend to end up with considerably lower supplementary pensions. Especially divorced women are at risk of encountering financial difficulties in retiring.

Moving to a part-time job has been one of the main forms of gradual retirement among older workers in the Netherlands, also among men. In 2014, about 20 per cent of Dutch people aged 55–69 have reported reducing their working hours in a move towards retirement. This is the highest percentage in Europe (Eurofound 2016). Other forms of gradual retirement are also gaining in strength (Bloemen, Hochguertel and Zweerink 2016). A recent study by Dingemans, Henkens and Van Solinge (2016) found that one in four Dutch retirees engage

in some form of bridge employment, albeit with a strong social gradient to it. Higher-educated people are likely to continue work after retirement voluntarily. Lower-educated people do so out of necessity, while being less likely to actually find a job. Also, the incidence of self-employment among older workers has been on the rise, although not necessarily to ease the way into retirement by reducing working hours, but rather out of necessity to avoid unemployment (Been and Knoef 2015).

Reforms to extend working lives have taken place against a background of an 'early exit culture' in the Netherlands. That means that a large part of the general public, employers and employees alike, believe that older workers are entitled to retirement at 65 or even earlier. Whereas reforms in the alternative early exit pathways have been passed rather uneventfully, the raising of the statutory pension age to 67 met with considerable resistance among the general public. In the 2017 parliamentary elections, two large opposition parties on the left and right were campaigning on a return to 65 as the statutory pension age. Moreover, a party called 50PLUS, aimed at attracting the older vote, has retirement at 65 as its number one programme item and increased its number of seats in parliament from two to four.

4.3 Finland

4.3.1 *Old-age pension system*

The current Finnish pension system is based on the reforms to the National Pension introduced in 1957. The reform introduced a pension with a universal basic amount for everyone with five years of residence plus an income-tested supplement. This system was reformed in 1996 when the National Pension became solely income-tested and was paid only as a supplement to retirees whose earnings-related pension were insufficient. In 1961, private-sector employees were granted an earnings-related pension scheme (TEL) to top up the National Pension, followed by schemes for the self-employed (YEL) and farmers (MYEL) in 1974. Earnings-related pensions in the public sector developed separately but parallel to the private sector, with the introduction of the KVTEL for the municipal sector in 1964 and the VEL for the state sector in 1966. Public-sector pensions had a somewhat higher replacement rate and allowed for retirement at 63 instead of 65. The pension age in the public sector was raised to 65 in 1993 and both

systems were fully harmonised in 2005. However, the legacy of these differences still applies to some extent to current pensioners.

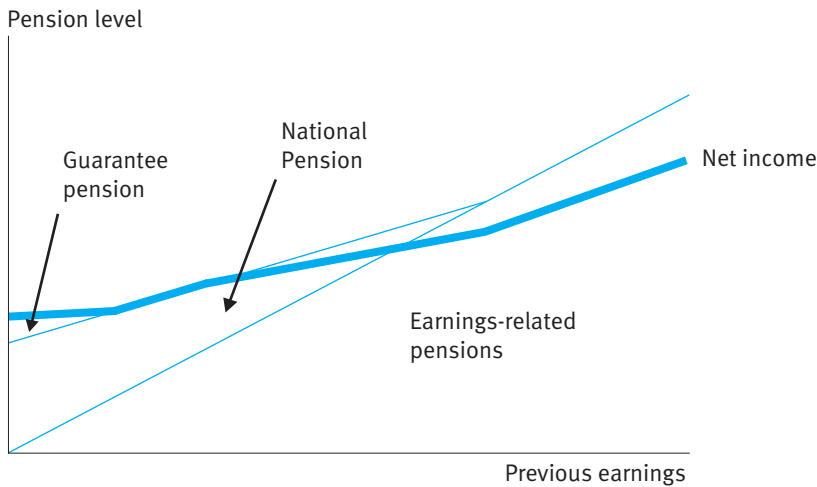
The current Finnish pension system consists of two main tiers. The third tier of private pension and life insurance schemes is relatively small (Kangas and Luna 2011). The statutory earnings-related pensions (*työeläke*) are the dominant tier and are accrued throughout working life. There is no ceiling to the amount of earnings-related pension one can receive. Contributions are paid by employers and employees. The National Pension (*kansaneläke*) is a basic pension and is based on residency. The level of the National Pension depends on the level of the earnings-related pension and is paid on top of it. Those with income from earnings-related pensions above a certain level do not receive the National Pension. For those below a certain income level, the Guarantee Pension (*takuueläke*) provides a minimum level of income support. The National and Guarantee pensions are paid from general taxes. In 2016, 59 per cent of pensioners received only an earnings-related pension, 34 per cent received both an earnings-related and a National Pension, and seven per cent received a National Pension only (ETK and Kela 2017).

The pension reform of 2002 introduced a flexible pension age between 63 and 68 in the earnings-related pension scheme, replacing a fixed retirement age of 65. Under this system, pensions could be drawn at the earliest eligibility age with no penalty, but deferring retirement meant accruing pensions at an increased rate of 4.5 per cent of earnings. The age of eligibility for old-age pensions under the National Pension scheme was 65, but pensions could be drawn from the age of 63 with a permanent reduction of the pension benefit of 0.4 per cent for each month of retiring early. In 2017, a new reform of the earnings-related pensions came into effect, gradually raising the earliest possible pension age by three months per year until it reaches 65 in 2025.

Figure 6 shows how the level of pension income is related to previous earnings in the Finnish pension system. Earnings-related pensions are topped up by the National Pension to a certain amount. In 2016, the upper limit of the earnings-related pensions for receiving the National Pension was 1311.05 euros/month for single households and 1167.71 euros/month for cohabitants (Knuuti and Ritola 2016). Those at the bottom of the income distribution receive a Guarantee Pension. In 2016, the level of Guarantee Pension was 634.30 euros/month. Income from pensions are taxed only from a certain level.

Figure 6.

Composition of individual pension levels relative to previous earnings, Finland.



Source: Author's drawing, based on Knuuti and Ritola (2016: 37).

4.3.2 Early exit pathways

The origin of the early exit pathways in Finland follows a different history than in the Netherlands. Following an economic recession in the late 1970s, early exit became a solution to dealing with structural unemployment, as in the Netherlands. However, in the 1980s, the Finnish economy was growing at an above-average level for Europe. Although the need for early exit was reduced and the economy came close to overheating in the late 1980s, the opportunities for early exit, especially through early retirement programmes, were extended. An early exit culture was, in a way, promoted to facilitate structural change in the economy and the boost the country's international competitiveness. Early exit allowed older, mainly lower-skilled workers to enjoy a socially acceptable exit, while making room for younger workers in more productive jobs (Hytti 2004; Ilmakunnas and Takala 2005). The severe economic recession that hit Finland in the early 1990s boosted the use of early exit pathways, especially through unemployment pensions, resulting in the direct need and a political will for extensive reforms.

Early exit in Finland has been enabled by three broad types of earnings-related pensions: early-retirement, disability and unemployment pensions. The entire pension system has been undergoing both incremental and more radical change over the decades, so it is difficult to sketch the exact institutional design

of the exit pathways over time (Kangas, Lundberg and Ploug 2010). The first type of age-related exit route was early retirement with an early old-age pension (Järnefelt 2010). This was introduced in the private sector in 1986 and in the public sector in 1989 and allowed workers to retire at 60 in the private sector and 58 in the public sector against permanently reduced benefits.

There were two main types of disability pensions. The first is the ordinary universal disability pension with no lower age boundary, but with strict medical conditions. It is available to those who have received sickness benefits for more than one year and who have a permanently reduced capacity to work of below 40 per cent. People with a capacity to work that is limited to 40–60 per cent are entitled to a partial disability pension. Rehabilitation pensions are assigned for a limited period of time, with the aim of returning workers to the labour market (and thus not strictly speaking an exit pathway). Second, there was a ‘relaxed disability pension’, literally called the ‘individual early retirement pension’ (Järnefelt 2010; Saurama 2004). This scheme was introduced in the late 1980s, again separately in the private and public sectors, and it allowed workers with long work histories and less severe health problems to retire at the age of 55. This age was raised to 58 in 1994.

The unemployment pension was introduced in 1971 for those who had been unemployed long-term and had received unemployment allowance for more than 200 days at the age of 60. After the recession of the 1970s, it became more popular when the minimum age was lowered to 58 in 1978 and to 55 in 1980. After 1986, the minimum age was gradually raised back to 60, but at the same time an extended unemployment benefit was introduced that allowed older long-term-unemployed workers to leave the labour market at 53. However, at the end of the 1980s, the economy was booming and a new Employment Act guaranteed paid employment to those who were unemployed long-term, so there was little need for this extended period of unemployment benefits and pensions (Hytti 2004). When the Finnish recession broke out in the early 1990s, this changed. The guarantee of a job for long-term-unemployed workers was suspended and the ‘unemployment tunnel’ of unemployment benefits, extended benefits and unemployment pensions came into full use, practically allowing workers who become unemployed at 53 to remain so until their retirement (Hytti 2004).

Finally, a part-time pension was introduced in Finland in 1987 in the private sector and in 1989 in the public sector. It allowed those who negotiated this with their employer a move from a full-time job to a part-time job to receive an earnings-related part-time pension that is proportional to the reduction in their working hours, at the earliest age of 60 (private sector) and 58 (public sector) and at the latest at the age of 64. The earnings and working hours needed to decrease between 35 and 70 per cent of the previous full employment and the part-time pensions benefit was 50 per cent of the difference between full-time and part-time earnings (Takala and Väänänen 2016). One might argue whether the part-time pension is an exit pathway or not. It was designed to allow older workers to extend their working lives, albeit in a reduced capacity, but one might also see it as gradual way out from full-time employment (Hytti 2004; Järnefelt 2010).

