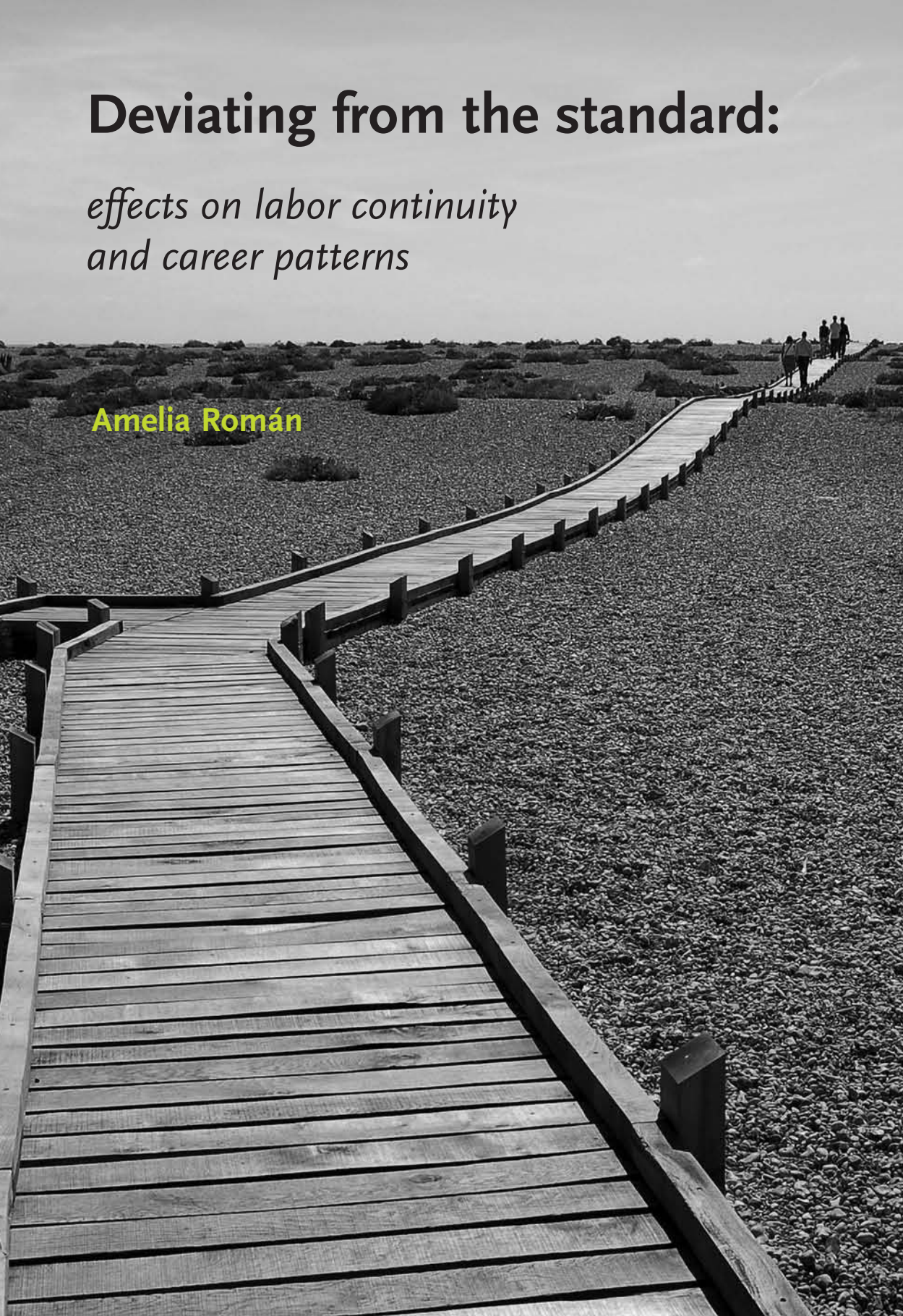
Deviating from the standard:

effects on labor continuity and career patterns



Amelia Román

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Amelia Ann Roman

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te Palo Alto, Verenigde Staten van Amerika

Promotor: Prof. dr. J.J. Schippers
Co-promotor: Dr. M.J.M. Kerkhofs

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- Ministerie van Sociale Zaken en Werkgelegenheid
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- Ministerie van Volksgezondheid, Welzijn en Sport
- Ministerie van Onderwijs, Cultuur en Wetenschap
- Ministerie van Binnenlandse Zaken en Koninkrijksrelaties

In loving memory of my sister Andrea – who chose another path.

