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Late career mobility and the transition into retirement of older workers in the Netherlands

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INTRODUCTION

The world of work has changed tremendously. During the three decades after World War II, Western economies grew continuously and became more and more prosperous. There was a high level of job security and workers had ample opportunities to make a career. Since the 1970s, however, worldwide social, economic and political forces resulted in a shift towards more precarious and flexible work, that is, towards employment that became more uncertain, unpredictable, and risky from the worker's point of view (Blossfeld, Buchholz and Hofäcker 2006; Blossfeld and Hofmeister 2006; Blossfeld, Mills and Bernardi 2006; Kalleberg 2009). Uncertainty is most likely to manifest itself during the early career of workers (Mills and Blossfeld 2005). Therefore, much research on social inequality that focuses on the consequences of employment flexibilization, studies labor market opportunities and income in the phase of entering the labor market (Shavit and Müller 1998; Gangl and Müller 2003). There are now many studies that focus on the – long-lasting – negative economic consequences of starting in a precarious job (Scherer 2004; Steijn et al. 2006; Gash 2008; Luijkx and Wolbers 2009). In this chapter we argue that older workers are also disproportionately likely to be subject to the negative consequences of globalization processes and, accordingly, study late career instability and inequality in the Netherlands.

In Western societies, the early 1970s represent one of the wealthiest periods in terms of labor market conditions. Participation rates were peaking and unemployment was virtually inexistent. The crisis in the world economy in the 1970s, however, resulted in a steep drop in labor force participation and skyrocketing unemployment rates. The Netherlands were no exception. The year 1983 is considered to be the moment that economic conditions were at their worst. For older workers (age 50 to 64), participation rates fell from more than 80 percent in 1971 to 55 percent in the early 1980s. At the same

time, unemployment levels increased from less than 2 percent to almost 8 percent among older workers (OECD 2005b: 41–42).

In order to reach higher levels of flexibility, so that among the members of the workforce inactivity could be combated, considerable adaptations of the labor market were initiated by the Dutch government and governments of other Western countries. As employers needed to become more efficient in reacting to the consequences of globalization, permanent employment contracts were more and more replaced by non-standard work arrangements, for instance fixed-term contracts, that, if necessary, could be more easily dissolved (Kalleberg 2000, 2009).[1] At the same time, a demand-shift from low-skilled to high-skilled labor took place (Juhn et al. 1993). Globalization accelerated the diffusion of information technology and workplace reorganizations (Castells 2000; Kalleberg 2009). Consequently, low-skilled jobs were replaced by – or evolved into – jobs for which substantially higher levels of skills were needed to reach the intended level of productivity (Maurin and Thesmar 2004; Spitz-Oener 2006). In Europe particularly, skills upgrading has been adjusted to a large extent through high unemployment rates among groups that could not keep up with this process of upgrading (low-skilled and/or older workers) and an increased allocation of employees into non-standard, fixed-term contracts (DiPrete 2005). Furthermore, the transition to a knowledge-based service economy resulted in a decline of traditional industries such as manufacturing and agriculture, in which older employees were typically overrepresented (Wielers and Mills 2008).

Generally, we expect that the consequences of these processes of globalization have resulted in a more precarious employment situation for Dutch older workers. By using the Dutch Socio-Economic Panel, we study social changes and inequality by comparing several cohorts of older workers (age 50 to 64) in terms of late career mobility (employment transitions and income mobility) and the transition into retirement (entry into retirement and pension income after retirement).

Although all advanced economies have been subject to common processes at the macro level, the level of and trends in precarious employment situations for older workers may differ substantially across countries, as they differ in the structure of their labor market, their policies, and have specific histories in shaping institutional arrangements (Breen and Buchmann 2002; Mills and Blossfeld 2005). This implies that the extent to which Dutch older workers are affected by increasing labor market uncertainty, depends on the specific structural and institutional settings of the Netherlands, and how they have changed recently. We therefore describe (changes in) relevant aspects of the Dutch structural and institutional context and explain how these may have influenced the late career of older workers in the Netherlands.

Furthermore, within countries, some groups of older workers are more likely to face high levels of uncertainty than others. We thus pose the question to what extent specific groups of older people are particularly affected by the increased labor market uncertainty and specifically study individual characteristics such as educational attainment, occupational class position, type of contract, industry sector and firm size. Given that, generally spoken, uncertainty in the late career has increased, inequalities between these groups may also have risen. For that purpose, we test whether the most disadvantaged groups of older workers are in particular hit by the increased uncertainty inherently linked to processes of globalization.

INSTITUTIONAL CONTEXT

Type of economy, employment structure and temporary employment

Type of economy. Two types of production regimes can be distinguished: Coordinated and uncoordinated market economies (Soskice 1999). The Netherlands can be classified in the former. The Dutch 'poldermodel' is well-known: Representatives of employers, employees, and the state come together on a yearly basis to reach collective labor agreements on labor conditions. These agreements are binding. And even though union membership has been decreasing in the Netherlands, labor unions still have a relatively powerful say in the overall process, and protect employees when necessary (Ebbinghaus and Visser 1999, 2000).

Coordinated market economies are typically regulated by strong employment protection legislation, thereby creating 'closed' instead of 'open' employment relationships (Sørensen 1983). Due to relatively unrestricted hire-and-fire opportunities, open relationships create a larger number of vacant positions but, at the same time, increase job competition, because employees can be easier replaced when labor supply changes. Closed relationships create an insider-outsider problem (Esping-Andersen 1999), because they protect job holders. They create less job vacancy but, at the same time, employed (elderly) workers are less exposed to external competition and, thus, to the risk of dismissal.

Nevertheless, even though the state plays a strong framework-setting role in reaching agreements on labor conditions between employers and employees, the OECD's 'difficulty of dismissal' index suggests that in the Netherlands employment protection is close to the OECD average (OECD 2004). In the Netherlands, there is a dual system, that is, requests for dismissals can either be filed through a public administrative body (CWI), or dismissals can be accomplished through the civil court. In the 1990s, the civil

court won in popularity, because even though costs are relatively high for employers, via this route employment contracts have the highest odds of being dissolved. Moreover, after the decision there is no possibility to appeal, and compared to the administrative procedure, the civil court is by far the quickest route (OECD 2005b). As of 1995 selective dismissal, that is, a more or less compulsory selection of older workers, was abolished. Nowadays, such principles as dismissals mirroring the age composition of the workforce are more generally applied. Nevertheless, in 2003 the rate of dismissal was (still) highest among the oldest workers: 1.2 percent of the 55 to 64 age group as compared to 0.7 percent of the 45–54 age group (OECD 2005b: 94). But in all, before 1995 the risk of dismissal was higher than afterwards, and was likely to be the definite exit from the labor market, either through unemployment, disability, or early retirement. Another sign that even though the Dutch economy is strongly coordinated it nevertheless is rather dynamic, can be found in the fact that voluntary internal and external mobility is relatively high in the Netherlands (Gesthuizen and Dagevos 2005, 2008). Thus, we generally expect that processes of globalization have had a destabilizing impact on the late career of older workers in the Netherlands, even though its economy is strongly coordinated. Changes in dismissal policies, however, might have tempered this process to some extent.

Employment structure. Compared to the employment structure of other Western economies, the Netherlands is an interesting case. Historically, the Dutch economy relies heavily on foreign trade and international investments. There are relatively few small companies, while a few multinationals dominate the Dutch economy to a large extent. Therefore, the Netherlands has experienced the impact of globalization for a longer duration than many other economies, and its occupational structure has for long been influenced relatively strongly by trade and service activities (Wielers and Mills 2008).

Nevertheless, as many other Western economies, the Netherlands also experienced drastic alterations of the employment structure. Processes of skill biased technological change (Levy and Murnane 1992; Krueger 1993; Berman et al. 1998; Maurin and Thesmar 2004; Spitz-Oener 2006) and increasing global competition caused changes in the distribution of industries. The agricultural sector declined, and a shift from manufacturing to service related employment took place. While in 1971, 38 percent worked in manufacturing and 23 percent in commercial services, in 2002, the share in manufacturing had declined to 22 percent, while the commercial service sector increased to 41 percent (Wielers and Mills 2008). As older workers are overrepresented in traditional industries such as manufacturing, we expect that as a result of changes in the employment structure, the labor market opportunities of elderly workers might have worsened in the Netherlands.