4.3.3 Exit pathway reforms, 1997–2017

The first wave of early exit pathway reform in Finland sprang almost directly from the fiscal pressures on the welfare and pension system caused by the economic recession of the early 1990s. Whereas GDP and tax revenues had shrunk, social expenditures increased manyfold, leading to cuts in pension benefits. Especially large was the increase in unemployment among older workers, and the fact that they were stuck in the ‘unemployment tunnel’ raised concerns. Moreover, the Finnish post-war baby boom took place somewhat earlier than in the rest of Europe, increasing pressure to reform the pension system (Ilmakunnas and Takala 2005). Hence, by the mid-1990s, there was momentum among a broad spectrum of policy actors to introduce large-scale reforms, and this resulted in a reform of the pension system in 1997 (Kangas, Lundberg and Ploug 2010). Further negotiations between social partners resulted in a second major reform agreement in 2002, which was implemented in 2005. Table 2 shows the succession of reforms that took place in the Finnish early exit pathways between 1997 and 2017.

Table 2.*Major reforms in Finnish early exit pathways, 1997–2017.*

Year of reform	Exit route	Type of reform
1997	Unemployment tunnel	Lower age threshold for extended unemployment allowance raised from 55 to 57
1998	Part-time pensions	Lower age threshold reduced from 58 to 56
2000	Disability pensions	Lower age threshold for relaxed disability pension raised from 58 to 60
2002	Part-time pensions	Lower age threshold raised back to 58
2005	Old-age pensions	Introduction of flexible pension age between 63 and 68
	Part-time pensions	Upper age threshold raised from 64 to 67
	Early retirement	Lower age threshold raised from 58 (public sector) and 60 (private sector) to 62 in both sectors
	Disability pensions	Relaxed disability pension abolished Somewhat less stringent medical criteria introduced on the ordinary disability pension
	Unemployment tunnel	Unemployment pension abolished Lower age threshold for extended unemployment allowance raised from 57 to 59
2011	Part-time pensions	Lower age threshold raised from 58 to 60
2013	Part-time pensions	Lower age threshold raised from 60 to 61
2017	Old-age pensions	Start of gradual increase of lower age threshold of flexible pension age from 63 to 65 by 2025
	Part-time pensions	Abolished and replaced by partial early old-age pensions

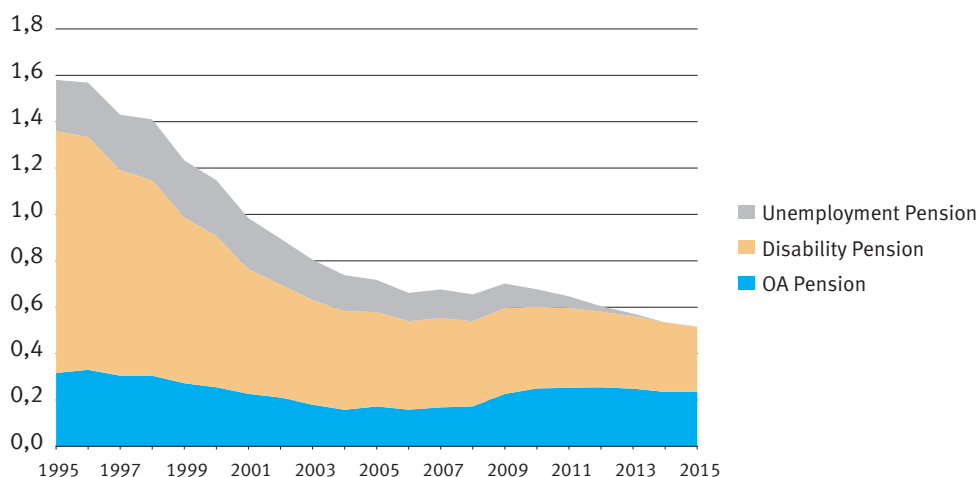
Sources: Hytti (2004), Ilmakunnas and Takala (2005), Järnefelt (2010), Kyrrä (2015), Takala and Väänänen (2016).

The first immediate object of reform was the unemployment pension, since its use had increased drastically due to the unemployment caused by the recession. In 1997, the lower age threshold for accessing the extended unemployment allowance was raised from 55 to 57. That meant that the unemployment tunnel (unemployment allowance + extended unemployment allowance + unemployment pension) became available at the age of 55 instead of 53. In 2005 the unemployment pension was abolished, while at the same time the extended unemployment allowance became available only at the age of 59 for those who entered unemployment at the age of 57. This meant that unemployment as an exit pathway was not closed down entirely, but was nevertheless reduced in significance, especially among the ‘younger’ 55–64 age group.

Figure 7 illustrates the phasing out of the unemployment pension in this age group. Kyrrä (2015) found that the 1990s reforms in the unemployment tunnel delayed the inflow to unemployment among older workers and caused a shortening in the average duration of unemployment. Nevertheless, incidence of unemployment has remained high, and reforms have not much addressed the outflow from long-term unemployment among older workers (Ilmakunnas and Takala 2005).

Figure 7.

Finnish population receiving old-age, disability and unemployment pensions as a ratio of the employed population, ages 55–64.



Source: Finnish Centre for Pensions.

The lower age limit for the relaxed disability pension was raised from 58 to 60 in 2000. In 2005 this individual early retirement scheme was abolished for everyone born after 1943. At the same time, the medical eligibility criteria for the ordinary disability pensions were made somewhat less strict (Järnefelt 2010). Under the new flexible pension system, disability pensions would convert to old-age pensions at the age of 63 instead of at 65. Kyrrä (2015) found that the abolition of the relaxed disability pension had substantial effect in extending working lives, especially among female workers in the public sector. Figure 7 also shows a decline in the ratio of recipients in disability pensions to employed persons from the mid-1990s, but stabilising around 2010.

Reforms in old-age pensions and early old-age pensions in 2005 had somewhat contrasting effects. On the one hand, with the introduction of the flexible pension

age, the earliest possible age for taking up an old age pension was lowered from 65 to 63. On the other hand, the lower age threshold for early retirement pensions was raised to 62 for both the public and private sectors. Studies have shown that the percentage of workers retiring before the age of 62 has indeed decreased, but that the percentage retiring at exactly 63 has increased considerably since the reforms (Tuominen 2013). This is also partly reflected in Figure 7, which shows the ratio of old-age pensioners among those aged 55 to 64 has even increased slightly since the 2005 reform. However, starting from 1 January 2017, the earliest possible pension age under the flexible retirement scheme has started to rise gradually and will reach 65 in 2025.

The earliest eligibility age for part-time pensions changed several times during the same period: from 58 (1994) to 56 (1998), back to 58 (2002) and then up to 60 (2011) and 61 (2013). The original upper age limit was set to 64, but this was raised to 67 under the flexible pension system in 2005 (Takala and Väänänen 2016). Part-time pensions were at the height of their popularity in the early 2000s, when the eligibility age was only 56, but the number of recipients has been steadily declining since 2003 (Takala and Väänänen 2016). In the aftermath of the recession, the eligibility age was lowered, as part-time pensions were seen to offer a possible way to extend working lives while at the same time reducing working hours and thereby avoiding potential layoffs. However, the scheme was deemed expensive and its effects non-conclusive. Although the outcomes of part-time pensions are hard to measure, some studies found that part-time pensioners did not retire on an old-age pension later than those who were employed full-time (Ilmakunnas and Ilmakunnas 2006; Takala and Väänänen 2016). In 2017, the part-time pension was replaced by a partial early old-age pension. Available at the age of 61 in 2017, its lower age threshold will rise to 62 by 2025, together with the old-age pension age. Partial early old-age pensions are accompanied by a reduction in pension accrual. Moreover, they will be decoupled from work: it is no longer required to have been employed full-time previously to take up the partial pension benefit.

4.3.4 Labour market for older workers

The willingness of employers to retain and employ older workers is also of importance in Finland, although employment legislation is not as restrictive to hiring and firing as in the Netherlands, and there is no formal system of seniority rules in wage setting (OECD 2014b). A recent study showed that about ten per

cent of pensioners retired earlier than desired: almost 60 per cent retired at 63, although they wanted to continue (Tuominen 2013). Whereas employers were found to believe extended working lives is a noble goal, almost half of them believed that this was unimportant and unlikely in their own workplace. Forty per cent of employers indicated that they were unwilling to employ or retain a worker older than 55, and 57 per cent were unwilling to employ or retain a person between 63 and 68, although this willingness was higher in the public sector.

In this same study, one out of five employers thought that 63 as a lower threshold for the flexible pension age was too high (especially in sectors with heavy physical work), and two-thirds felt that the upper threshold of 68 was too high. The same study showed that retirement is predominantly an individual decision of the employee, unless the employee wants to continue working after 63: then it is seen as a decision of the employer and employee together. Still, the study found that employers saw more opportunities to continue work until 65 or even 68 than older workers were willing to fulfil. Hence, it shows that while there are some ways to continue working after 63, many employers are hesitant to actively engage in recruiting or retaining older workers.

A specific feature of the pension system that provides incentives for hiring and firing in the private sector has been the so-called 'experience rating' in unemployment and disability pensions. Employers pay contributions to the pension system based on their disability risk. This risk is determined by the cost of worker pension claims compared to the average disability pension cost of all employers with workforces with similar age structures (Kyyrä and Paukkeri 2015). This means that a firm pays more in insurance contributions if its employees are retiring early on disability pensions (and, previously, unemployment pensions), which should serve as a financial incentive to retain older workers with health problems. This can be done by investing in prevention, by channelling employees into temporary rehabilitation pensions instead of disability and by adjusting work tasks after rehabilitation. However, Kyyrä and Paukkeri (2015) found little impact of disability rating on the inflow into disability pensions. Moreover, experience rating might provide a disincentive for hiring older workers, as it increases the costs of having an older workforce (Ilmakunnas and Ilmakunnas 2015).

One major difference between Finland and the Netherlands has been the labour market participation of women. This is visible in Figure 2, which shows that the employment rates of Finnish men and women aged 55–64 have been close to equal over time, while women even overtook men in recent years. Women tend to work full-time throughout their life course. This has been made possible

by education, family and labour market policies that allow combining work with raising children (Järnefelt 2010). However, the Finnish labour market is strongly segmented by gender, with women predominantly employed in jobs in the municipal public sector. This segmentation into male and female occupations can also be observed in their pension income, which averaged at about 66 per cent of men's pension income in 2013 (Rantala and Riihelä 2016).