There's an evenin' haze settlin' over town
Starlight by the edge of the creek
The buyin' power of the proletariat's gone down
Money's gettin' shallow and weak
Well, the place I love best is a sweet memory
It's a new path that we trod
They say low wages are a reality
If we want to compete abroad

Workingman's Blues #2 by Bob Dylan

Acknowledgements

My inspiration for a comprehensive study of the effects of detours on careers becomes more obvious if one looks at my background. A seemingly innocent international student exchange was soon followed by an international migration from California to the Netherlands (these deviations are not covered in this thesis) and this was the beginning of my own nonstandard career path. However, a true detour, if diligently pursued, will inevitably lead to one's respective destination, and the journey although not without its hurdles, has really been quite inspiring. To actually research and write about such processes seemed the only logical thing to do and acknowledged earlier advice given by teachers that if I were to begin upon such a task, to stick to what I know and find fascinating.

It is often said that the task of writing a thesis is rarely done without the help of others, and in my case there are many friends and colleagues that have been a great help for whom a word of thanks is now due. First, I would like to extend my gratitude to my supervisor, Joop Schippers who knew the value of allowing me autonomy while keeping vigilance over my progression. He was never critical without a good suggestion and maintained a positive outlook that always made me feel like I really could achieve this goal. Next, I would like to thank my colleagues at the OSA for their support and input throughout the entire endeavor. A very special thanks to Didier Fouarge for his vital contribution during our research for chapter 3 on part-time work, and for setting such an excellent example of tenacity while attaining his PhD. Also, my appreciation is due to Marcel Kerkhofs my co-promoter for his didactic talent in making the most obscure concepts brilliantly simple. My thanks to Marian de Voogd-Hamelink for opening impregnable data files and providing coaching in SAS.

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Turnhout/Tilburg, September 2006
Amelia Román

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1. *The context of career detours: societal trends and policy goals*

1.1 Introduction

In many European countries there is currently a public debate concerning the need for life course oriented labor market policies. The appeal for such labor market reform and the provision of new facilities is directly related to developments on both the supply and demand side of labor. From the perspective of the supply side of labor, life course oriented labor market policy is essential to better equip individuals throughout their working lives to combine work with other important life domains such as care, training, and leisure. The changes in the demand side of labor are manifested by employers that require flexible workers, who take responsibility for their own employability, and who are willing to invest in lifelong learning. A key role for policy is that of mediator between both sides. Policy furnishes the regulatory infrastructure, initiating life course based instruments and facilities. The Netherlands has taken a forerunner's position in designing life course labor policy to accommodate and facilitate its workforce in adjusting to its own diversified life course as well as meeting the requirements of current and future labor markets.

Observing the present debate on integrating life course policy into labor market policy in the Netherlands, two main issues come to attention. First, the focus of this debate is very much on the technical and administrative aspects of life course policy implementation and the bureaucratic problems that institutional facilities inherently incorporate. Second and more important is the striking absence of concern for the *longer-term* effects of such institutional arrangements for the individual employee's working career. We just do not know how the proposed life course instruments (e.g. parental leave, part-time work, time-outs) will affect the careers of individuals in the long run. And remarkably enough, this issue is not even on the agenda. We also do not know whether these effects will disproportionally affect specific groups. What we do know is that these types of labor career patterns are not new as such. Since their entrance onto the labor market, women have been the pioneers of intermittent careers and irregular career paths, a factor seen by many social scientists as contributing to earnings inequality (Light and Ureta, 1995; Mertens *et al.*, 1995; Mincer and Ofeck, 1982; Mincer and Polachek, 1974). The fact that this is not specified in the discussion around life course policy may be (at least partly) due to a lack of awareness, which is related to gaps in and availability of empirical research. It could be argued that im-

plementation of strategic policy bears in its very nature a measure of the unknown, since under normal circumstances strategic policy is extremely difficult to pre-evaluate. However, when combining life course and labor market policy for labor market participants to incorporate labor with other important life domains, the very focus should by definition be long-term, including what the (positive and negative) effects may be over the *entire* life course. Also, any micro effects, no matter how small, will be magnified on the macro level.