Temporary employment. In the Netherlands, conditions for using temporary contracts have been liberalized since the late 1980s and since then employers try to adapt the deployment of labor to (temporary) production changes of their companies by means of fixed-term contracts, temporary work agency employment and on-call employment. In particular, jobs mediated by temporary work agencies became very popular. Employers used temporary work agencies to avoid the strict system of dismissals control. Originally, there were quite some restrictions on temporary contracts, but with the expansion of this type of employment these have been reduced gradually and are nowadays almost fully abolished. At the moment, an employer can offer three consecutive temporary contracts to an employee for a duration of three years maximally. After that, the employer has to actively terminate the contract, or it tacitly changes into permanence. At the same time, however, equal treatment of permanent and temporary contracts was enforced, that, among other things, enabled temporarily employed workers to build up pension rights. Nevertheless, 16 percent of the workforce is still uncovered by an occupational pension, mainly referring to workers with a temporary labor contract. In the Netherlands, temporary contracts are highly concentrated among young workers. In 2002, more than 35 percent of the men and women in the age group 15 to 19 had a temporary job, and for the 20 to 24 year old group this was 20 percent. However, also among the 60 to 64 year old workers, the incidence of temporary work was relatively high: 7 percent for the male and 13 percent for the female population (OECD 2005b: 97). Given the flexibilization of the labor market, the disproportionate risk of being in temporary employment among older workers thus seems to have grown.

Occupational boundaries and lifelong learning

Occupational boundaries. The importance of skills for employment chances are undisputed (see for instance Blau and Duncan 1967; Wolbers 2000, Solga 2002; Gesthuizen 2004). Moreover, technological changes and the industrial progress towards a service economy have made skills ever more important. The Dutch educational system can be characterized as highly vertically and horizontally stratified and highly standardized (Allmendinger 1989; Shavit and Müller 1998; Wolbers 2008). Vertical stratification, that is, the allocation of pupils into different levels of the educational system, starts at the beginning of secondary education at age 12. Based on school performance tests and the teacher's advice, pupils are directed into either the highest level of secondary education (VWO: pre-university education), or the second highest track (HAVO: prepares for vocational college), or a lower secondary track (VMBO: prepares for school-based vocational programs, or is finished

within the dual system of apprenticeship training). As upper secondary vocational and tertiary education include many programs within each level, that each train the student for one or a small number of specific occupations that are difficult to access without the proper certificate, the Dutch educational system is highly stratified horizontally, with a close linkage to the labor market. And even though students can choose from many programs within levels, through nationally agreed curricula and certification procedures, the Dutch educational system has reached a high level of standardization, which provides employers with reliable information on the knowledge and skills that school-leavers have acquired.

As compared to younger age groups, the group of 50 to 64 year old workers is less well educated. Older workers simply have not benefited from the educational expansion that has taken place in the Netherlands in the decades after World War II. Given the, in general, strong and rather linear relationship between level of education and labor market outcomes, this has resulted in large differences in employment rates between low- and high-educated elderly workers. Particularly, the employment rates of low-educated elderly women were and still are low, which, of course, poses employability problems, not only in terms of formal skills acquired in education, but also as a result of lacking work experience.

Consequently, older members of the workforce, who have been trained to occupy specific positions in the occupational structure that have become redundant due to labor market restructuring, or who lack proper qualifications, are more likely to experience late career instability (nowadays), and may be disproportionately unlikely to re-enter the workforce again after losing employment.

Lifelong learning. In addition to levels of initial education, with regard to continuing education and training there also is a large gap between younger and older workers (Wolbers 2005). On average over the period 1993–2001, 5 percent of the 55 to 64 year old employees had received training in the last four weeks as against 30 percent for the 15–24 age group. In no other EU country, the age group disparity was so large. Even though lifelong learning principles receive much attention from the Dutch government recently (OECD 2005b: 119), it seems very difficult to get more older workers into training participation, and difficulties particularly arise where older low-educated workers are concerned. As in Germany (Blossfeld and Stockmann 1999), vocational training highly concentrates itself in the phase of initial education, which means that generational replacement is the main force of adapting the labor force to a changing demand for high skilled employment. Illustratively, in 1998, the Dutch government introduced tax reductions for employers and employees with regard to training expenses, but as there were only minimal effects, this policy measure was abolished again in 2004.

Welfare state arrangements

Pension regime. Recently, Soede and Vrooman (2008) presented results from a categorical principal components analysis, in which 34 indicators of the pension regimes of 23 nations, mostly measured in 2004–5, were used to identify pension regime types. Two main dimensions arose: the generosity of the pension system – total pension wealth, average replacement rates – and the existence of private schemes within the mandatory system, that is, the obligation to participate in a mandatory occupation pension (Soede and Vrooman 2008: 16). Four clusters of countries were found. Firstly, there is a corporatist cluster, where pension wealth and average replacement rates are high, and mandatory pension schemes are fully public. Secondly, in the liberal cluster pensions are meager and its provision for employees is mostly left to the market. The third they call the moderate pensions cluster. Here the pension benefits are slightly below the European average, and fully public. The fourth has been assigned the name mandatory private (Soede and Vrooman 2008). The Netherlands belong to this cluster. Here, private schemes exist within the mandatory system. They are funded most of the times, which means that contributions are invested in the stock market so that future pensions can be guaranteed (OECD 2005a, 2005b). In this cluster, the Netherlands is the only country with a defined-benefit scheme, which implies that the height of the pension a pensioner receives, depends on the worker's number of years worked, and previous earnings. Many of the countries in this cluster, among which the Netherlands, have generosities and replacement rates that are much in line with those found in the corporatist cluster.

Within the Netherlands, there thus is a first pillar within the pension scheme, that provides basic old-age pension from age 65 and onwards. One is fully entitled when one was a legal resident of the Netherlands for 50 years between age 15 to 64. Full entitlement is equivalent to 55 percent of an average wage in a certain year. In the second pillar, there are fully funded collective occupational pension schemes, which, after 40 years of contribution, aim to pay an old-age pension of 70 percent of the final salary, or (for the youngest birth cohorts) of the average career salary. This second pillar is supplementary to the first. In 2001, approximately 16 percent was uncovered by this second pillar, due to the inexistence of collective labor agreements in certain sectors, or because some pension schemes do not allow for temporary contracts. Thus, the risk of not building up pension rights partly depends on in which industrial sector one works and whether or not one has a temporary contract. Of those who are covered, the legal retirement age of 65 is not the age at which each and every employee has to exit the workforce. A substantial part of the occupational pension schemes offer flexibility to the employee to retire earlier, so that in 2005 retiring between

age 60 and 62 was possible for 40 percent of the contributors (OECD 2005b). And finally, yet unmentioned, is the very small, but increasing third pillar of private pension arrangements with an insurer. Presumably, these arrangements are available mostly to those without an occupational pension, for instance, self-employed workers.

Thus, to sum up the situation for the Netherlands, the most typical characteristic is that the pension provided strongly depends on the duration and success (in terms of wages earned) of a worker's labor market career. Income inequalities after legal retirement typically are as a result of not being able to take part in an occupational pension, either by working in an industry where this is inexistent or by being in temporary employment, or as a consequence of episodes of inactivity. This may have strong implications for different social groups that differ in their working career profiles.

Disability benefits. In the Netherlands, many individuals receive disability benefits. The reason is that the institutional arrangements are generous, in terms of both coverage and benefit level (OECD 2003). In 2003, 786,000 working persons received disability benefits (Vrooman et al. 2007) of which 61 percent were aged 50 to 64 (OECD 2005b). There is a first-stage and follow-up disability benefit. The former depends on the wage level and increases with age. The latter is partially related to the minimum wage and the level of reduction diminishes as one gets older. Generally, older people receive higher benefits with a longer duration (OECD 2005b: 72). Furthermore, a large portion of the Dutch workforce is covered by collective agreements that assure that the benefit level is increased to a 100 percent in the first year of disability, 90 percent in the second year, 75 percent in the third, and 70 percent in many years thereafter until age 65 (OECD 2003).