Part-time employment is relatively rare among Finnish employees in general and is not a common strategy for gradual retirement. The take-up of part-time pension, however, has been popular, especially among women and in the public sector. Employers have been less positive about part-time pensions. They see it as a privilege granted to certain socioeconomic groups that would have continued working anyway. The part-time pension, in essence, compensates for a reduction in income with a pension benefit and offers an incentive to start working less before the pension age is reached. Moreover, part-time pension cannot be offered equally in all professions (Takala and Väänänen 2016). The new partial old-age pension introduced early in 2017 was aimed at correcting some of these flaws, and the number of applications received in the first months of its existence indicate that it is more popular than its predecessor, especially in the private sector.²

4.4 Comparing retirement in the Netherlands and Finland in a nutshell

The previous shows there are many similarities but also differences between retirement in Finland and the Netherlands. Both are relatively small prosperous countries with open economies and well-developed welfare states. The openness of their economies reinforces the need to be competitive in the global economy, which has been reflected in labour market policies towards older workers. Partly as a result of this economic openness, both countries experienced economic crises that led to policies that promoted early exit. Similar to other European countries, various early retirement and social security schemes were used to allow older workers to withdraw from the labour market at an earlier age than the statutory pension age (Ebbinghaus 2006; Henkens and Kalmijn 2006; Hytti 2004; Van Oorschot 2007). In the Netherlands, however, early exit mainly resulted directly from economic crisis and the perceived need to redistribute the negative employment effects of the crisis from young to old. In Finland, early exit was already promoted before the onset of the economic crisis in an attempt to redistribute the negative employment

2 <http://www.etk.fi/en/tiedote/11000-persons-predicted-retire-partial-old-age-pension/>

effects from exporting sectors to declining sectors. In both countries, employer and employee organisations played a crucial role in shaping pension policies and early retirement arrangements.

While Finland and the Netherlands both have relatively extensive welfare states and long traditions of old-age pension systems that provide a mix of universal basic and earnings-related benefits, there are notable institutional differences between the countries. The Dutch pension system has a basic pension that is topped up with occupational pensions, while the Finnish system has occupational pensions that are topped up by a basic pension. Whereas both systems are seen as relatively sustainable and fair, these differences have implications for policy-making. In the Netherlands, pension policy-making revolves around the national basic pension, and any changes made to it are often met with fierce public and political struggle. In Finland, pension policy-making centres on the occupational pension, which has been the domain of social partners and not of party politics.

Moreover, each of the early exit pathways in Finland have constituted part of the occupational pension system. This means that entitlements to disability, unemployment and early-retirement pensions are accrued individually across a working life and dependent on previous earnings. Employee and employer organisations have a decisive voice in their administration. In the Netherlands, the VUT was organised through sectoral collective agreements, while disability and unemployment pathways are part of the social insurance system. The level and duration of disability and unemployment benefits depend on recent work history and earnings, but are not accrued individually like the Finnish pensions. They are administered by the state, and although the social partners are often consulted in case of larger reforms, they do not have a final say in the decision-making.

It is possible that these institutional differences have contributed to different reform trajectories in the two countries. Finland experienced more incremental changes in the pension system, mainly through the shifting of eligibility ages and the eventual phasing out of the IER and the unemployment tunnel. In the Netherlands, changes in the VUT were also incremental. Government reforms in unemployment and especially disability, however, did not abolish the programmes all together, but were abrupt and radical in blocking their function as early exit pathways by reducing inflow to and stimulating outflow from benefit receipt. In turn, these different reform trajectories are likely to have had different effects on the changes in retirement trajectories in the two countries.

A final important difference between the countries is the gender differences in employment and retirement. Finland has a tradition of being a dual-earner society, with high labour market participation across women's life courses, whereas the Netherlands has long been a male-breadwinner society. These differences are reflected in the design of the pension and social security system, but also in the outcomes in retirement, such as timing of exit and post-retirement incomes. Whereas labour market participation in the Netherlands has been steadily growing, many women still work part-time only. This is reflected in their lower labour market attachment and lower pension income. In Finland, older women caught up with men in terms of labour market participation, but occupations are strongly segmented by gender, leading to a gender pension gap.

5 Data and methods

To apply sequence analysis, detailed longitudinal categorical data is needed that can measure spells of different types of income or main activity statuses within a relevant age bracket. To study de-standardisation and differentiation of life-course trajectories, it is necessary to have that data for the relevant age bracket for a number of cohorts and spanning a relevant period of time to capture processes of change. To take a comparative life-course approach to retirement, one needs comparable data for at least two countries. Obviously, obtaining data that meet all these criteria poses problems, as not much comparative longitudinal data is available.

Previous studies have often used SHARE, and in particular the SHARELIFE wave, which has allowed sequence analysis of people's life courses in retrospective for almost 30,000 respondents in 13 countries (Hoven et al. 2017; Madero-Cabib and Fasang 2016; Ponomarenko 2016; Van Winkle and Fasang 2017). However, SHARELIFE does not include Finland, and since the data were collected in 2008–2009, they cannot be used to analyse more recent changes in retirement. Moreover, the disadvantage of cross-national datasets is that categories must be harmonised across countries. This may lead to a loss of information, as various types of income sources must be grouped under categories broad enough to allow comparison.

Instead of using pooled comparative data, it is possible to use separate datasets for two countries. In the ideal case, data are available for similar periods, contain comparable variables and allow for matching samples on the basis of a set of criteria (Bynner and Heinz 1991). For example, one might want to ensure that samples are stratified similarly along lines of gender, education, occupation, marital status, etc. Finding comparable variables in two national datasets is often problematic, however. The variables might mean something different in each national context and are likely to be measured differently. For example, there are differences in welfare systems and the relevance of various income types such as specific types of benefits and pensions (Fasang 2010; 2012). It is possible to group such various types into broader categories, but that would mean the loss of detail that makes using national datasets often more attractive than cross-national comparative datasets.

For the five sub-studies that are the empirical basis of this thesis, separate national datasets were used for the studies on the Netherlands and Finland. Table 3 summarises the types of data used in each of the articles and the methods for analysing them. Data were mostly based on administrative registers, which generated relatively large sample sizes. Using register-based data reduces the risks associated with flawed self-reporting and attrition, as can often occur with survey data. Data were available for different periods for the two countries, which also imposed the analysis of different age brackets. In creating the retirement trajectory typologies, monthly income data were available for a longer period in the Netherlands, allowing broader age brackets and multiple birth years. For Finland, only a shorter age bracket and one cohort year were available. Partly due to the different ways of collecting the data in both countries, monthly income statuses were available in greater detail from Finland than from the Netherlands. These issues make it difficult to compare both countries directly. No attempt was made to create matching samples due to the large differences in data, but the entire population was analysed where possible. Still, the separate analyses in each of the four articles allow for the detection and comparison of broader issues, associations and trends.

Table 3.
Use of data and methods in each of the articles.

Article	Addresses research question	Country	Data sources	N	Cohorts	Age bracket	Sequence states	Dependent variables	Independent variables	Methods
I	1 & 2	NL	Administrative data and LFS (Statistics Netherlands)	2,277	1943–1945	56–66	Monthly, main source of income: employment, disability and sickness, unemployment, social assistance, old-age pensions, and other	Sequence clusters	Gender, country of birth, level of education, occupational status, type of employer, and sector	Sequence analysis, multinomial logistic regression
II	1 & 2	FI	Finnish Centre for Pensions combined with FLEED (Statistics Finland)	55,971 (18,702)	1948	57–65	Monthly, main source of income: employment, sickness benefits, unemployment benefits, other benefits, full disability pensions, partial disability pensions, rehabilitation pensions, unemployment pensions, part-time pensions, early retirement pensions, old-age retirement pensions, and other pensions	Sequence clusters	Gender, marital status, children, level of education, socioeconomic status, disposable income in quartiles, and sector	Sequence analysis, multinomial logistic regression
III	2	FI	Finnish Centre for Pensions	55,971 (44,449)	1948	57–65	Monthly, main source of income: employment, sickness benefits, unemployment benefits, other benefits, full disability pensions, partial disability pensions, rehabilitation pensions, unemployment pensions, part-time pensions, early retirement pensions, old-age retirement pensions, and other pensions	Levels of annual income	Sequence clusters, length of career, gender and sector	Sequence analysis, multilevel regression models
IV	3 (& 2)	NL	Administrative data (Statistics Netherlands)	12,843	1940–1946	59–65	Monthly, main source of income: employment, disability and sickness, unemployment, social assistance, old-age pensions, and other	State entropy and sequence turbulence	Gender, level of education and labour market status	Sequence analysis, descriptive analysis, ANOVA
V	3 (& 2)	FI	FLEED (Statistics Finland)	238,099	1937–1948	51–65	Annual, main activity: employed, unemployed, unemployment pensioner, other.	Sequence clusters, sequence turbulence	Sequence clusters, gender and level of education	Sequence analysis, OLS regression

5.1 Dutch data and sample selection

Sequence data for the studies on the Netherlands was based on municipal register data on socioeconomic categories that are established by a person's main sources of income for each month (*Personen sociaaleconomische categorie*, or SECMBUS). The data contains the entire Dutch population, given that they have registered at a municipality. At the time of research, full data was available for 1999–2011. The data consists of spells of 11 different categories of income sources. Some of these categories were grouped together in order to reduce their number. Six categories remained: employment (including self-employment), disability and sickness, unemployment, social assistance, old-age pensions and other (including having no direct income of one's own).

For Article I, the aim was to perform sequence and cluster analysis on the longest possible relevant period. A ten-year period between the ages 56 and 66 was chosen. Age 56 was the starting point, since at that age a considerable part of the population was still active in the labour market, and possible exit through the exit pathways began to bear relevance at ages 57–58. Age 66 was selected as the right censoring point in order to detect movement into pensions up to one year after the Dutch statutory pension age. With data available for 1999–2011, this meant that it was possible to study ten-year retirement trajectories for those born in 1943–1945. The sample of this study was selected on the basis of the availability of data on the background variables, which mainly came from labour force surveys (*Enquête beroepsbevolking*, or EBB). As the aim was to study trajectories from work to retirement, an additional condition for sample selection was that the individual had to be employed at the age of 56 ($N = 2,277$).