If life course policy measures are indeed intended to be available to all labor market participants, it simply needs empirically founded knowledge of possible micro effects that these life course instruments may have on individual working careers in terms of labor continuity and essential job-related variables such as wage, function level and socio-economic status. The information deficiency concerns any possible individual effects, intended and unintended, that these life course arrangements could have and whether the effects are noticeably distinct for different groups. The exploration and assessment of this crucial information deficit is the main purpose of this thesis.

In the following sections of this introduction the core arguments will be further amplified leading to a presentation of the main research question. First a description of the developments necessitating the call for life course policy will be formulated for the supply side of labor (1.2). Following this, the evolution of the demand side will be summarized (1.3). After both sides of the labor market have been sketched, a brief introduction to life course theory is presented which is followed by developments in Dutch life course policy (1.4). After the principal policy issues have been examined, the relation between women's labor market participation (as pioneers of career detours) and the new life course arrangement is put in perspective (1.5). This leads to the introduction of the central research question (1.6). Finally, the operational definitions and focus of this research are specified in section 1.7, and this introductory chapter is closed with an outline of the thesis (1.9).

1.2 Supply side developments

The need for a life course arrangement is first and foremost due to developments in emancipation and individualization (Bovenberg, 2003). The process of emancipation, initiated by the availability and growing acceptance of birth control enabled women for the first time in history, to assert a certain amount of control over their own fertility, which resulted in a reduction in the number of births. The process of individualization is one in which individuals increasingly opt for their own personal choice in lifestyle biography (Giddens, 1991). This process inherently brings with it an increase in diversity among life course patterns (du Bois-Reymond, 1998). As individuals become less restricted and choices increase, the need for institutional arrangements becomes more evident.[1] Individual life course patterns are adapting to these two processes of

emancipation and individualization and diversifying, as women turn away from the more traditional role of homemaker and enter European labor markets *en masse* (Bovenberg, 2003).

The increasing participation of women in labor creates new demands for labor market instruments for a more adequate incorporation of task combinations and an alleviation of the *time squeeze*, sometimes referred to as the *rush hour* of working life. During this period in the life course (approximately between the ages of 30 and 50) individuals are experiencing not only the pressures of investing in careers, but this is also the period in which women are giving birth, caring for young children, and often caring for the children's grandparents as well (Groot and Breedveld, 2004).

Responding to this time squeeze challenge, individuals are changing their labor patterns, diversifying and displaying an amazing capacity for flexible labor forms. Many of the alternative forms of labor proposed to better integrate life course processes appear to be little more than the very career path detours that women have been making for years. Women have, since their emancipation and (re)entry into the labor market, been using these various types of labor to enable participation throughout their careers while still allowing them to coordinate and attend to childcare and housework.[2] A majority of European women has adopted these styles of labor market participation in which multiple entrance and exits combined with periods of part-time work have made for highly varied career paths. This trend in women's labor market participation can be attributed to the fact that women, emancipated or not, still take on the lion's share of the household tasks and responsibility of caring for children (Becker and Moen, 1999; Rimmer and Rimmer, 1997). Whether this is a rationally planned division of labor through task differentiation (Becker, 1985) or simply a matter of preference (Hakim, 2002), however fascinating, is not the point here. What is crucial to this research is the fact that women have been adopting diverse styles of labor participation to enable the integration of work with other important life domains. Their past (and current) use of alternative labor patterns are invaluable sources for understanding longer-term effects of career deviations.

The advance of women's emancipation initiated a number of demographic processes. The availability and acceptance of contraceptive use resulted in (in some cases quite drastically) lowered birth rates throughout Europe. At the same time, increased economic growth and stability led to a generally higher standard of health and life expectancy. Europe is only beginning to experience the consequences of a low fertility rate, increased longevity, and an aging baby boom cohort. The large birth cohort of

1 SER (2001): 23.

2 In Britain this was made official with the abolition of the marriage bar in the 1940s, similar formal ruling took place in the Netherlands as late as the 1960s. For most western European countries, however, the marriage bar consisted of social and cultural norms dictating that wives should not engage in paid employment (Hakim, 1995).

the 1950s commonly referred to as the baby boom generation begins reaching retirement age in 2010 adding to an already unbalanced ratio of active to passive labor market participants.[3] One crucial result of this dramatic demographic change is that the European Union is faced with an aging workforce; a workforce that in its resilience is further exasperated by a tendency towards early retirement, a low female participation rate and a generally high level of unemployment.[4]

