Chapter 1
General introduction
Many developed countries are confronted with ageing populations, due to the increase in life expectancy and long-term decline in fertility rates. The rising ratio of the older inactive population to the younger active working population puts pressure on the social security system, and causes tension in the solidarity between generations [1]. Many European governments responded to the ageing of the population by increasing the statutory retirement age and discouraging early exit from the workforce. In the Netherlands, the average age of leaving employment strongly increased in previous years, i.e. from 60.8 years in 2001 to 64.1 years in 2014 [2]. However, still many workers leave the workforce before the statutory retirement age. In addition, the current average age of leaving employment is still far away from the expected future statutory retirement age. Hence, the prolongation of working lives is an ongoing challenge.

Before focusing on the aim and outline of this thesis, a short history of early retirement in the Netherlands will be sketched, including today's paradox of a demand for prolonged working lives on the one hand and poor labor market opportunities for older workers on the other hand. This is followed by a summary of previous research about determinants of early retirement. Subsequently, the aim of this thesis, the chosen perspective and level of analysis, and the data used will be described. This general introduction concludes with a brief outline of this thesis.

History of early retirement in the Netherlands

When the state old age pension was established in the Netherlands in 1957, statutory retirement age was 65 years. Working until the age of 65 years was the norm until the 1970’s. In the 1970’s, youth unemployment was high, and as a response to this problem, early retirement schemes were introduced (in Dutch: Vervroegde Uittreding (VUT)). The early retirement schemes were supposed to facilitate that relatively expensive older workers would be replaced by younger workers. Older workers could leave the workforce earlier with financially attractive arrangements, whereas younger workers could enter the workforce. After reaching a certain eligibility age, that varied by sector and ranged between 58 years and 62 years, a worker could retire and received an early retirement benefit of about 80% of the last earned wage [1]. VUT was often mentioned as an offer one cannot refuse [3].
In the eighties and nineties, the awareness arose that early retirement schemes could no longer be affordable in future due to the increasing longevity and decreasing fertility rates. In 1997, the VUT was replaced with less generous pre-pension schemes [1]. After that, the Dutch government implemented various other pension system reforms, among others the gradual increase of the statutory retirement age from 65 years in 2012 to 67 years in 2021 [4]. In addition, fiscal measures made early retirement schemes offered by the employer or sector financially less attractive [5].

The shifting policy focus from promoting early retirement to the prolongation of working lives, is reflected in an increasing average age of leaving employment since the beginning of this century, i.e. from 60.8 years in 2001 to 64.1 years in 2014 [2]. Despite this increase, many employees still leave the workforce before the statutory retirement age. In addition, the mean age of leaving employment is still far away from the statutory retirement age of 67 years, which will apply in only five years from now (2021) [4]. As Figure 1 shows, a further increase in statutory retirement age is expected in future [6], as from 2021 onwards it will be linked to life expectancy [4]. Therefore, the prolongation of working lives will be an ongoing challenge.

![Figure 1. Forecast statutory retirement age until 2060](image)

**Figure 1.** Forecast statutory retirement age until 2060 [6]
Today’s paradox

Although there is a societal need for workers to prolong their working lives, labor market opportunities for persons aged 55 years and older are poor in the Netherlands. If older workers lose their job, the chance of finding a new job is substantially lower, and many of those get into long-term unemployment (>1 year). The proportion of older persons in long-term unemployment is almost two times the proportion of the entire workforce [7]. In addition, the proportion of older persons in long-term unemployment in the Netherlands is large in comparison with other countries. In Europe, on average 25% of those long-term unemployed is older than 50 years, in the Netherlands this is 40% [7]. These figures may be explained by a relatively negative perspective on older workers among Dutch employers. To illustrate, an international comparison showed that Dutch employers do relatively little to recruit and keep older workers compared to employers in, for example, Denmark, Germany, and Italy [8]. Besides, in 2012, only 27% of the employers reported it is important for staffing that employees continue working until their statutory retirement age [9]. In addition, wages that continue increasing at older ages are considered to play a role in the unfavorable labor market opportunities in the Netherlands [10].

Hence, with an increasing statutory retirement age and abolishment of early retirement schemes in the Netherlands, older workers are encouraged to prolong their working life in spite of non-optimal labor market opportunities. This paradox could be illustrated by a quote of a Dutch employee interviewed by the Council for Public Health and Health Care in the Netherlands [11]: “You cannot demand that people work longer if there are no jobs.” Although at a societal level there is a need to prolong working lives, it is of interest how this works out at the meso-level (employer) and micro-level (employee).

Previous research on determinants of early retirement

The topic of early retirement has previously been studied from a broad range of disciplines, e.g. health sciences, social sciences, and economics. Health scientists and occupational epidemiologists mostly focused on health and work ability in relation to work force participation, whereas psychologists focused on motivational processes and psychosocial job demands. Economists often focused on the role of financial factors and policy reforms. Research derived from these disciplines showed that factors in the
domains health, job characteristics, skills and knowledge, and social and financial factors influence early retirement.