The SECMBUS dataset with the same income source categories was used for creating the sequence data for Article IV. However, as the aim of this study was to analyse de-standardisation and differentiation of retirement trajectories over time, it was decided to select a shorter age bracket of six years between the ages 59 and 65 in order to be able to incorporate more birth years. This enabled the analysis of sequences of seven consecutive birth cohorts, the oldest of which was born in 1940 and the youngest in 1946. Important was also that the oldest cohort retired before the implementation of the major early exit reforms in the Netherlands, whereas the youngest cohort was almost fully affected by these reforms. As the total study population consisted of almost 1.3 million cases, a random sample of one per cent was drawn to perform the analyses with ($N = 12,843$).

Background variables for the Dutch studies were collected from the EBB dataset for sociodemographic variables and from HOOGSTEOPLTAB, which is a separate

database with detailed information on each person's educational attainment. Article I used variables for gender, country of birth, level of education, occupation, type of employment and sector. Country of birth was divided into two categories: native and non-native. Level of education consisted of three categories: lower, middle and higher education. Occupation was split into six categories: managers, professionals and technicians, routine service and administrative, farmers and craftsmen, skilled blue-collar workers, and unskilled workers. There were three types of employer (self-employed, employed in micro- or small enterprises and employed in medium-sized or large companies) as well as a division between public and private sector. In Article IV, de-standardisation and differentiation of retirement trajectories were analysed by gender and level of education.

5.2 Finnish data and sample selection

The sequence data for Articles II and III are combined from various datasets from the Finnish Centre for Pensions. They consist of data on work, pension and benefit spells. Work spell data are based on information about contributions to earnings-related pension schemes, whereas pension spell data are based on receipt of earnings-related pensions. The data allowed detailed distinction between all various benefit and pension types. After grouping some of the rarer and less relevant categories, there were 13 sources of income: employment (including self-employment), sickness benefits, unemployment benefits, other benefits, full disability pensions, partial disability pensions, rehabilitation pensions, unemployment pensions, part-time pensions, early retirement pensions, old-age retirement pensions, and other pensions (including special farmer pensions). Those who died during the follow-up period were given the status 'deceased'.

The selection of period and cohort were limited by the availability of data. Data on benefit spells was not available before 2005 and the latest available year of data at the time was 2013. In order to have the broadest possible age bracket, it was decided to have only one birth year (1948), which could be followed for eight years between the ages 57 and 65. The age bracket is relevant, however, since access to the first exit pathways became available at age 57, and at age 65 one became eligible for the national old-age pension. As in Article I, one additional selection criterion was being in paid employment at the start of the trajectory. This yielded a total study population of $N = 55,971$.

For Article II, the data from the Finnish Centre for Pensions was combined with background variables from FLEED (Finnish Linked Employer-Employee

Data). As FLEED covers only one-third of the total working age population, the sample size for the additional analyses was reduced to $N = 18,702$. Background variables were taken from 2004, before the onset of the trajectories in 2005. They included categorical variables for gender, marital status (married, single, divorced, widowed), children (yes/no), education (low, middle, higher), socioeconomic status (farmers and forestry entrepreneurs, other self-employed persons, upper-level employees, lower-level employees, manual workers and other), disposable income in quartiles, and sector (private/public). Also included were variables measuring incidence of sickness and unemployment over a relatively long period of time.

For Article III, we used additional Finnish Centre for Pensions data on income from earnings and earnings-related pensions to establish income trajectories of individuals. One limitation of the data was that, although spells of benefits were included in the data, the level of income from benefits was not. Therefore, years with more than 20 days of benefit receipt were marked as missing and income from earnings was simulated using missing data imputation procedures in SPSS. The data included information only on income earnings-related pensions, not on the national and guarantee pensions. However, because the levels of the latter two depend on the level of the first, it was possible to calculate the total income from pensions. A simulation model by the Finnish Centre for Pensions was used to calculate taxes and net income from earnings and taxes. Because it was necessary to exclude those who died in the follow-up period and, as a result of incomplete data, the self-employed, the study population was reduced to $N = 44,449$.

Article V was based entirely on FLEED. As FLEED was available from 1988 to 2013 (at the time of writing), it was possible to follow more cohorts for a longer period of time. A disadvantage of FLEED is that it is available on an annual basis only. Therefore, it was decided to study late careers rather than retirement trajectories as such and expand the age bracket for this study to 51–65 in order to have 15 consecutive statuses in the sequences. This permitted following 12 cohort years born between 1937 and 1948 and yielded a large study population: $N = 238,099$.

Main activity statuses registered at the end of the year were used to construct the sequences. That means that is not possible to know if statuses changed in the course of a year. Another limitation of the data was that activity statuses only included five relevant categories: employed, unemployed, unemployment pensioner, pensioner and other. Information on disability pensions was not included in the data in the same way for all years, so it could not be included as a separate status. One advantage of FLEED was, however, that it was possible to

included changes in jobs in the sequences with the help of the enterprise codes in the data. When an individual's enterprise code changed in the data from one year to the other, the status of that individual changed, e.g. from 'Job 1' to 'Job 2'.

5.3 Methods

Article I on the Netherlands and Article II on Finland followed a similar methodological approach. In a first stage, sequence analysis with OM and cluster analysis were performed. For the sequence analysis on the Dutch data, substitution costs were set according to the transition rates between the states. Indel costs were set as default. For the Finnish study, a customised matrix of substitution costs was used based on the theoretical proximity and distances between states. This was done because using the transition rates did not yield any sensible results, most likely due to having 14 different states to work with. Indel costs were set at just above half of the largest substitution cost to ensure that the timing of states played an important role (Aisenbrey and Fasang 2010). In both studies, the Ward method for cluster was used, and the optimal number of clusters was decided upon using the Average Silhouette Width (ASW) as a measure for cluster quality (Studer 2013). In the second stage of Studies I and II, multinomial regression with a set of categorical independent variables was used to predict the likelihood of entering each of the retirement trajectories.

In Article III, we used multilevel or mixed linear regression models for discontinuous change to estimate the income trajectories of older employees, with individual changes in income over time at Level 1 and variation between subjects at Level 2 (Singer and Willett 2003). Change in income was assumed to be discontinuous due to the drop in income that generally takes place when retiring and earnings are replaced by pension receipt. The same retirement trajectory clusters as in Article II were entered as dummy variables in order to analyse how the pension and tax systems affected income around the time of retiring in each of the trajectories. Controls were included for gender and sector of employment. Separate analyses were performed for income from earnings and earnings-related pensions only, for gross income and for net income to separate the effects of earnings-related pensions, basic and guarantee pensions, and taxes.

In Article IV, state distribution entropy and turbulence indicators were calculated for each of the birth years and for men and women separately to analyse retirement trajectory de-standardisation and differentiation. Changes in turbulence were further analysed by level of education and status at the onset of

the follow-up period, using one- and two-way analysis of variance (ANOVA). In Article V, the focus was on changes in turbulence across cohorts, both in sequences excluding job changes and those including job changes. Sequence analysis with a simple Hamming measure was applied to calculate distances between sequences. Dummies for gender and levels of education were included in the OLS regression analysis to estimate the impact of these factors on changes in turbulence.

6 Overview of results

In this chapter, I present the main findings that resulted from the sub-studies of Articles I–V. It elaborately summarises the results, and some of the crucial figures from the articles are shown to allow quick comparisons between the countries. For a complete overview of all graphs and tables, the reader is referred to the individual articles.

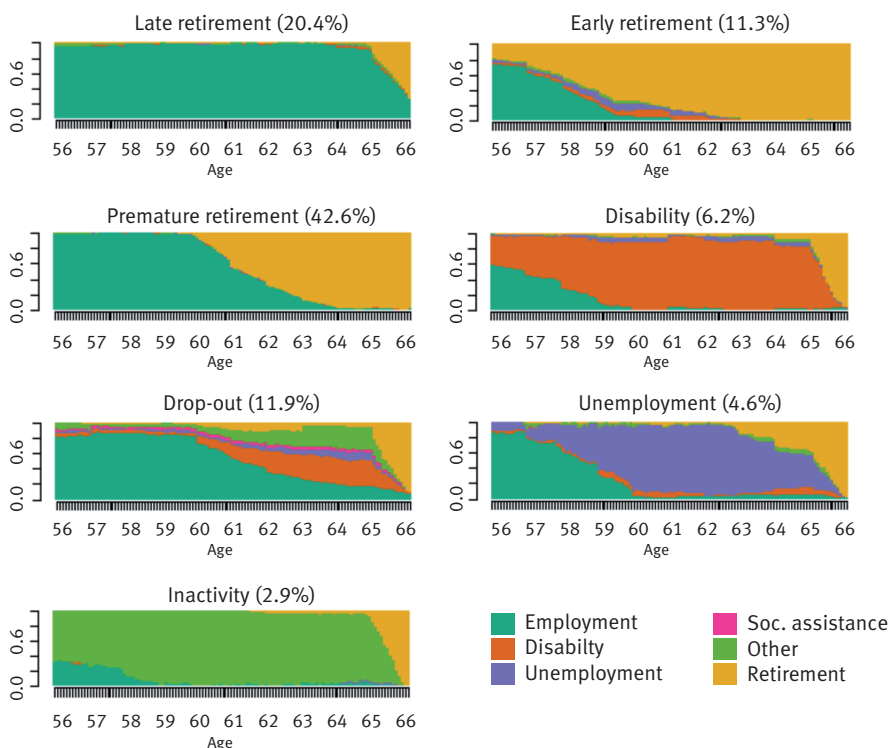
6.1 Article I: Institutional and socioeconomic drivers of work-to-retirement trajectories in the Netherlands

The aim of Article I was to identify the main trajectories from work to retirement in the Netherlands and to analyse how these trajectories were shaped by both institutional factors and individual socioeconomic characteristics. Seven dominant trajectory clusters were identified (Figure 8). Three are related to variations in the timing of the transition from employment to retirement: late retirement (20.4%; exit around 64–65), early retirement (11.3%; exit around 56–60) and premature retirement (42.6%; exit between 60 and 64). There was a trajectory of those receiving disability benefits before entering retirement (6.2%) and one in which unemployment benefits (4.6%) constituted the exit pathway. Inactivity constituted an exit pathway for 2.9 per cent of the study population, whereas 11.9 per cent experienced an unclear and unstable trajectory and were therefore classified as ‘drop-out’.