Measures have been taken recently to limit the number of disability recipients. The Continued Payment of Salary (Sickness) Act and the Disability Insurance Act have been introduced, respectively in 1996 and 1998. The first act forced employers to pay at least 70 percent of the salary in the first year of sickness, and in 2004 the duration was extended to 2 years. The Disability Insurance Act introduced an ‘experience rating disability insurance’, resulting in higher insurance costs when the number of disabled persons within a firm increased. Consequently, it became a less attractive option for employers to facilitate a transition of an employee from working to disability. In 2002, the Gatekeeper Act was introduced, in which regulations about work organization and work conditions were included on the firm’s side, while check-up and re-integration activities became more intensive on the side of the employees (OECD 2005b; Soede 2006a, 2006b). Moreover, in 2005, the medical criteria for the allowance of a disability benefit were strengthened. And, finally, in 2006, new regulations were introduced for new disability recipients. Employment relations of less than 35 percent disabled

were from then on maintained and the employer had to adopt the workplace if necessary. The fully disabled receive benefits of 70 percent of their final salary, but during the first five years their disability is medically re-evaluated annually. The intermediate group (35 to 80 percent disabled) will be compensated, only if they remain in employment for at least 50 percent of their disability percentage.

Consequently, the Netherlands experienced a rather steep drop in disability benefit recipients. In 2002, there were 803,000 allowances, while in 2006, these were decreased to somewhat more than 650,000 (Vrooman et al. 2007). The outflow remained unchanged in this period, thus, the progress made is almost completely due to lessened inflow rates (from 92,000 in 2002 to 32,000 in 2006: Vrooman et al. 2007: 139). As the inflow of the age group 55 to 64 dropped more strongly than the 15 to 54 age inflow, 'the role of disability as a road to early retirement for older workers is now modest' (OECD 2005b: 73).

In all, the changes in the disability legislation imply that nowadays the late career of many older workers are prolonged, while previously they would have left the labor market earlier (for reasons of disability or as an alternative exit route). Part of this group will stay in continuous employment with their employers, but another portion will face a more instable late career. Changes in the disability legislation thus most likely have led to a higher risk of late career instability among Dutch older workers. Furthermore, as definitely exiting the labor market has become less easy, on average, the transition to legal retirement has most likely been postponed.

Early retirement. In the late 1970s, the possibilities of early retirement arose in the Netherlands (Dutch: VUT; vervroegd uittreden). These arrangements were separate from occupational pension schemes, were based on 'pay-as-you-go' criteria and were not linked to past contributions. Around that time, there were more than 300 early retirement schemes. As people who worked after they were early retired found their income deducted from their pension benefits, the early retirement schemes had strong disincentives to stay working. As the replacement rates were generally high, the VUT was considered to be an offer that one could not refuse (OECD 2005b).

In 1997, the VUT was translated into pre-pension arrangements. These were and still are fully funded and people leaving on pre-pensions can only receive what they have in their individual funds. Pre-pensions also have lower replacement rates, and people are allowed to engage in work, next to receiving pension benefits. The pre-pension arrangements, therefore, include much more incentives to stay in the workforce as compared to the early retirement arrangements that were previously operative (OECD 2005b).

Here again, changes in the institutional arrangements of early retirement probably have prolonged the late career of older workers, and for a part, it

could well be in relatively instable and uncertain employment situations. Also, as a consequence of less attractive arrangements, the transition to legal retirement has most likely been postponed.

Unemployment benefits. As the OECD (2005b: 79) states, in the Netherlands, unemployment benefits are less pervasive than disability in the labor market, particularly for older workforce members. To nevertheless combat long-term unemployment, particularly as an alternative route into early retirement, several measures have been taken recently. The requirements for being granted an unemployment benefit and its duration were tightened up. The second-stage unemployment benefit, which older workers could use to bridge the period to early retirement, was abolished in 2004. Moreover, the duration of the unemployment benefit has been made dependent on the worker's full work history only. Also, before 2005, older inactive members of the labor force (57.5 years or older) were excused from applying procedures. In 2005, the obligation to apply was reintroduced.

There are two processes that need to be highlighted here. In the first place, as alternative exit routes such as disability have been made less attractive recently, more older workers are likely to become regularly unemployed nowadays. It has been shown that unemployment rates among 55 to 64 year old workers increased after 2004, while disability decreased (Vrooman et al. 2007). Secondly, since recent changes in the institutional arrangements have made unemployment a less definite stage itself in terms of being the end of the labor market career, we expect that older workers nowadays are not only more likely than before to exit employment, but also more likely to re-enter employment after a period of unemployment or inactivity, ultimately leading to a postponement of finally making the transition to legal retirement.

HYPOTHESES

The empirical part of this chapter is based on information that was gathered from 1990 until 2001. The mid-1980s were characterized by low participation rates for the elderly. More and more 50 to 64 year old workers were allocated into unemployment, disability or early retirement. As described, through various policy implementations, the Dutch government has tried to reactivate the inactive, and to keep the active at the labor market for a longer duration. Given our set of interrelated research goals, however, we are not able to cover the mid- and late-1980s, and the period from 2002 and onwards. As many effective policies were implemented only recently, we, unfortunately, are not able to show the full scope of social changes.

Nevertheless, as we expect that structural and institutional forces and earlier policy changes have had an impact on the late career in the

Netherlands, we still expect to be able to show some differences between cohorts of older workers in the Netherlands. We start this hypothesis section with presenting some stylized facts that underline the particularly strong increase in participation rates in the Netherlands.

Table 1 shows that participation rates of older workers steadily increased from 1992 to 2006. Fit also have been shown that compared to other Western countries, this rise has been relatively strong (Gesthuizen 2007). Increasing participation was mainly achieved by making alternative exit routes such as early retirement less attractive. Also unemployment became a less likely way of definitely exiting the labor market. Nevertheless, unemployment rates did increase among older workers, but most likely as regular, temporary phases during the late career.

Table 1 Net participation rates across age and sex, 1992–2006 (%)

	Year					
	1992	1996	2000	2002	2004	2006
Men						
35–49	89	89	92	90	88	88
50–54	80	82	85	85	83	85
55–59	58	58	67	72	71	73
60–64	20	18	24	27	27	29
65–74	5	4	5	5	6	7
Women						
35–49	45	50	60	64	65	67
50–54	31	36	47	51	55	59
55–59	18	22	31	34	37	43
60–64	4	5	7	7	11	13
65–74	1	1	1	1	2	1

Source: Statistics Netherlands (Labor Force Surveys 1992–2006), as published in Gesthuizen (2007).

Social change: an increasing risk of late career instability and less favorable retirement circumstances?

Generally, we hypothesize that the prolongation of the late career as a result of institutional changes implemented in times of increasing flexibility, has led to a higher risk of late career instability among older workers in the Netherlands. As in other Western economies, the Netherlands has faced a pronounced labor market restructuring towards an even stronger service economy, while older workers are disproportionally likely to be employed in shrinking manufacturing industries. Also, a strong process of skills upgrading

can be observed in the Netherlands. Since occupational boundaries are strong, older workers are less well educated, and lifelong learning is strongly underdeveloped, generational replacement is the most likely route to adapt to these structural changes in the economic structure. Furthermore, alternative exit routes have been made less attractive recently, so that nowadays more older workers (have to) stay in the labor market for a longer duration. While in earlier times, they would have left the labor market for good via disability and early retirement, at present, older workers have to prolong their career with a higher risk of facing career instability. Thus, compared to older cohorts, younger cohorts are more likely to exit employment, to re-enter employment, and to experience upward or downward income mobility during the late career. We furthermore expect that the age of permanently entering the legal state of retirement has increased recently and that a high pension income is secured less easily nowadays.

Social inequality: who is most likely to suffer from late career instability and unfavorable retirement circumstances, and to what extent can we expect increasing social inequalities?