The fact that people are living longer and healthier lives stands in sharp contrast with the reality that they are spending so much less of it participating in the labor force.[5] This means that individuals will have to spend a longer period of their lives participating in paid labor, and reverse the current trend in early retirement. Across the EU, member states are raising the age at which social retirement benefits will become available.[6] Readjustments in age limits for pension benefits, although a step in the right direction, will be futile if the effects are not buffered and workers are not aided in their life course adjustments integrating longer working lives (Sap and Schippers, 2004). The need for longer working careers will require facilities for workers to take time-out for caring tasks, training, and leisure as well as being an effective instrument in burnout deterrence. Periods of part-time work or even part-time retirement are other options, allowing workers to slow the pace while still contributing to the workforce.

1.3 Demand side developments

As Europe moves ahead to compete in a global economy, it aims to create economic growth and social cohesion strong enough to carry it well into the second half of this century. A key factor to retaining economic stability and the realization of economic growth is seen by the European Commission in taking a lead role in the knowledge economy where current technological developments open diverse markets, enabling the creation of jobs with new chances for economic viability.[7] The EC considers this

3 The European Council set targets for employment population ratios (number of active labor market participants as a percentage of the total working age population) at the Lisbon top in 2000. The EU target for 2010 is 70 percent, or 7 out of 10 persons of working age (15-64) should indeed be actively participating in the labor market. The current EU average is 51 percent (OECD, 2003).

4 The European average unemployment rate in May 2004 (Eurostat Euro-Indicators news release 84/2004 – July 2004) was nine percent. Unemployment rates vary from country to country – ranging from 18.9% in Poland to 4.2% in Cyprus, Luxemburg, and Austria.

5 "The fact is that the demographic dependency ratio will rise from 49% in 2005 to 66% in 2030. We will have to not only reach but to exceed the objective in the Lisbon Strategy – an employment rate of 70% – to compensate for the expected drop in the working age population: employment participation will have to increase, and the retirement age will have to continue to rise. It will be important to assess and discuss how best to mitigate the most damaging effects of these trends." Brussels, 16.3. 2005 COM(2005) 94 final communication from the commission. Green Paper "Confronting demographic change: a new solidarity between the generations" (p. 4).

6 http://europa.eu.int/comm/represent/be/neder/eurinfo259/nl/nlinfo05.htm (170306).

7 http://www.europarl.eu.int/summits/lis1_en.htm. (060206).

an excellent strategic choice because of the relatively high requirements for skills and knowledge of workers, the greater productivity that can be achieved through application of this knowledge, and the virtually unlimited potential for market growth.

Inherent in the very nature of a knowledge economy is a certain amount of flexibility. Effectively participating in the knowledge economy, one of the fastest growing sectors of the global economy, requires workers that are innovative and multi-faceted, capable of lifelong learning, possessing highly attuned problem solving skills, as well as softer, more social skills, making them adept at teamwork.[8] Lifelong learning is not simply a slogan. The knowledge economy is characterized by rapidly developing new technologies and their seemingly infinite applications (Castells, 1998). Initial education coupled with on-the-job training is no longer sufficient to carry workers throughout their careers. These individuals, upon entering the labor market will, need to take responsibility for their own employability, keeping abreast of developments and updating their skills and knowledge.

This requires a new kind of worker with new kinds of competences, including skills in personal life course planning. For younger generations still to enter the labor market, it will require changes in educational facilities, especially the middle and higher vocational schools, emphasizing teamwork, problem solving, and more independent and less classical styles of training. For those already participating in the labor market, training will have to take place during as well as outside of working hours, an investment that will need to be made continually throughout one's working career. At the same time, employers are more aware that they too will need to facilitate workers in acquiring training (Bekker *et al.*, 2003).

The resurgence of life course theory can at least partially be attributed to the work of Schmid (1998), who introduced his model for transitional labor markets as a new European employment strategy. According to Schmid, a transitional labor market is a fluid model that allows for supple transitions between different life realms: caring tasks, leisure time, labor participation, and study or career training. One of the key features in a transitional labor market is the strategy of combining working time reduction with lifelong learning.[9] Within this strategy lie traces of the normative concept of 'full employment' as a greater good that would economically emancipate individuals.

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8 The European Council has requested EU members to "give higher priority to lifelong learning as a basic component of the European social model, by encouraging agreements between the social partners on innovation and lifelong learning; by exploiting the complementarity between lifelong learning and adaptability through flexible management of working time" (EC, 2000).