Women were more likely to exit through ‘Inactivity’ and to drop out. Non-natives were more likely to enter the ‘Unemployment’ and ‘Inactivity’ trajectories. Higher levels of education decreased the risk of following the ‘Unemployment’, ‘Inactivity’ and ‘Drop-out’ trajectories. There were strong associations of occupational status with retirement trajectories. Farmers and craftsmen were less likely to retire early or late and to drop out. Skilled blue-collar workers were less likely to follow the ‘Early retirement’ trajectory. Unskilled workers were more likely to drop out. The self-employed were more likely to follow the ‘Late retirement’, ‘Disability’, ‘Inactivity’ and ‘Drop-out’ trajectories. Those employed in smaller companies were at greater risk of ‘Late retirement’ and ‘Inactivity’. Being employed in the public sector reduced the risk of ‘Early retirement’, ‘Late retirement’, ‘Unemployment’, and ‘Drop-out’.

Figure 8.

State distribution plots, seven-cluster solution, the Netherlands.



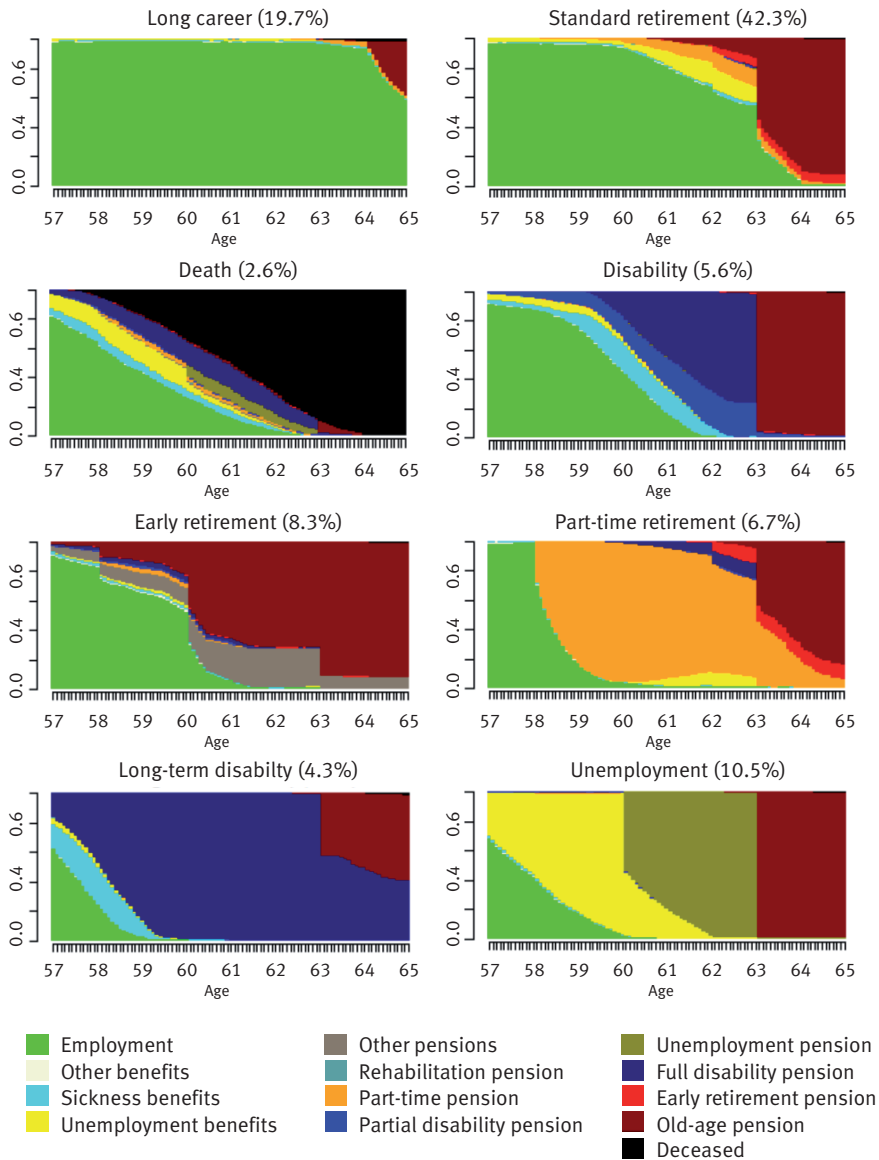
In short, especially women, non-natives, the lower-educated and the self-employed were found to have a greater risk of ending up in the ‘involuntary’ trajectories of late retirement: disability, unemployment and inactivity. Public-sector employees, farmers and craftsmen, and skilled blue-collar workers were less likely to diverge from the norm of entering into premature retirement between the ages of 60 and 64.

6.2 Article II: Gender differences in retirement in a welfare state with high female labour market participation and competing exit pathways

In Article II, various theories that explain gender differences in retirement were used to analyse whether such gender differences occur if women’s employment rates are higher than men’s, as in the case of Finland. The different theories focused on gendered life courses, social stratification, late career vulnerabilities and

employment segmentation by sector. Sequence and cluster analysis yielded eight distinct clusters, as shown in Figure 9: ‘Regular retirement’ (retirement at age 63; 42.3%), ‘Long career’ (retirement at age 64 or beyond; 19.7%), ‘Early retirement’ (retirement before age 63; 8.3%), ‘Part-time retirement’ (6.7%), ‘Disability’ (5.6%), ‘Long-term disability’ (4.3%), ‘Unemployment’ (10.5%) and ‘Death’ (2.6%).

Figure 9.
 State distribution plots, eight-cluster solution, Finland.



We found only small differences between men and women in the take-up of the various retirement trajectories. Women were somewhat more likely to enter 'Part-time retirement' and less likely to enter 'Long-term disability'. Being married was negatively related to 'Long career' and 'Part-time retirement', but only for women. The effect of education on retirement was stronger for women than for men. Those with a higher level of education were more likely to have long careers, retire early (women only) and retire part-time (men only), but less likely to exit through the unemployment tunnel or disability pensions. There were major differences in retirement related to socioeconomic status. Farmers and the self-employed stood out as being more likely to have 'Long careers' and less likely to exit through 'Unemployment'. Farmers were more likely to retire early; however, this was less likely the case with other self-employed persons. Manual workers were less likely to retire early and more likely to enter the unemployment tunnel (women only) and exit through disability. Higher income was an incentive to retire earlier, but for women also to have a 'Long career'. Higher income also increased the probability for part-time retirement among men, whereas it reduced the risks of exit through 'Unemployment' and 'Disability' among women.

A history of unemployment increased the risk of 'Long career' (only among women) and 'Unemployment', while decreasing the probability of 'Early retirement' and 'Part-time retirement'. A history of sickness contributed to an increased risk of exit through 'Early retirement', 'Unemployment' and both of the disability trajectories. Finally, sector was a strong predictor of retirement trajectories, especially among women. Those in the public sector were more likely to exit through 'Long career', 'Early retirement', 'Part-time retirement', 'Disability' and 'Long-term disability', but less likely to exit through 'Unemployment'. Also, within both sectors, the factors contributing to exit through the various retirement trajectories differed substantially. The findings support theories of institutionalised gendered life course, where women's retirement is different because their marital status, education and income has a stronger effect on their attachment to the labour market and because they work in particularly female-dominated occupations.

6.3 Article III: Retirement trajectories and income redistribution through the pension system in Finland

Article III continued the analysis of the retirement trajectories that were found for Finland in Article II, but employed them as independent variables instead of dependent variables. The aim of the article was to analyse the redistributive

outcomes of the Finnish pension system by looking at how the timing and type of retirement was related to trajectories of income before and after retiring, while incorporating the impact of earnings-related pensions, the national and guarantee pensions, and the tax system. We used multilevel regression models to analyse the changes in income over time, using fixed effects to analyse income changes within each of the trajectory types.

The results showed that the pension system is able to diminish income differences, but that it also sustains inequalities. Women had lower income from earnings than men, which continued as lower income from pensions after retirement. Public-sector workers had on average higher earnings and higher pensions than private-sector workers. Early old-age retirement and part-time retirement were associated with higher earnings and more generous pension entitlements. Early exit through unemployment and disability pensions was associated with lower earnings, although the pension system guaranteed a minimum income level in retirement, which improved the income situation of those on unemployment and disability pensions relative to the overall population. Those who retired later were relatively well-off in work, but worse-off in retirement.

6.4 Article IV: De-standardisation and differentiation of retirement trajectories in the context of extended working lives in the Netherlands

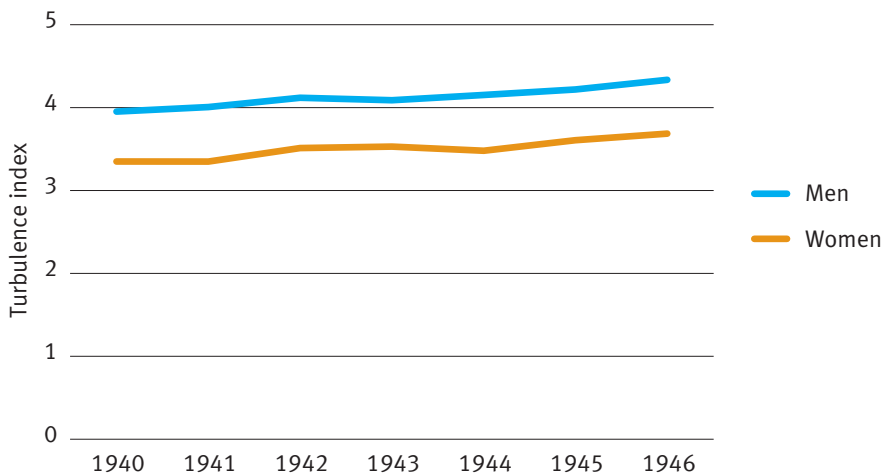
The aim of Article IV was to analyse the de-standardisation and differentiation of retirement trajectories between the ages of 59 and 65 in the context of several reforms to close off exit pathways in the Netherlands. There was a slight standardisation of men's trajectories, especially between the ages of 59 and 62, probably due to the decreased use of the various exit pathways. Among women, there was some de-standardisation, especially between the ages of 62 and 64, most likely due to lower rates of inactivity among the younger cohorts.