In the Netherlands, a duration 40 years of undisrupted contributions to a pension scheme determines the eventual amount of pension income that a worker receives. Only in this case, a full 70 percent of the final (or average) salary level can be achieved. Late career instability, therefore, strongly influences income levels after legal retirement. The extent to which suffering from an instable late career is unequally distributed across social groups, therefore, also determines income inequality after retirement. Rising inequality can be expected if, as a result of structural processes of globalization, technological progress, and institutional changes, late career instability has become increasingly widespread among some social groups, while others were less affected by these processes.

Who is relatively likely to have an instable late career? As particularly education, occupational class, type of contact, industrial sector and firm size are important predictors of remaining in stable employment (Baron and Bielby 1984; Blossfeld, 1986; Althauser and Kalleberg 1990; Wolbers 2000; Scherer 2004; Steijn et al. 2006), we hypothesize that lower educated workers, workers in skilled, semi-skilled and unskilled occupations, workers in temporary employment, workers in traditional industries, and workers in small firms are more likely to experience instability during their late career than their counterparts. Furthermore, as a result of building up less pension rights due to their more instable (late) career, these disadvantaged social groups are also more likely to make the transition to legal retirement at a later age and to receive less pension income.

To what extent do these disadvantaged social groups face an increasing risk of late career instability and more unfavorable retirement circumstances? As mentioned above, both structural and institutional processes have increased the risk of late career instability in the Netherlands. As a result of skill biased technological change, low-skilled work was gradually replaced by high-skilled work, while at the same time, traditional industries shrunk and the service sector grew. Alongside these structural processes, the Dutch government made it less attractive and sometimes even impossible to permanently withdraw from the labor force through alternative exit routes. Low educated workers have become increasingly redundant, but nevertheless, they cannot exit the labor market permanently. We expect that this has led to a disproportionately increasing risk of late career instability for the low educated, which also resulted in more educational income inequality after legal retirement. The same holds for workers in low-skilled jobs, as their work has become increasingly obsolete as a result of skills biased technological change. Furthermore, given the fact that conditions for using temporary contracts have been liberalized in the Netherlands since the late 1980s, older workers with flexible labor contracts have become more marginalized during their late working career and experience less favorable retirement circumstances. In addition, workers in the traditional manufacturing industries and in agriculture face an increased risk of career instability and less favorable retirement circumstances, since these industries have been shrinking. And finally, as small firms have less possibilities to re-allocate their employees into different types of jobs, whereas in larger firms internal labor markets are likely to be prevalent, we expect that in particular employees working in small firms are confronted with an increasing risk of late career instability and more unfavorable retirement circumstances.

DATA AND METHODS

For the empirical analysis, we use data from the Dutch Socio-Economic Panel. This panel study, conducted by Statistics Netherlands, started in 1984 collecting information about the socio-economic situation of a representative sample of approximately 5,000 households in the Netherlands. Each household member of 16 years and older was eligible for participation and, if interviewed, asked questions about his or her educational qualifications, labor market participation, household situation, income and wealth. During the period 1984–1989, respondents have been interviewed twice a year (in April and October). Since 1990, interviews have taken place on an annual basis (in April). The last full survey of this panel study was held in 2001.[2] Panel attrition was very low: each year, around five percent of the households left

the panel. These households were replaced by newly selected households, that correspond as closely as possible to the original ones. Given the fact that detailed information about (pension) income is only available since 1990, we are able to use the data obtained in the surveys conducted in the period 1990–2001.[3] In order to analyze the late employment career and the transition into retirement of individuals, we started to select those between age 50 and 65 (that is, the age of official retirement in the Netherlands). In total, our analytical sample consists of 1,521 men and 1,808 women, who are analyzed separately.

In the multivariate analysis, we employ discrete time event history models to estimate the time dependent process of the late career and the retirement decision. For that purpose, the original data were transformed into a person-year file. The retirement income is analyzed by means of linear regression models. For each dependent variable, the risk set may differ.

The transition to *exit out of employment during the late career* is restricted to all individuals of age 50 and older who were employed at age 50. We focus on the transition to unemployment or inactivity, where the event of retirement is treated as right censored. For the transition to *re-entry into employment during the late career*, the risk set is based on those individuals of age 50 and older who actually became unemployed or inactive after age 50. Due to the small number of events observed here, we, unfortunately enough, do not present the results of the event history models estimated for this employment transition. *Upward* and *downward income mobility during the late career* is defined as a 10 percent increase, respectively decrease in the individual wage level (gross hourly wage in Dutch guilders) adjusted for inflation. Information on the previous job is used when an individual experienced an inactivity spell. This holds for both the wage level and other job characteristics included as independent variables. To take possible ceiling and bottom effects into account, the current (or previous) gross hourly wage is statistically controlled for. Once again, the observation window starts at age 50, with persons who are employed at that age as the population at risk. The transition to retirement is treated as right censored. *Entry into retirement* is measured as the time point when individuals retire. Retirement is defined as receiving income of state retirement pension, occupational pension or private pension and being not or only marginally (that is, less than 12 hours per week) employed. All individuals of age 50 and older are at risk for the transition to retirement. *Retirement income* is based on the sum of the three above mentioned kinds of pension income (gross monthly; in Dutch guilders).

Birth cohort is used to investigate changes over time. We compare three birth cohorts: ≤1939, 1940–1945 and ≥1946. These cohorts have been chosen arbitrarily, without an institutional or macro-economic basis.

Other independent variables included in the multivariate analysis are *age* (in 4 or 5 categories depending on the outcome variable of interest), *unemployment rate* in the year of survey (based on figures from Statistics Netherlands [CBS, 2009]), *education* (measured according the CASMIN classification [Braun and Müller, 1997]), *marital status* (married, divorced, widowed, unmarried), whether or not there are *child(ren) at home*, whether or not the respondent is *employed* (with the exception of the analysis of employment exit, where the risk set by definition is based on those who are employed), whether or not the respondent is *part-time* employed, whether or not the respondent is *temporary employed*, *occupational class* (based on the EGP class schema [Erikson et al. 1979] with seven categories), *industry sector* (defined on the basis of an industry-allocation scheme developed by Singelmann [1978]) and *firm size* (≤19, 20–49, 50–99 and ≥100 employees). All these variables are measured time-varying.

Table 2 presents a descriptive overview of the indicators for the late employment career and the transition into retirement for different birth cohorts. Given the limited age variation within the two youngest birth cohorts (in the most recent birth cohort, for instance, we just observe the 50–54 years old), most results are displayed only for the oldest birth cohort.

Table 2 Descriptive overview of indicators for the late career and the transition into retirement for different birth cohorts

	Men			*Women*		
	≤1939	*1940–45*	*≥1946*	*≤1939*	*1940–45*	*≥1946*
Employment status at age 50						
Employed (%)	79	85	91	30	52	61
Part-time employed (%)	11	7	6	77	79	79
Temporary employed (%)	x	1	4	x	8	11
Late career						
Non-employed after age 50 (%)	24	–	–	43	–	–
Re-employed after non-employment (%)	23	–	–	10	–	–
Upward income mobile (%)	74	–	–	68	–	–
Downward income mobile (%)	47	–	–	59	–	–
Transition into retirement						
Median retirement age (years)	62	–	–	64	–	–
Monthly pension income						
Median monthly pension income (NLG)	3723	–	–	1385	–	–
Mean monthly pension income (NLG)	4468	–	–	1933	–	–
Kind of pension received						
State pension (%)	45	–	–	79	–	–
Occupational pension (%)	83	–	–	31	–	–
Private pension (%)	5	–	–	2	–	–

Source: Own calculations based on Dutch Socio-Economic Panel (1990–2001).

Notes: x percentage is not presented due to lack of cases; – figure is not presented due to lack of sufficient age variation within birth cohort.

RESULTS

In this section, we describe the results of the multivariate analysis. Each time, we first highlight the results that pertain to our hypothesis on social change. After that, we relate our findings to the hypotheses on social inequality. We conclude each part with a description of interesting results that do not directly pertain to the hypotheses.