9 Working time reduction was an instrument used during the 1980s during the economic recession to create more jobs. France affected a 35-hour workweek nationwide. There is currently a break with this trend, Siemens, one of Germany's largest employers renegotiated in the summer of 2004, with labor unions to return to a 40-hour workweek.

Economic emancipation is currently a less critical issue on the European agenda than the more pressing issue of activating its citizens as labor market participants to ensure the affordability and maintenance of the social welfare system. The message is quite simple: more people will have to participate in the labor market, for extended working careers while at the same time increasing their level of productivity. Facilitating lifelong learning to keep workers abreast of technological innovations is crucial to developing and sustaining a knowledge economy. A transitional labor market could further provide the kind of flexibility capable of serving as a buffer, expanding in times of economic growth and contracting during periods of economic recession. This kind of labor market model creates new challenges as well as opportunities for combining work and family life.

To meet the goals of the Lisbon treaty, training will need to be accessible for all workers, regardless of gender, contract type or age.[10] Within this European labor market framework, the Dutch labor market is being redesigned to accommodate the requirements of global economies and new technologies. These ambitious goals have stimulated life course based employment policies that encourage flexible forms of labor, which facilitate an increase in labor participation and longer working careers, allowing for combinations of work with other significant life domains.

1.4 The life course perspective in theory and in Dutch labor market policy

There is a certain sense of urgency with which life course issues are now being revived and used as blueprints for policies integrating working life with the domains of care, training, and leisure. The life course is a social phenomenon. It reflects the intersection of social and historical factors with personal biography (Elder, 1985). Within a life course framework, events within one's life occur following a certain structure based on three time dimensions: *biographical time* or the chronological order of personal events, *historical time* or how historical events, opportunities and impediments affect one's chances and *social time* or how society places the individual according to the age group in which he or she belongs (Elder and Rockwell, 1979). There are unlimited possibilities for variation, thus life course patterns are expected to vary across time, space, and populations (George, 1993).

10 The Lisbon Council of Ministers and the Commission asked Member States to meet a number of targets, including: a substantial annual increase in human resources investment; the number of 18- to 24-year-olds with lower-secondary level education only halved by 2010; development schools into multi-purpose local learning centres; defining basic new skills to be acquired through lifelong learning, including information technology skills, foreign languages, entrepreneurship and social skills; improvements mobility of students, teachers and research staff; and the development of common European format for curricula vitae to aid mobility within the EU http://www.eiro.eurofound.ie/2000/04/feature/eu0004241f.html (160206).

The classic life course biography of initial education, employment, marriage, child-rearing, and retirement is no longer standardized. People are making individual choices in both *what* is desirable and in *when* this is the most convenient, the so-called de-standardized biography (Vinken *et al.*, 2002). The multitude of choice and the importance of timing interact to make career choices ever more complicated. This requires individuals to take responsibility for decisions made increasingly earlier in their lives that will have extensive consequences for their well being far into their futures.

Mayer (2004: 182) stresses the importance of acknowledging the 'force and variety of constraining and enabling social and historical contexts.' By doing this, he essentially takes a step back from the current evolution in life course theory where individual aspects are viewed as having a more profound effect on life course outcomes. In this manner, it is not only the historical context surrounding the individual and shaping his or her possibilities (or lack thereof) but also the institutions in a society that steer individuals onto or away from a particular path. In respect to this research, we are brought to the institutional arrangements allowing (even stimulating) or deterring deviations on standard career trajectories. The role of institutional arrangements is essential in mitigating possible negative effects for individual careers arising from flexible labor forms.

During the early stages of the life course debate the Netherlands was already accruing an extensive regulatory system for leave taking arrangements and working hour reductions. The Finlo Act of 1998 afforded the possibility of a financial compensation when employees took leave for caring tasks or educational training. The Finlo Act was not a statutory right, but a policy instrument to be agreed upon between employees and their employers. Actual use of the ruling fell short of projections. An evaluation of the Act showed a lack of information by employees, administrative complexities, and financial consequences were major impediments to use (Van der Aa *et al.*, 2001). In 2001 the Work and Care Act was established covering a vast range of leave taking facilities. It was especially due to its numerous rulings that a complete refurbishing and simplification became necessary. In the Long Term Policy Plan for Emancipation 2001-2010, the Dutch cabinet announced preparations for an investigation into the life course: its changing patterns and requirements, the barriers, and the facilities, which after a motion from parliament to broaden the study, covered the areas of education, the social system and labor, urban development, and healthcare. A multi-faceted team of external experts worked together with the government on an integral analysis. The results of this study, presented in the report Life Course Enquiry, have become the foundation of the new life course arrangement.[11]