There was a small but statistically significant increase in turbulence between the 1940 and 1946 cohorts, indicating differentiation in retirement trajectories (Figure 10). Trajectory complexity was constantly higher among men than among women, with no trend of convergence or divergence over time. There were no clear differences between levels of education. Those who were employed or unemployed at the beginning of the trajectory experienced on average higher turbulence than those in retirement, disability, social assistance or inactivity. Overall, a trend towards differentiation of retirement trajectories could be observed, with some

indication that policy reforms contributed to this, but no clear outcomes in terms of (de-)standardisation were found.

Figure 10.

Average turbulence by birth year and gender, the Netherlands.



6.5 Article V: Extended working lives and late-career destabilisation: A longitudinal study of Finnish register data

Article IV focused on late career differentiation among Finnish cohorts born between 1937 and 1948. The study specifically looked at whether there were differences in trends between men and women and levels of education. Moreover, it took into account a variety of exit pathways and the changes in them in 1988–2013. Another novelty in its approach was that it looked at late career patterns that consisted only of states of employment and non-employment, as well as patterns that included changes between jobs. This allowed investigating whether extending working lives means not only a decrease in the use of exit pathways, but also an increase of job mobility among older workers. Sequence and cluster analysis yielded five distinct patterns: ‘Regular retirement’ (55.6%), ‘Early retirement’ (24.5%), ‘Unemployment pensions’ (15.6%), ‘Unemployment’ (2.2%) and ‘Inactivity’ (2.1%). The percentage of those exiting through ‘Early retirement’ and ‘Unemployment pensions’ declined across cohorts. The lower-educated were more likely to exit through ‘Unemployment pensions’ and ‘Unemployment’.

Results show that the average complexity within individual sequences has decreased when only transitions between work, unemployment, and pension types are considered (Figure 11a). The findings suggest that this de-differentiation especially occurred among women and the higher-educated, while less change is observed among the lower-educated. When transitions between jobs are included, overall complexity is rather stable (Figure 11b). The results show a slight late-career destabilisation among men and the lower-educated, but a decrease in complexity among women and higher-educated. The findings suggest that late-career complexity was increasingly determined by transitions between jobs rather than between spells of employment and non-employment.

Figure 11.

Average turbulence by birth year and gender, Finland.

Figure 11a.

Average turbulence by birth year and gender, excluding job changes, Finland.

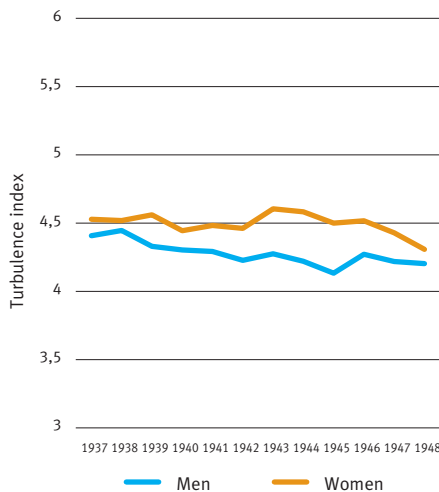
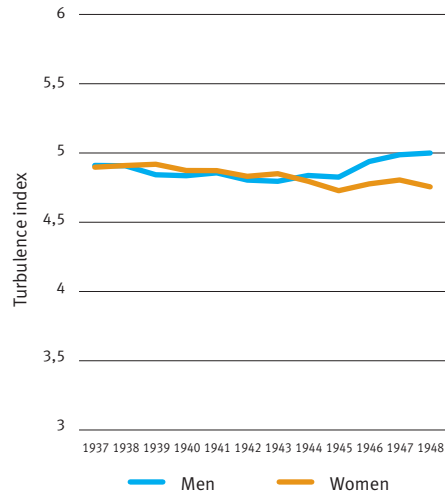


Figure 11b.

Average turbulence by birth year and gender, including job changes, Finland.



The results for de-standardisation between ages 51 and 65 in Finland were not published in Article V, but can be found in the annex to this thesis. The figures show a trend towards standardisation among both men and women between the ages 54 and 60. This can be seen as the result of increases in employment and decreases in other non-employment statuses for this age group across cohorts.

However, at age 62, entropy was highest for the youngest cohort. This is probably due to the pension reform of 2005 and the change in early-retirement age to 62 while the unemployment pension was still in existence. Heterogeneity between statuses has decreased for those who were 63 and older, due to the increased share of the population moving to an old-age pension at that age among the younger cohorts.

7 Discussion and conclusions

The overall aim of this thesis was to study retirement as trajectories, using a sequence-analysis approach. The thesis looks at the institutional and individual factors shaping those trajectories, as well as at how these trajectories are associated with people's income. Moreover, it analyses how these trajectories have tended to change over time and especially to what extent retirement has become more de-standardised and destabilised. In this final chapter, the results for the Netherlands and Finland are discussed from a comparative perspective. It also discusses the limitations of this study, as well as the policy lessons and possibilities for future venues of retirement research.

7.1 Retirement trajectories and institutional factors

The first research question was, *What types of retirement trajectories can be identified from the Netherlands and Finland with the help of sequence analysis?* The findings showed that it is difficult to compare the trajectories that were found in the Netherlands and Finland directly, as well as those in studies on other countries, due to differences in time periods, cohorts, age brackets, sampling procedures and statuses available in the data. Nevertheless, some similarities between the retirement trajectories could be identified based on Articles II and III. First, in both countries there were trajectories that indicated 'early', 'standard' and 'late' retirement. In both cases, 'standard' retirement were the largest clusters, but they did not coincide with the statutory or desired pension age of 65 or later. This group of slightly over 40 per cent retired between the ages 60 and 64 in the Netherlands and in Finland predominantly at age 63 exactly. Rather, what was called 'late retirement' in these studies should be the 'normal' retirement at age 65 or later. In both countries, this was about 20 per cent of the study population. These numbers show that the situation in both countries is still far from the extended working lives that policy-makers are aiming at, especially considering that a substantial group of people that were not employed at baseline were still excluded from this study.

In both countries, there were also trajectories shaped by unemployment and disability. In the Netherlands, these trajectories were rather small, whereas in Finland a larger proportion of the population made their exit through disability and unemployment pensions. It is possible that in the Dutch case, especially in

the case of people who exited through disability benefits, a substantial number already began drawing their benefits before the age of 56 and were therefore not in the data. Moreover, some of the group that ended up on disability benefits were part of the 'Drop-out' trajectory.

The main difference in trajectories was the existence of a 'Part-time retirement' trajectory in Finland and an 'Inactivity' trajectory in the Netherlands. Part-time retirement has been a specific retirement phenomenon in Finland, where a part-time pension could be combined with part-time employment. While the Netherlands has been champion of part-time work in Europe, especially among women, part-time employment was not available as a separate status in the Dutch data. It is likely that a separate part-time employment trajectory would have been identified if such data had been available. Spells of inactivity before retirement are certainly more common in the Netherlands, where women have been more likely to depend on their spouses' income. It is possible that women stop working when their older spouses retire, at a time when they are not yet entitled to pensions themselves. Inactivity rates among Finnish women are much lower. However, 'inactivity' was not available as a separate status in the data from the Finnish Centre for Pensions, so this could not be studied in the context of Articles II and III. Article V, however, showed that about two per cent of the Finnish population between the ages of 51 and 65 belonged to an 'Inactivity' cluster, with women more likely to belong to this group.

The findings in this thesis showed similarities with studies on retirement using sequence analysis in other countries. Also Fasang (2010) studying Germany and Britain and Calvo, Madero-Cabib and Staudinger (2017) looking at the United States found conventional, early and late retirement as separate trajectories, as well as trajectories shaped by disability and unemployment. Fasang (2010) included self-employment and part-time employment as separate statuses and distinguished between different types of pensions, resulting in separate trajectories for each. Calvo, Madero-Cabib and Staudinger (2017) also used part-time employment as a separate status, resulting in a separate trajectory for those who mainly move from part-time employment to partial retirement in their late careers. Other than in Finland and to some extent the Netherlands, there were trajectories that were strongly female-dominated in these countries, with high incidences of part-time employment, inactivity and gender-specific pension types. In Finland, women were only somewhat more likely to enter into the 'Part-time retirement' trajectory, and in the Netherlands the 'Inactivity' trajectory was female-dominated.

The lack of strongly female-dominated trajectories in this study results from at least two reasons. First, other than in the studies mentioned, the selection criteria were such that people had to be employed at baseline. This excluded a group of women that were not employed at the start of the trajectories. Moreover, it is likely that labour market attachment was particularly high among the older women that were selected, resulting in retirement behaviour that was similar to men's (Finch 2014; König 2017). Second, the lack of part-time employment as a separate status has excluded the possibility of analysing a rather gender-specific labour market phenomenon, especially in the Netherlands.

The retirement trajectories identified in the Netherlands and Finland were a good reflection of how the exit pathways work differently in both countries. In the Netherlands, a constant and steady flow out of employment and into retirement, unemployment, disability and inactivity could be observed between the ages of 56 and 66. This is due to the nature of the benefit and early-retirement programmes, which have heavily depended on individual needs and preferences at each particular moment in time. In Finland, similarly to the Netherlands, flows into unemployment and sickness benefits in combination with disability pensions are also rather constant, but the eligibility ages for the various pension schemes structured the timing of transitions out from the labour market. This was especially visible at the massive transitions to unemployment pensions at age 59, the start of early-retirement pensions at age 62 and the transition to earnings-related old-age pensions at 63. The 2006 Finnish policy reform in disability pensions had a considerable effect on the separation into two disability clusters, in which those who entered into disability before that year received a disability pension until age 65 and those entering after that year exchanging their disability for an old-age pension at age 63.