Exit out of employment during the late career

Social change. Table 3 contains the results for the conditional likelihood of exiting employment between age 50 and 64. The first model (M1) shows that in the Netherlands, there is no consistent trend towards a higher risk of late career exit from employment, neither for men, nor for women. Unexpectedly, for Dutch older male workers we find that the oldest birth cohort (≤ 1939) has a significantly higher odds of experiencing a transition into non-employment than the ≥ 1949 birth cohort. For older female workers there are no significant differences between cohorts in the conditional likelihood of exiting employment.

Social inequality. Table 3 shows that low educated older men (elementary and basic vocational education) do not face a higher risk of exiting employment than higher tertiary educated older men. Neither for women we find significant educational differences. Furthermore, there is a strong positive effect of being in temporary employment on the risk of exiting employment, both for men and women. Occupational class does not seem to be related to the risk of employment exit in the late career. For men the exit rate differentials are small. Compared to employees in the upper service class, for women we do find significantly higher risks of exiting non-employment for employees working as lower grade routine non-manual employees, as small proprietors or self-employed, or as skilled or unskilled manual workers (M1). After controlling for education, however (M2), these differences have become substantially smaller, often leading to insignificance. For industries, we find some confirmations for our expectations. As hypothesized, older men in the transformative sector are more likely to become non-employed than older men working in social services. Yet, there are also some marked differences in the risk of exiting employment between service industries. Men in producer services are more likely to become non-employed than men in social services. The same is true for women in the personal service sector. In all, the most stable late careers in terms of preventing employment exit are found within the social services (M2).

Table 3 Likelihood of exit out of employment during the late career (discrete-time event history analysis)

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Constant	–3.64**	–4.10**	–4.09**	–2.72**	–3.33**	–2.35+
Age						
50–54	–1.26**	–1.40**	0.15	–1.40**	–1.19**	–1.70*
55–58	–0.12	–0.26	0.59	–0.66+	–0.45	–0.74
59–61(ref.)	–	–	–	–	–	–
62–64	0.82	1.20	0.49	0.49	0.47	–0.50
Birth cohort						
≤1939	0.80*	0.25	2.21*	–0.15	0.24	0.80
1940–45	0.59	0.22	1.10*	0.15	0.42	0.48
≥1946 (ref.)	–	–	–	–	–	–
Unemployment rate		–0.14+	–0.26*		–0.15*	–0.28*
Education						
Elementary education		–0.10	–0.40		1.11	1.46
Basic vocational education		–0.23	-0.11		1.40	1.18
Intermediate vocational education		–0.46	-0.03		0.85	0.16
Intermediate general education		–0.11	-		0.15	0.41
Lower tertiary		0.02	–0.40		0.87	0.77
Higher tertiary (ref.)		–	–		–	–
Marital status						
Married (ref.)		–	–		–	–

Table 3 Continued

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Divorced		–0.39	–1.25		–0.26	–0.04
Widowed		0.19	0.25		–0.68	–0.96
Unmarried		0.27	0.82		–0.23	0.14
Child(ren) at home		–0.50*	–0.23		0.23	–0.02
Part-time employed		0.79**	0.15		0.35	0.41
Temporary employed			1.60**			1.49**
Occupational class						
Upper service (ref.)	–	–	–	–	–	–
Lower service	0.09	0.06	–0.18	0.41	0.14	–0.32
Routine non-manual employees	0.53	0.60	–0.03	0.42	–0.01	0.05
Lower-grade routine non-manual employees	–0.41	–0.70	–0.06	1.01*	0.36	–0.06
Small proprietors, self-employed, farmers	0.42	0.74	0.53	1.93**	1.21*	1.39+
Skilled workers	0.52+	0.36	–0.06	1.67**	1.10+	–0.20
Unskilled workers	0.07	–0.04	–0.41	1.61**	0.70	0.55
Industry sector						
Extractive		–0.10	–0.56		0.43	–2.07*
Transformative		0.81*	0.84+		–0.18	–0.04
Distributive services		0.30	0.09		0.36	–0.04
Producer services		0.75*	0.24		0.22	0.24
Social services (ref.)		–	–		–	–
Personal services		–0.00	–1.08		0.78**	0.20

Table 3 Continued

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Firm size						
≤19			0.76*			0.97*
20–49			–0.58			–0.22
50–99			–0.62			0.46
≥100 (ref.)			–			–
Model Chi-square	61**	90**	69**	72**	102**	75**
Df	11	27	31	11	27	31
Number of events	106	106	52	138	138	57
Number of persons	941	941	770	623	623	441
Number of person-years	3907	3907	2528	2395	2395	1294

Source: Own calculations based on Dutch Socio-Economic Panel (1990–2001).

Notes: ** Effect significant at $p < 0.01$; * effect significant at $p < 0.05$; + effect significant at $p < 0.10$; - coefficient is not reliable due to small number of cases.

In models M3 the results for firm size are also included (only for 1995 to 2001). Here we find confirmation of our hypothesis: In smaller firms (≤ 19) the risk exiting employment is higher than in large firms (≥ 100). This holds for both men and women.

Changes in social inequality.[4] Generally, our models show few significant interactions between cohort and the other independent variables. And in as far as there are significant changes in social inequality in the late career, they do not seem to be systematic. We will therefore report on these significant changes, but have to draw the conclusion that with the research design that we have used, it is as yet impossible to detect changes in social inequality. Here, for women we find that in the younger cohorts the positive effect of working in distributive services is weaker.

Other findings. With regard to age it shows that for men and women, exiting employment becomes more likely as one gets older. Furthermore, for men we also find that economic conditions have an impact on the risk of becoming unemployed or inactive. The higher the national unemployment rate is a certain year, the higher the conditional likelihood of experiencing a transition into non-employment. For women, we do not find such an impact of economic conditions. Contrarily, we find a negative in stead of a positive impact of the unemployment rate on exiting employment. The presence of (a) child(ren) at home has contradictory effects for men and women. Having child(ren) at home reduces the risk of exiting employment during the late career for men, while for women it increases the risk (but insignificantly). Finally, part-time employment increases the exit risk, but only for male workers in their late career.

Late career upward income mobility

Social change. Findings for upward income mobility during the late career can be found in Table 4. For men we find that the likelihood of experiencing such a positive event is most likely in the youngest birth cohort. For women we find no significant cohort-differences in the conditional likelihood of upward income mobility.

Table 4 Likelihood of upward income mobility during the late career (discrete-time event history analysis)

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Constant	2.22**	3.69**	3.61**	3.70**	6.10**	6.32**
Log gross hourly wage	–0.41**	–0.61**	–0.60**	–0.96**	–1.25**	–1.46**
Age						
50–54	–1.49**	–0.91**	–0.56+	–1.06**	–0.40	0.52
55–58	–0.60**	–0.29	–0.20	–0.28	–0.03	0.35
59–61(ref.)	–	–	–	–	–	–
62–64	0.18	–0.26	–0.20	–0.33	–0.72	–0.84
Birth cohort						
≤1939	–0.43**	0.26	0.88**	–0.35	0.56*	1.74**
1940–45	–0.32**	0.17	0.41**	–0.19	0.45*	0.92**
≥1946 (ref.)	–	–	–	–	–	–
Unemployment rate		–0.21**	–0.25**		–0.28**	–0.36**
Education						
Elementary education		–0.79**	–0.81**		–1.05*	–1.17*
Basic vocational education		–0.50*	–0.42+		–0.77*	–0.87*
Intermediate vocational education		–0.53**	–0.46*		–0.62+	–0.61+
Intermediate general education		–0.08	0.17		–0.53	–0.76
Lower tertiary		–0.13	–0.17		–0.46	–0.41
Higher tertiary (ref.)		–	–		–	–