Previous research showed that workers with specific diseases, such as depression, rheumatoid arthritis, diabetes, and cancer, have a higher risk of an early exit from the workforce due to work disability [12-15]. Studies on the role of health in early retirement present an inconclusive picture. A literature review showed that poor perceived health was a risk factor of early retirement, although the association was less strong than for disability pension [16]. A second review showed that general health was related to early retirement, but that chronic diseases only marginally related to early retirement [17]. Previous research also showed that job characteristics play a role in early retirement. High work pressure [18] and low autonomy [18-20] increased the risk of early retirement. The findings with regard to physical work demands are mixed. Two studies did not find a relationship with early retirement [18,19], but one study that adopted a more narrow definition of physical load, i.e. extreme bending of the neck, indicated that physical demands increased the risk of early retirement [21]. Another study showed that the presence of challenging work was among the most important reasons for not retiring early [22]. The relation between skills and knowledge and early retirement has less often been studied. Previous research indicated that skills and knowledge are likely to influence the transition from work to early retirement. To illustrate, providing access to training opportunities was associated with fewer workers retiring early [23]. With regard to social factors, previous research showed that having a partner increased the likelihood of early retirement [21]. A Dutch study also pointed to the importance of social factors by showing that support of the partner to continue working was associated with retirement at an older age [24]. Finally, previous research showed that financial factors influence early retirement. To illustrate, financial advantages of working were reported as a reason for not taking full retirement in a qualitative study [22]. Other research showed that pension systems offering more generous retirement options were associated with higher rates of early retirement [25].

Hence, previous research showed that health, job characteristics, skills and knowledge, and social and financial factors push or pull workers from work to early retirement. However, these studies mostly focused on single factors that influence early retirement. Hence, the relative importance of different characteristics is unclear. To understand the complexity and to get an idea of the relative importance of the different domains, a broader perspective is needed. Moreover, it has barely been studied via which mechanisms determinants in these domains influence early retirement.
This thesis

Aim
Considering the previously mentioned gaps in our knowledge, the aim of this thesis is: To investigate determinants of, and mechanisms underlying early retirement and working beyond retirement.

Perspective and level of analysis
A broad perspective will be combined with a health perspective in this thesis. To understand the complexity of early retirement and to gain insight in the relative importance of health, job characteristics, skills and knowledge, and social and financial factors, a broad perspective will be used. This is helpful to gain insight in which policies and interventions would potentially have the greatest effect on the prolongation of working life. Due to the ageing of the working age population, and as a consequence, the higher prevalence of chronic diseases, special attention will be paid to the role of health as well.

The level of analysis in this thesis is the level of the employee. The level of the employer, e.g. their perspective on older workers and the effectiveness of human resource instruments aiming at prolonged working lives, and the governmental level, e.g. the influence of reforms in the retirement system on several outcomes, fall beyond the scope of this thesis.

Data
For this thesis data of the Dutch Study on Transitions in Employment, Ability and Motivation (STREAM) were used. STREAM is a prospective cohort study among 12,055 employees, 1,029 self-employed persons, and 2,034 non-working persons, all aged 45 to 64 years at baseline. The study sample was stratified by age and employment status, and was drawn from an existing internet panel. The baseline measurement was carried out in 2010. Yearly follow-up measurements took place in 2011, 2012, and 2013. The yearly online questionnaire consisted of a wide range of questions on demographics, health, job characteristics, skills and knowledge, and social and financial factors, the ability, motivation, and opportunity to work, and transitions in employment (e.g. the transition from work to early retirement). STREAM was previously extensively described elsewhere [26].

In addition to the yearly online questionnaires, qualitative in-depth information was collected by means of face-to-face interviews. In a first qualitative study, 30 Dutch employees
who retired early were selected and invited for a face-to-face interview. Data collection of this qualitative study is extensively described elsewhere in this thesis (chapter 5 and 6).

STREAM has been designed and conducted by TNO, in close collaboration with VU University Medical Center, and Erasmus Medical Center, and it was funded by the Dutch Ministry for Social Affairs and Employment. The Medical Ethical Committee of the VU University Medical Center Amsterdam declared that the Medical Research Involving Human Subjects Act does not apply to STREAM. The Medical Ethical Committee had no objection to the execution of this study.

Outline

Chapter 2 and 3 focus on determinants of early retirement. Chapter 2 investigates the influence of health, job characteristics, skills and knowledge, and social and financial factors, and their relative contribution at population level, on the transition from work to early retirement. Chapter 3 zooms in on a selection of chronic diseases and determines whether these chronic diseases predict transitions from work to early retirement, disability pension, and unemployment. In addition, this chapter describes whether several job characteristics strengthen or buffer these relations. From chapter 4 to 6, several studies investigate how factors influence early retirement. Chapter 4 presents the Early Retirement Model. According to this model, determinants in the domains health, job characteristics, skills and knowledge, and social and financial factors influence early retirement through three central explanatory variables, i.e. the ability, motivation, and opportunity to work. This chapter investigates whether data support the model and how it could eventually be improved. The following two chapters are based on the qualitative data that were collected within STREAM, and concern perceptions of early retirees. Specifically, chapter 5 investigates which non-health related factors influence early retirement, and why and how these factors are of influence. Chapter 6 identifies pathways in which health influences early retirement. Chapter 7 investigates whether the period before (early) retirement is characterized by a period of “mental retirement”. It identifies trajectories of work engagement among older workers who approach the retirement age and investigates which trajectories, in turn, precede retirement. In chapter 8, working beyond retirement instead of early retirement is studied. Predictors of working beyond retirement are studied. Chapter 9 summarizes the main findings from chapter 2-8
in this thesis, and discusses methodological considerations. In addition, the findings of this thesis are placed in the context of three important future trends, i.e. the increase in older workers with chronic diseases, the increasing demand on older workers to provide informal care, and the increasing flexibility of the labor market. Finally, recommendations for future research and practice are presented.
References


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