7.2 Social inequalities in retirement trajectories

The second research question of this thesis was, *What are the gender and socioeconomic differences related to retirement trajectories in the Netherlands and Finland?* Many of the findings on the associations between individual characteristics and retirement trajectories were similar in both countries and in line with previous research. In general, the results confirmed findings from previous studies that there are large social inequalities in retirement. In both the Netherlands and Finland, those with lower education were more likely to exit through the 'involuntary' disability and unemployment trajectories (Dahl,

Nilsen and Vaage 2003; Radl 2013; Schils 2008). The self-employed were more likely to retire late (Blöndal and Scarpetta 1999; Hochguertel 2015). A finding specific for these two countries was that manual workers were less likely to retire on early-retirement pensions. Moreover, in both countries, those working in the public sector were less likely to exit through unemployment. This is logical due to the more secure and shielded employment that the public sector usually offers, but little research on the role of public-sector employment has been performed in other countries.

There were also marked differences between the findings for the two countries. In Finland, higher education was identified as a factor contributing to later retirement, particularly among women, whereas in the Netherlands there was no such association. This might be due to the especially high labour market attachment among educated women in the context of high female labour market participation in the Finnish Nordic-type of welfare state (König 2017). Findings from other studies on the strong associations between manual/blue-collar work and early exit through unemployment and disability were not confirmed in the case of the Netherlands and only partly in the case of Finland (Radl 2013; Schils 2008). It is possible that the selection criteria of being employed at baseline was at work here again and that a large share of manual workers had already exited the labour market at an earlier age for reasons of health or displacement.

In the Netherlands, farmers and public-sector employees were more likely to follow the conventional retirement trajectory and less likely to retire early or late, whereas in Finland these groups were more likely to retire early and late. In the Finnish case of early retirement, this was due to the structuring effects of the occupational pensions for public-sector workers and special pensions for farmers. In the case of farmers and late retirement, it is unclear whether this is the result of low pension accruals or high motivation to work longer. In the case of public-sector workers and late retirement, this is likely due to individual retirement ages in the public sector that might be later than 63, but also because of the possibilities in the public sector to adapt better to the workability of an ageing workforce. In the Netherlands, the position of the self-employed appeared more precarious than in Finland, as they were more likely to exit through the 'Disability', 'Inactivity' and 'Drop-out' trajectories. This might be due to the low pension accruals among the Dutch self-employed, because pension insurance under the second tier has not been obligatory for them.

Due to differences in the focus of Articles I and II, as well as differences in the availability of comparable data, it was not possible to draw comparisons between

the Netherlands and Finland on all aspects related to retirement trajectories. The Finnish study focused on gender differences in retirement, while in the Dutch study gender was controlled for but not the main focus. The Finnish study included data on marital status, which turned out to have an impact on women's retirement, but not men's. It is likely that in the Netherlands, with its remnants of a male-breadwinner society and high levels of part-time work among women, equally strong or even stronger relations between marital status, gender and retirement would have been found (Schils 2008).

In the Dutch study, immigrants were identified as one of the vulnerable groups in retirement. The Finnish study population excluded immigrants, as they are a small heterogeneous group with irregular pension contribution histories. With the numbers of immigrants steadily rising and ageing in Finland, this will be a more pressing issue for research in the future in this country as well (Henkens et al. 2017). Moreover, in line with earlier research, Article I showed some glimpse of the importance of company characteristics in terms of size (Van Dalen, Henkens and Wang 2014). Whereas in the Netherlands a broad variety of employer-related aspects in retirement have been researched extensively already, few studies have been performed in Finland (for exceptions, see Ilmakunnas and Ilmakunnas 2015; Kyyrä and Paukkeri 2015). How employers react to an ageing workforce and changing government policies is another pressing issue in retirement research in coming years (Henkens et al. 2017).

Article II confirmed that, in line with economic studies that focus on financial incentives and retirement, income was a crucial determinant of retirement behaviour in Finland (Blöndal and Scarpetta 1999; Gruber and Wise 1998). However, there were effects of income on retirement that were different for men and women. Contrary to economic theories, higher income among women was not only associated with retiring late, but also with retiring early. This indicates that women may take different decisions on the basis of their personal financial situation than men. Among women, higher earnings may be associated with high labour market attachment and an incentive to continue working longer for some, whereas for others it means that it offers the option of stopping work and taking up other activities instead.

Furthermore, Article III showed how the Finnish pension and tax systems have various redistributive incomes for groups in society and that it is likely that income does not only affect the timing of retirement, but that timing of retirement also affects income. Had longitudinal and detailed data on income been available for Dutch retirees as well, it would have been interesting to draw comparisons

between redistribution in the Finnish and Dutch pension systems. Which system is more equitable: one where a basic pension depends on and is paid on top of earnings-related pensions or one where earnings-related pensions are paid on top of a universal basic pension?

7.3 De-standardisation and differentiation of retirement and late careers

The third research question of the thesis was, *Have extended working lives contributed to de-standardisation and destabilisation of retirement and late career trajectories?* In both the Netherlands and Finland, the results were mixed for de-standardisation and differentiation of the careers of older workers, but the size of changes was not large. Article IV showed that Dutch men between 59 and 65 experienced some degree of standardisation across cohorts, while women experienced de-standardisation, but only small shifts within specific age brackets. It is possible that these shifts were due to men making less use of exit pathways. At the same time, women were less likely to be inactive, while at greater risk of unemployment and disability at the same time. In Finland, late careers standardised between ages 54 and 60, both for men and women. Only at age 62 was there an increase in heterogeneity due to the delay in the timing of exit pathway availability. Therefore, there is no evidence that retirement or late careers have de-standardised as working lives grew longer, neither in the Netherlands nor Finland. Rather, they have become more standardised, as fewer were able to make use of early exit options and more remained in employment longer.

Although the destabilisation of retirement and late career trajectories have not been studied as such before, in line with earlier studies on employment destabilisation, only small changes were found in career complexity across cohorts (Biemann et al. 2011; Hollister 2011; Van Winkle and Fasang 2017). Although in both countries many important reforms took place during the period under study, it should be kept in mind that the time periods were relatively short and relatively few cohorts were included. In the Netherlands, the 59–65 age group experienced a minor differentiation of retirement trajectories across seven birth cohorts. Overall, the results seem to indicate that closing off exit pathways coincided with an increase in labour market transitions for everyone in these few years before the statutory pension age. In Finland, the 51–65 age group experienced de-differentiation in late career patterns across 12 birth cohorts. This suggests

that closing off exit pathways in Finland resulted in declining complexity in late careers, mainly due to increases in longer spells of employment.

However, it is difficult to compare differentiation trends in these countries on the basis of these two studies. This is due to the different age brackets that were studied, along with the fact that the Dutch data include monthly statuses and the Finnish data annual statuses. In the Dutch case, the last six years before the statutory pension age of 65 had been already a period of early retirement or disability for many older workers. Even small increases in employment may have increased the complexity of careers. The Finnish study, on the other hand, sketched a broader picture of late careers of workers between 51 and 65. Here, lengthening employment spells was more likely to have the effect of decreasing complexity. The data, however, was not able to take into account changes in statuses that might have happened within each year, potentially leading to an underestimation of career complexity. Including changes in jobs was expected to correct for this somewhat, as it is likely that shifts between employers were paired with spells of unemployment.

In the Netherlands, men's retirement complexity was higher than women's, while trajectories were differentiating at a similar pace. Women's lower complexity might be due to women continuing to be more likely to remain outside the labour market during the follow-up period. In Finland, women's late career patterns were initially more complex than men's, but de-differentiated at a faster pace. This might be due to their increasing labour market participation and predominant employment in the secure jobs in the public sector. In the Dutch study, there were no clear differences in complexity between levels of education. In Finland, education mattered for the level and changes in late-career complexity. The lower-educated experienced less change across cohorts.

7.4 Limitations to this study

Whereas it was possible to compare the two countries along broad lines, it was obvious that direct comparisons are difficult to make. This is mainly due to the different availability of data for the two countries. The Dutch sample in Article I was smaller due to restrictions in the availability of labour force survey data, whereas the Finnish data in Articles II and III covered almost the entire population. The data differed in age brackets, cohorts and time periods, the effects of which are difficult to control for when it is not possible to pool datasets or match samples.

Moreover, there were differences in the types of statuses that were available. The data from the Finnish Centre for Pensions used in Article II and III were exceptionally detailed, including all different types of income from benefits and pensions, whereas the Dutch data contained only more broad categories of income statuses. Article V featured even broader categories from FLEED. However, it is hardly ever possible to avoid problems in comparison, even with the most harmonised comparative data, e.g. SHARE. There is always a risk that a status does not mean the same thing in one country as it does in another. For example, this study showed that disability benefits in the Netherlands are subject to different rules and logics than disability pensions in Finland.

A limitation that affected all articles in this study was that data was available for relatively few cohorts only, covering only a short period of time. This is partly due to the nature of sequence analysis, which needs relatively long follow-up periods and thereby limits the birth cohorts that can be included. This problem was most visible in the Finnish Centre for Pensions data, which allowed analysis of one birth cohort only. Even in Article V, twelve consecutive birth cohorts might not be enough to capture trends that take place over longer periods of time. Studies by Biemann et al. (2011), Widmer and Ritschard (2009) and Van Winkle and Fasang (2017), have shown that change in trajectories and their complexity is slow, even when studying cohorts born across several decades.

As a method guiding the research in this thesis, sequence analysis is powerful in its holistic approach to identifying patterns and trajectories in complex longitudinal data (Aisenbrey and Fasang 2010). There are, however, also risks and limitations to sequence analysis. Whereas it permits the detection of patterns without prior assumptions about the data, a researcher must make decisions that affect the outcomes at various stages of the analytical process. A distance measure must be selected. If Optimal Matching, the most commonly used method, is applied, substitution and indel costs must be decided upon. Next, the clustering method can affect the composition of clusters. Lastly, a cut-off point for the optimal cluster solution must be chosen. The decisions made at each of these steps can affect the final outcomes, and this has caused many to criticise certain types of sequence analysis or the entire method as such (Wu 2000; Levine 2000). At the same time, however, a growing body of literature has acknowledged these problems and suggested ways to deal with them (Aisenbrey and Fasang 2010; Studer 2013; Studer and Ritschard 2016).