Table 4 Continued

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Marital status						
Married (ref.)		–	–		–	–
Divorced		–0.05	–0.12		–0.34*	–0.22
Widowed		0.58+	0.52		0.55	0.65
Unmarried		–0.10	–0.23		0.10	0.10
Child(ren) at home		–0.13	–0.12		–0.03	–0.02
Non-employed	–2.45**	–2.34**	–3.03**	–2.74**	–2.96**	–3.40**
Part-time employed		0.09	–0.06		–0.43**	–0.46**
Temporary employed			0.39			0.11
Occupational class						
Upper service (ref.)	–	–	–	–	–	–
Lower service	–0.09	–0.12	–0.25 +	–0.07	0.07	0.05
Routine non-manual employees	–0.55 **	–0.46 **	–0.51 **	–0.56 *	–0.27	–0.17
Lower-grade routine non-manual employees	0.05	0.19	0.21	–0.52 *	–0.13	0.10
Small proprietors, self-employed, farmers	–0.38	–0.24	–0.57	–1.14	–2.43 **	–3.29 *
Skilled workers	–0.28 *	–0.16	–0.25	–0.49	–0.00	–0.24
Unskilled workers	–0.31 *	–0.13	–0.21	–0.29	–0.20	–0.21
Industry sector						
Extractive		–0.24	–0.57		1.53**	1.50*
Transformative		0.12	–0.07		–0.29	–0.38

Table 4 Continued

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Distributive services		–0.09	–0.18		–0.09	–0.04
Producer services		0.03	–0.09		0.10	0.15
Social services (ref.)		–	–		–	–
Personal services		0.16	0.43		0.14	0.39
Firm size						
≤19			–0.12			–0.46*
20–49			–0.22			–0.11
50–99			–0.16			–0.21
≥100 (ref.)			–			–
Model Chi-square	195**	264**	229**	107**	172**	162**
Df	13	29	33	13	29	33
Number of events	905	905	657	408	408	325
Number of persons	838	838	739	393	393	363
Number of person-years	3415	3415	2299	1479	1479	1100

Source: Own calculations based on Dutch Socio-Economic Panel (1990–2001).

Notes: ** Effect significant at $p < 0.01$; * effect significant at $p < 0.05$; + effect significant at $p < 0.10$.

Social inequality. Educational attainment is strongly related to the conditional likelihood of upward income mobility: Men and women with an elementary, basic vocational, or intermediate vocational education are less likely to experience such a mobility event as compared to the higher tertiary educated. Being in temporary employment, however, does not influence upward income mobility. We would expect a negative impact, but it proves to be insignificant for both men and women. For men, we find expected effects of occupational classes. In addition to skilled and unskilled manual workers, employees in the routine non-manual class are less likely to experience an upward income mobility event than employees in the upper service class. Interestingly however, these differences seem to be largely confounded by educational attainment (compare models M1 with M2). For women we find that working in the routine and lower-grade non manual classes reduces the likelihood of experiencing upward income mobility, as compared to women working in the upper service class. But after taking account for educational attainment, these differences disappear, while now small proprietors, self-employed and farmers are significantly less likely to experience such a positive event. For men, industry and firm size are not related to upward income mobility. For women, however, they are. It shows that unexpectedly, women working in the extractive sector have a higher odds of upward income mobility than female employees in social services. Also, women working in the smallest firms are less likely to experience upward income mobility than women working in large firms.

Changes in social inequality. The models show that for men it has become increasingly less likely across cohorts to experience upward income mobility as small proprietors, self-employed or farmers. Also, the positive effect of working in the transformative sector is less strong in the younger cohorts. Working in the personal services sector, however, has become more favorable in terms of upward income mobility. For women we find that the positive effect of working in the extractive sector is less strong in the younger cohorts.

Other findings. For both men and women, older employees are more likely to experience an upward mobility event than younger employees. In the late career, there seems to be a rather linear and positive relationship between age and upward income mobility. Economic conditions also affect upward mobility chances for both men and women: The higher the unemployment rate is in a year, the less likely one is to experience a significant increase in income. Not being employed decreased the odds of experiencing upward income mobility one month later. Being in employment thus strongly determines income increases later on in one's late career. Part-time employment decreases the conditional likelihood of upward income mobility during the late career, but only for women.

Late career downward income mobility

Social change. With regard to downward income mobility, the effects for birth cohorts are contrary to our expectations (see Table 5). The younger the birth cohort, the less likely one is to experience downward income mobility. This holds for both men and women. For women, these differences remain significant after taking account for other characteristics, for men they do not.

Social inequality. Rather unexpected is the absence of differences between educational categories in the conditional likelihood of experiencing downward income mobility. Being in temporary employment one month earlier, however, increases the risk of experiencing downward income mobility for both men and women. There also are pronounced differences between occupational classes. As expected, the upper service class is least likely to experience downward income mobility. For both men and women our results show that lower-grade routine non-manual employees and skilled and unskilled workers are disproportionately likely to experience downward income mobility. But for men, most strongly affected are the small proprietors, self-employed, and farmers. For industries we do not find any significant differences for men. For women we find that working in the extractive or personal service sector is associated with a relatively high risk of downward income mobility. And finally, working in small firms shows the expected results for men. It increases the risk of downward income mobility as compared to working in larger firms.

Changes in social inequality. For men we find several significant interactions. First, the higher likelihood of downward income mobility for the lower service class as compared to the upper service class, is mainly to be found among the older cohorts. Here inequality thus decreased. Second, educational inequality also seems to have decreased: the lower educated in the younger birth cohorts are significantly less likely to experience downward income mobility than the lower educated in the older cohorts. Finally, the positive (non-significant) effect of higher vocational education is less strong in younger cohorts.

Other findings. For men and women, there is no relationship between late career age and downward income mobility. Macro-economic circumstances again have a significant impact on downward income mobility during the late career: The higher the unemployment rate, the more likely men are to experience a significant decrease in income. For women, this does not hold. Having children at home increases the risk for downward income mobility for women. Part-time employment increases the risk of downward income mobility only for men.

Table 5 Likelihood of downward income mobility during the late career (discrete-time event history analysis)

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Constant	–8.41**	–8.02**	–7.82**	–8.13**	–9.48**	–11.15**
Log gross hourly wage	1.49**	1.34**	1.29**	1.54**	1.77**	1.85**
Age						
50–54	–0.22	–0.35	0.10	–0.37	–0.46	0.92
55–58	0.32	0.23	0.25	0.02	0.09	0.70
59–61(ref.)	–	–	–	–	–	–
62–64	0.20	0.33	–0.04	–1.57	–1.35	–1.44
Birth cohort						
≤1939	0.50*	0.02	0.79+	1.04**	1.05*	2.61**
1940–45	0.33+	0.14	0.56*	0.72**	0.74*	1.57**
≥1946 (ref.)	–	–	–	–	–	–
Unemployment rate		0.11*	0.03		0.05	–0.06
Education						
Elementary education		–0.12	–0.50		0.04	0.54
Basic vocational education		–0.25	–0.25		0.05	0.51
Intermediate vocational education		–0.32	–0.46		0.13	0.17
Intermediate general education		0.09	0.07		–2.91*	–2.61+
Lower tertiary		0.01	–0.06		0.09	0.34
Higher tertiary (ref.)		–	–		–	–

Table 5 Continued

	Men			Women		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Marital status						
Married (ref.)		–	–		–	–
Divorced		0.11	–0.07		–0.34	–0.18
Widowed		0.62	0.68		1.11**	1.57**
Unmarried		–0.18	–0.30		0.08	0.41
Child(ren) at home		–0.18	–0.22		0.34+	0.52*
Non-employed	0.40	0.58*	0.50	0.47	0.62	0.63
Part-time employed		1.19**	1.14**		0.28	0.52+
Temporary employed			1.22**			1.35**
Occupational class						
Upper service (ref.)	–	–	–	–	–	–
Lower service	0.46*	0.27	0.12	0.35	0.06	–0.25
Routine non-manual employees	–0.16	–0.13	–0.13	0.15	–0.34	–0.73
Lower-grade routine non-manual employees	1.04*	0.49	0.79	1.34**	0.87*	0.41
Small proprietors, self-employed, farmers	2.49**	2.49**	3.02**	0.76	–0.44	-
Skilled workers	0.45*	0.25	0.19	0.97+	0.31	–0.06
Unskilled workers	0.90**	0.55*	0.34	1.19**	0.25	–0.53
Industry sector						
Extractive		–0.39	–1.94+		2.09**	1.66+
Transformative		0.32	0.30		0.60	0.53

Table 5 Continued

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Distributive services		0.32	0.17		0.50	0.63
Producer services		–0.35	–0.57+		0.34	0.26
Social services (ref.)		–	–		–	–
Personal services		0.35	–0.00		1.11**	1.35**
Firm size						
≤19			0.51*			0.52
20–49			0.60*			–0.03
50–99			–0.12			–0.54
≥100 (ref.)			–			–
Model Chi-square	213**	274**	210**	106**	148**	137**
Df	13	29	33	13	29	33
Number of events	332	332	242	184	184	136
Number of persons	834	834	729	390	390	358
Number of person-years	2842	2842	1884	1255	1255	911

Source: Own calculations based on Dutch Socio-Economic Panel (1990–2001).

Notes: ** Effect significant at $p < 0.01$; * effect significant at $p < 0.05$; + effect significant at $p < 0.10$; - coefficient is not reliable due to small number of cases.

Entry into retirement

Social change. For men, there are no differences between birth cohorts in the timing of the transition into retirement (see Table 6). For women, we also do not find a trend towards later retirement. On the contrary, among the youngest cohorts (≥ 1946), the incidence of retirement is significantly higher than in the ≤ 1939-cohort.

Social inequality. For men, educational attainment is not related to the timing of retirement. Among women, the lower tertiary and intermediate vocationally educated retire significantly earlier than the higher tertiary educated. For occupational classes, we find that among men the small proprietors retire significantly later than the upper service class, while skilled workers, supervisors of manual workers, and lower-grade routine non manual employees retire significantly earlier. Among women, only the unskilled and routine non-manual workers retire significantly later than employees in the upper service class. For men the results show that firm size is important: Working in the smallest firms leads to the strongest delay in retiring.

Changes in social inequality. Only for occupational class we find some changes in inequality. On average, routine non-manual and skilled manual workers enter retirement later than upper service class workers. These effects are weaker for the younger cohorts.

Other findings. The results for age shows that in the Netherlands, one retirement peak lies between age 59 and 61. Until that age, the likelihood gradually increases, while after that age, it temporarily decreases again for the age group 62–63. Not surprisingly, the highest conditional likelihood of retiring is found for age 64 to 65. Macro-economic conditions, as measured by the unemployment rate, are not related to the timing of retirement. Men and women who have children in their household retire significantly later as compared to households where no children are present. Divorced or widowed women, however, retire significantly earlier. And finally, being unemployed one month earlier increases the odds of receiving retirement income the next month for men, but it decreases the odds for women.

Table 6 Likelihood of entry into retirement (discrete-time event history analysis)

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Constant	–2.21**	–2.31**	–2.84**	–0.93	–2.68**	–1.90
Age						
50–54	–4.33**	–4.24**	–3.74**	–3.28**	–3.22**	–3.65**
55–58	–1.31**	–1.30**	–1.44**	–1.40**	–1.39**	–1.58**
59–61(ref.)	–	–	–	–	–	–
62–63	–1.75**	–1.73**	–2.11**	–0.48*	–0.56*	–0.58+
64–65	2.42**	2.49**	2.63**	4.16**	4.42**	4.35**
Birth cohort						
≤1939	0.17	0.24	0.31	–1.23**	–1.29*	–1.47*
1940–45	–0.02	0.05	0.32	–0.54	–0.55	–0.77
≥1946 (ref.)	–	–	–	–	–	–
Unemployment rate		0.01	0.01		0.01	0.02
Education						
Elementary education		–0.59+	–0.84+		0.89	0.69
Basic vocational education		–0.36	–0.37		0.96	0.96
Intermediate vocational education		0.03	0.01		1.36+	1.17
Intermediate general education		–0.17	–0.04		1.33	0.54
Lower tertiary		0.24	–0.10		1.42+	1.34
Higher tertiary (ref.)		–	–		–	–

Table 6 Continued

	Men			Women		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Marital status						
Married (ref.)		–	–		–	–
Divorced		–0.21	–0.17		0.44*	0.60*
Widowed		0.28	0.62		2.22**	2.71**
Unmarried		–0.42	–0.59		0.25	0.46
Child(ren) at home		–0.32*	–0.64**		–0.44*	–0.23
Non-employed	0.67**	0.90**	1.55**	-0.83*	–0.41	–0.93
Part-time employed		–0.18	–0.54		0.61	0.34
Temporary employed			0.20			–0.98
Occupational class						
Upper service (ref.)	–	–	–	–	–	–
Lower service	0.20	0.23	1.01 *	–0.90+	–0.99+	–0.90
Routine non-manual employees	0.44	0.57	0.69	–0.78	–0.63	–0.63
Lower-grade routine non-manual employees	0.99+	1.42*	1.95 *	–0.30	–0.20	–0.54
Small proprietors, self-employed, farmers	–0.76+	–0.35	0.18	–0.96	–0.16	0.90
Skilled workers	0.76*	0.88**	1.52 **	–0.66	–0.40	0.27
Unskilled workers	0.26	0.69+	1.09 +	–1.87**	–1.74*	-
Industry sector						
Extractive		–0.17	0.17		–0.72	-
Transformative		0.20	0.06		–0.83	–1.76

Table 6 Continued

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Distributive services		–0.19	0.27		0.07	0.57
Producer services		–0.00	0.36		–1.36+	–0.83
Social services (ref.)		–	–		–	–
Personal services		–0.27	0.03		–0.90	0.24
Firm size						
≤19			–0.97+			–0.57
20–49			–0.29			–1.57
50–99			0.21			–1.41
≥100 (ref.)			–			–
Model Chi-square	1225**	1255**	746**	2153**	2274**	1290**
Df	13	29	33	13	29	33
Number of events	447	447	237	577	577	340
Number of persons	1521	1521	1148	1808	1808	1334
Number of person-years	6721	6721	3888	8720	8720	4602

Source: Own calculations based on Dutch Socio-Economic Panel (1990–2001).

Notes: ** Effect significant at $p < 0.01$; * effect significant at $p < 0.05$; + effect significant at $p < 0.10$; - coefficient is not reliable due to small number of cases.

Pension income after retirement

Social change. For the level of retirement income we do not find birth cohort trends (see Table 7). Among men, the retirement income level is practically constant across cohorts. Among women, income from pensions seem to have increased over birth cohorts. The differences, however, only reach significance after various individual characteristics are controlled for (M2).

Social inequality. Not surprisingly, there are large differences in pension income across educational and occupational groups. The lower educated (primary and basic vocational education) receive significantly less than the higher tertiary educated, and all occupational classes receive less than the upper service class. For men, the largest differences are found for the small proprietors and the manual workers. For women, large differences also exist for those working in the lower-grade routine non-manual class. Having been in temporary employment during the late career leads to lower levels of retirement income for both men and women. However, the differences are not significant. Industry does not seem to matter, neither for men, nor for women. And finally, women who worked in smaller firms ($\leq$ 49) receive significantly less pension income than women who worked in large firms.

Changes in social inequality. Here, we find several changes in social inequality. For men it shows the difference in pension income between the higher service class and routine non-manual workers is significantly larger in the younger birth cohorts. For educational differences in pension income we generally find that they are smaller in the younger cohorts. This implies decreasing educational inequality and contradicts our expectations. For women we find that the income differences between the upper service class and routine non-manual workers, self-employed, and unskilled workers are smaller in the younger cohorts. Here again, the findings run counter to our expectations. Working in the transformative and distributive service sector has become less favorable for women in terms of pension income.

Other findings. The age effects show that the age group of 59 to 61 generally receives the highest level of pension income. This suggests that for these age groups, in the past there were attractive ways to permanently exit the labor force around that age. Widowed men receive less pension income compared to married men, while unmarried women receive significantly more pension income as compared to married women. Men who have been temporarily unemployed during their late career receive significantly less pension income than men who did not experience episodes of unemployment. For women, an even stronger difference was found.