Another limitation of sequence analysis is that it yields informative broad typologies of patterns or trajectories, but allows little possibility of analysing

the variation and changes within those trajectories. For example, the ‘Early retirement’ trajectory in Articles II and III consisted of a diverse group of Finnish retirees, including farmers, public-sector workers and employees with specific occupational pension ages. Many of the trajectories in both the Netherlands and Finland showed great variation in the timing of transitions between one state and another. For studies on the exact timing of certain transitions, methods from the survival analysis family might be more suitable.

In this thesis, the differences between trajectories were modelled using multinomial logistic regression. This method has at least two drawbacks. Due to the numbers of clusters – seven in the case of Article I and eight in the case of Article II – the models had to compare a large number of categories. This makes the results difficult to interpret with one cluster as the reference category against which all other categories are compared, while at the same time having a set of categorical independent variables that also uses reference groups to compare one or more other groups. Second, each of the dependent variables was measured at baseline, i.e. before the start of the trajectories. This does not allow for changes within those variables during the follow-up period, e.g. changes in professions or marital status. Although this issue was beyond the scope of this thesis, new methods have been developed to allow for time-varying covariates in relation to sequences as well (Studer, Struffolino and Fasang 2016).

As argued in Article V and following Biemann et al. (2011), it is difficult to say whether greater sequence complexity is inherently good or bad. First, the turbulence indicator incorporates transitions and spell lengths, but it is hardly possible to say to what extent these components affect turbulence as a composite measure. For example, there was an increase in complexity across cohorts among the older Dutch workers, but it is hard to say exactly whether this is due to greater outflows from unemployment and disability benefits or changes in spell length of especially the employment and retirement statuses. The ‘Early retirement’ cluster in Article V also showed that the turbulence measure was sensitive to sequences with only two statuses, but variation in spell lengths. Second, increased complexity can indicate more instability and unpredictability of careers, but it can also mean shorter spells of unemployment and disability, as well as greater job mobility among older workers. Therefore, more research is needed to analyse what constitutes ‘good’ or ‘bad’ complexity. This could be done, e.g. by observing whether status changes are accompanied by improvements in income, health or job satisfaction.

The discussion on the trajectories in the Netherlands and Finland in this thesis took place in the context of institutional reforms and extended working lives. However, due to the use of sequences that cover longer periods it is difficult to incorporate the timing and effects of these reforms. In the articles, it was shown that in general the reforms have seemed to contribute to changes in retirement and late career complexity, but that their exact impact could not be estimated. At the same time, it was likely that improvements in health and education among the younger cohorts have contributed to their extended working lives. Moreover, it might yet be too soon after these reforms to observe the changes in the long-run. More research on the precise impacts of reforms is needed, albeit most likely with longer timeframes and different data and methods, but also on countries with different institutional settings and reform trajectories.

Finally, this thesis relied mostly on individual characteristics and labour market factors to explain variation in retirement trajectories. Obviously, not all factors that contribute to retirement behaviour can be controlled for and in some cases, there was no appropriate data to analyse some of these factors' impacts. Although the disability trajectories in the Netherlands and Finland, as well as the impact of sickness absences in Finland gave some indication of the role of health in retirement, subjective and objective health have most likely been a more central factor in retirement behaviour (Ilmakunnas and Riekhoff 2016). Furthermore, little attention was paid to the social context of retirement behaviour. More research should be done on the embeddedness of individuals in firms (Beck 2013; Conen, Henkens and Schippers 2014; Vickerstaff, Cox and Keene 2003) and in households and families (Denaeghel, Mortelmans, and Borghgraef 2011; Johnson and Favreault 2001; Henkens and Van Solinge 2002) from a longitudinal perspective.

7.5 Policy lessons from the Netherlands and Finland

Although this thesis focused on retirement in the Netherlands and Finland there are broader conclusions to draw and lessons for other countries to be learnt as well. First of all, this study confirmed that retirement is more than a single transition and should be studied as a multifaceted and life-course phenomenon. It is multifaceted in a way that there is a great variation in the way that people take steps from career employment to old-age pensions. It is a life-course issue in the sense that events that occur early on in working lives, as well as happening parallel in other life spheres, are often interrelated with the events that follow and

determine people's trajectories towards retirement. These findings support the idea that early intervention is needed to make extended working lives possible. Both in the Netherlands and Finland, the results showed that unemployment and sickness/disability in the late career is almost always a dead-end. Timely interventions to prevent lay-offs or ill health or adequate measures to ensure reemployment need to be in place to make longer working lives possible.

Second, reforms that close off exit pathways have contributed to extended working lives in both countries. Due to the differences in the institutional arrangements of early exit, reform trajectories differed. In the Netherlands, early exit was mainly through benefit programmes, i.e. disability and to some extent unemployment, and sectoral collectively negotiated early retirement schemes. Consecutive governments restricted early exit through benefit programmes by limiting inflows with stricter selection criteria and incentivising outflows. Employers were made co-responsible for increasing outflows from sickness and disability. Early retirement was phased out following agreements between social partners and creating financial disincentives to take up a pre-pension. In Finland, early exit was mainly organised through the pension system. Reforms took place by completely phasing out two pension types (the IER and unemployment pension), while increasing the eligibility ages for other pension types. Employers were incentivised to prevent inflows to disability and unemployment pensions by the experience-rating scheme. This comparison shows that there is not a single recipe for early exit reform, but that possibilities and success depend on the type of existing institutional arrangements.

It might still be too early to tell, but in spite of the reforms, early exit is still a common phenomenon in both the Netherlands and Finland. If people really cannot or do not want to work longer, they will exit their jobs before the statutory pension age anyway. This may lead to perverse effects of the reforms. Either those older workers will find another exit pathway that will allow them to bridge their time between a career job and old-age pension. For the better-off this may be in the form of private pension savings, while for the worse-off it might mean getting by on minimum income support benefits. An alternative is to continue in the labour market in bridge jobs that are likely to be more insecure and lower paid than their career jobs. In either case, social inequalities among older workers will increase. In the Netherlands, for example, there has been an increase in recent years in the number of those with low incomes just before reaching the pension age (CBS 2018). This is due to an increasing group of people between 55 and 65

that is dependent on disability and unemployment benefits, but is not entitled to early-retirement pensions.

Finally, the findings support the concern that there are large social inequalities in retirement, in spite of the relatively inclusive welfare state institutions in both the Netherlands and Finland. The healthy, educated and well-off have a greater degree of voluntariness and more opportunities to extend working lives, while for the ill, unskilled and poor, choices are more limited. These advantages and disadvantages tend to accumulate across the life course. If everyone should extend their working lives, it should not just be about setting limitations to retiring early, but policies should be in place to make working longer possible. This means not just adjustments at the workplace and training programmes for older workers, but continuous investments in people across the life course. It also needs to go a step further by ensuring that there are jobs available and that age discrimination among employers is counteracted.

Finally, the policies aimed at extending working lives focus predominantly on the end of careers, i.e. by delaying the time of exiting the labour market, and they apply the same logic to everyone. However, this form of extending working lives has very different implications for people who began working in construction at age 18 than for people who started out with an office job and a university degree at age 28. Pension systems remain incapable of accounting for such fundamentally different life courses, while reforms to end early exit and raise retirement ages hit the first group especially hard. Moreover, policies to extend working lives should include a strong gender dimension to account for the structural differences in life courses between men and women. Women should not be penalised by the pension system for taking off longer periods from work for childcare, for divorcing their husbands or for working part-time (Möhring 2017). The real challenge of policy-makers in the future lies in creating opportunities to adjust retirement to individual life courses while keeping pension systems sustainable and equitable.

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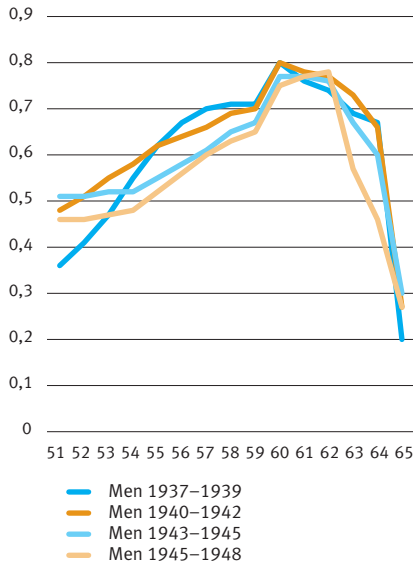
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Annex

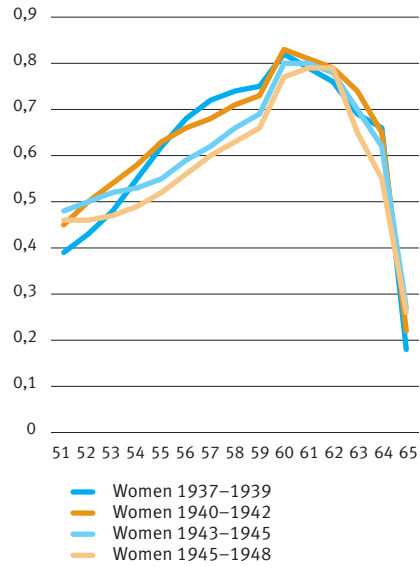
Figure A1.

State distribution plot Finnish men and women.

*State distribution entropy,
 Finnish men aged 51–65.*



*State distribution entropy,
 Finnish women aged 51–65.*





FINNISH CENTRE FOR PENSIONS,
STUDIES

Retirement trajectories in the Netherlands and Finland

Institutional change, inequalities, de-standardisation and destabilisation

This study approaches retirement as trajectories from work to old-age pension. Using detailed longitudinal register data from the Netherlands and Finland, it analyses sequences of income and labour market statuses in late careers. The study shows how national institutions shape individuals' mode and timing of exit from the labour market, especially through old-age pension, early retirement, disability, and unemployment schemes, while analysing how gender and socioeconomic differences contribute to individual variation in these trajectories. Furthermore, this study analyses whether retirement and late career trajectories have de-standardised and destabilised in recent years and whether there are gender and socioeconomic inequalities in this regard as well.

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