Table 7 Log gross monthly pension income after retirement (linear regression analysis)

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Constant	9.45**	10.08**	10.50**	8.19**	8.97**	8.38**
Age						
50–54	–0.83*	–0.59	–0.87	0.11	0.27	1.30**
55–58	–0.18+	–0.10	0.19	–0.14	–0.13	–0.14
59–61(ref.)	–	–	–	–	–	–
62–63	–0.25	–0.23	–0.23	–0.47*	–0.34+	–0.28
64–65	–0.47**	–0.40**	–0.46**	–0.08	0.02	–0.02
Birth cohort						
≤1939	–0.34	–0.11	–0.07	0.43	0.72+	1.55**
1940–45	–0.20	–0.11	–0.34	0.61	0.81*	1.61**
≥1946 (ref.)	–	–	–	–	–	–
Unemployment rate		–0.05*	–0.08*		–0.06**	–0.04
Education						
Elementary education		–0.91**	–0.57+		–0.98*	–1.20**
Basic vocational education		–0.83**	–0.60*		–1.02**	–1.31**
Intermediate vocational education		–0.66**	–0.56+		–0.71+	–1.02*
Intermediate general education		–0.25	–0.05		–0.61	–1.25*
Lower tertiary		–0.41+	–0.18		–0.62	–0.82+
Higher tertiary (ref.)		–	–		–	–

Table 7 Continued

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Marital status						
Married (ref.)		–	–		–	–
Divorced		0.13	0.30		0.14	–0.08
Widowed		–0.41*	–0.37		0.03	–0.08
Unmarried		–0.22	–0.05		0.77**	0.78**
Child(ren) at home		–0.02	0.22		–0.06	–0.06
Non-employed	–0.76**	–0.60**	–1.08**	–1.30**	–1.18**	–1.19*
Part-time employed		–0.11	–0.37		–0.45	–0.29
Temporary employed			–0.68			–0.48
Occupational class						
Upper service (ref.)	–	–	–	–	–	–
Lower service	–0.32	–0.32	–0.67	–0.88*	–0.57	–0.63
Routine non-manual employees	–0.59*	–0.58+	–1.38*	–1.10**	–0.64	–0.37
Lower-grade routine non-manual employees	–0.52	–0.22	–0.33	–1.61**	–0.88*	–0.63
Small proprietors, self-employed, farmers	–1.01**	–0.98**	–2.19	–1.59**	–1.40*	–0.04
Skilled workers	–0.71**	–0.51*	–1.00*	–2.42**	–1.64*	–0.41
Unskilled workers	–0.69**	–0.43	–1.04+	–0.83	0.05	-
Industry sector						
Extractive		0.36	1.05		–0.65	-
Transformative		0.02	0.19		–0.28	–2.34+

Table 7 Continued

	Men			*Women*		
	Model 1	*Model 2*	*Model 3*	*Model 1*	*Model 2*	*Model 3*
Distributive services		0.07	0.29		–0.45	0.16
Producer services		0.13	0.21		–0.19	0.70
Social services (ref.)		–	–		–	–
Personal services		–0.10	–0.24		0.38	0.20
Firm size						
≤19			0.07			–0.91+
20–49			–0.21			–3.21*
50–99			–0.18			–0.07
≥100 (ref.)			–			–
Adjusted R-square	0.13	0.18	0.12	0.05	0.14	0.21
Number of persons	441	441	235	559	559	335

Source: Own calculations based on Dutch Socio-Economic Panel (1990–2001).

Notes: ** Effect significant at $p < 0.01$; * effect significant at $p < 0.05$; + effect significant at $p < 0.10$; - coefficient is not estimated due to lack of cases.

CONCLUSIONS

Since the 1970s, Western, advanced economies have been subject to several processes that arguably increased uncertainty and precariousness among employees. The aim of this chapter was to study to which extent Dutch older workers (age 50 to 64) are nowadays more likely to be in a precarious employment situation than in the past. We aimed to answer three research questions. First, to what extent are Dutch older workers subject to social change, that is, to an increasing risk of career instability and less favorable retirement circumstances? Second, who is most likely to suffer from late career instability and unfavorable retirement circumstances, and third, to what extent can we expect increasing inequalities? To answer these questions, we used the years of 1990 to 2001 of the Dutch Socio-Economic Panel, and compared several cohorts of older employees in their late career in terms of their conditional likelihood to exit employment, to re-enter employment, to experience upward or downward income mobility and to enter retirement. Furthermore, we also studied their level of retirement income. Additionally, we studied (changes in) the effects of determinants such as educational attainment, occupational class, temporary employment, industry and firm size to detect (changes in) social inequality.

As far as the question of social change is concerned, we have to conclude that in the Netherlands there does not seem to be a trend towards increasing late career instability among Dutch older workers. Mostly, cohorts did not consistently differ in their risk experiencing destabilizing events. The significant cohort differences that were found, do not depict a more unfavorable, but in stead a more positive situation for younger cohorts. Younger cohorts of older working men were more likely to experience upward income mobility than older cohorts, and less likely to experience downward income mobility. The latter finding also pertains to younger cohorts of working women.

Two remarks need to be made at this point. In the first place, the data did not allow us to study re-entry. In the case of this labor market event, we therefore can not make any assertions on social change, and it might well be that here increasing late career instability indeed has occurred. Secondly and perhaps even more importantly, due to the strict definition of the entry into retirement (receiving pension income) and subsequently the level of retirement income, we were only able to study the period of 1990 to 2001. However, above we described that important changes in the Dutch institutional settings we implemented since the 1980s, and also after 2001. Given the limited range of years we were able to study, we could only

compare a few cohorts of older workers. We therefore, most likely, have not been able to cover the full scope of social changes that took place in the Netherlands. Sadly, in the Netherlands there is no longitudinal panel that allows us to study processes of social change in such detail for such a long period.

The results with regard to the question who is more likely to suffer from late career instability and unfavorable retirement circumstances, lead to stronger conclusions. Educational attainment proved to be strongly related to the likelihood of upward income mobility. However, it did not affect the other late career outcomes. The lower educated earn significantly less retirement income than the higher educated. For occupational class we found that as expected, particularly workers in the lower routine non-manual and skilled and unskilled manual working classes were more likely to exit employment (men only) and to experience downward income mobility, were less likely to experience upward income mobility, enter retirement relatively late (women only), and earn significantly less retirement income as compared to upper service class workers. Being in temporary employment also proved to be an important predictor of late career instability and disadvantageous pension earnings profiles. Workers in temporary employment are relatively likely to exit employment and to experience downward income mobility. In the end, this accumulates to lower levels of pension income as compared to workers who were in permanent employment contracts. Even though there are marked differences between industries in late career instability and subsequent retirement income, the results did not allow for consistent conclusions. The results for firm size, however, do. Workers in smaller firms are relatively likely to exit employment and to experience downward income mobility (men only), they are least likely to experience upward income mobility (women only), they retire the latest, and earn the least pension income (women only). In sum, largely the patterns found were as expected: the groups at the labor market that traditionally run the highest risks of unfavorable careers, also run the highest risks of late career instability and unfavorable retirement circumstances.

We also hypothesized that the increasing uncertainty at the labor market should most likely affect those risky groups the most, leading to increasing inequalities during the late career. However, our models did not show consistent patterns that would allow for such a conclusion. For now we therefore conclude that in the Netherlands, there is no evidence that consistently points at increasing inequality among older workers. But here again, we must acknowledge that our models might lack power, and that studying the entire period of the 1980s until the late 2000s would possibly have generated opposite conclusions.

NOTES

1. In many countries part-time employment is also considered as an uncertain job position. In the Netherlands however, part-time jobs are culturally accepted, have legal status and are often accompanied with permanent contracts, allowing women (and men increasingly more often) to combine work with family responsibilities (Kalmijn and Luijkx 2006; Wielers and Mills, 2008). We therefore will not consider part-time employment as an uncertain job position in this chapter.
2. In 2002, the Dutch Socio-Economic Panel continued as a database of administrative registers. This implies that since then, quite important individual characteristics, such as their occupation, are not collected anymore. This makes it impossible to use the data collected from 2002 and onwards for the purpose of this chapter.
3. Some relevant characteristics are only measured since 1995, which implies that the models in which these variables are included are restricted to the period 1995–2001. In the presented tables, these models are indicated by a ‘.
4. To study changes in social inequality, the variables have been interacted with an interval level cohort variable that ranges between -2 and 0.

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