11 Verkenning levensloop (2002), Den Haag: Ministerie van Sociale Zaken en Werkgelegenheid (SZW).

This new life course arrangement, developed by the Dutch government and implemented in 2006, provides employees with a fiscally attractive option to save for unpaid leave in the future with the goal that more persons will be capable of a better combination of paid labor with other life domains. Employees may save up to 12 percent of the gross wage earned per year to help finance unpaid leave; time that can be used in the form of a time-out from paid labor. A maximum of 210 percent of the gross yearly salary can be saved at any one time. This amount can then be used to finance unpaid leave. Once the balance has been used, an employee can begin to save again to the maximum amount.[12] The system applies to the individual employee, with no restrictions beyond having a labor contract. It creates individual freedom while at the same time placing responsibility for the financial affordability with the employee who must make all necessary arrangements with the employer concerning any insurance arrangements or even pension continuity. The employee has no statutory right to take a career break, but the legal right to take part in the life course arrangement (and save for unpaid leave) is included in the Work and Care Act. In this manner it is a system that relies on good communication between employee and employer.

These types of work and care arrangements are especially designed to facilitate employees throughout the rush hour of working life. These instruments have in essence answered demands from individuals for more choice in filling in their individual biographies. At the same time, life course policy in the Netherlands has transferred a significant part of social risk management from the state to the individual (Groot and Breedveld, 2004).

1.5 Women as pioneers of alternative career paths

The careers of women have traditionally been more affected by demographic events than the careers of men (Mincer and Polachek, 1974; Gronau, 1988). This fact is in itself not surprising but how these demographic influences affect women's careers is not always so evident. Women's career mobility is found to be most influenced simply by union formation (Bernasco *et al.*, 1998; Drobnic *et al.*, 1999). Engagement, cohabitation and marriage all have strong effects on women's career decisions, decisions that have major consequences for a woman's continuing participation and upward career mobility. Some researchers argue (Corcoran *et al.*, 1983; Mincer and Polachek, 1974) that this is because most women assume, whether this actually ever occurs or not, that they will at some point leave the labor market to bear and raise children. The presence of young children is found to be the strongest factor in-

12 The life course arrangement savings may also be used to finance early retirement. Using the maximum balance and depending upon the accrued life course rate of reduction, individuals may, prior to retirement, finance three to four years of early retirement of up to 70 percent of the last earned wages.

fluencing the decision to work part-time although this decision is often made with some delay (McRae, 2003).

One of the greatest problems is that women are still not effectively creating their own economic independence and it may have strong repercussions in the future. Many of these life course oriented labor market instruments lay the brunt of the responsibility (and costs) on the individual. Many women do not seem to be aware of the great financial risks they take when opting for periods of nonparticipation or cutting back their working hours. Warren (2004:112) refers to it as the "gaping hole in women's individual pension positions, unlikely to be plugged adequately by the state." With the help of a partner's income, work interruptions or part-time work can sometimes create the additional time needed to coordinate other life domains. As a unit, the household in this way fulfills the same kind of task differentiation as described by Becker (1985).

Couple's strategies for combining care and paid labor have attracted much interest. Becker and Moen (1999) describe a common tactic they find among couple's work-family strategies that they refer to as 'scaling back'. Most often it is the woman that puts less emphasis on career in order to coordinate work and care. As long as the couple remains together, these kinds of work-life decisions are usually very much in balance. Playing the odds of staying together as a couple however, is somewhat risky when relying on one's long-term financial security.[13]

Warren (2004) observes that there are still a substantial number of women working part-time that remain excluded from British pension schemes. In the Netherlands, part-timers are no longer excluded from collective pension systems. However, there is a substantial number of part-time jobs found in the commercial sector, where no (more affordable) collective pensions exist. At best, a woman working part-time is only capable of building a very modest pension. This problem is complex because in addition to a reduction of working hours, the majority of women also shorten their working careers (and pension building time). Some evidence suggests that women seem to be more likely to abide by retirement age norms despite their varied career experiences. This may be because they simply cannot afford to take early retirement (Han and Moen, 1999). Women have, on average more career interruptions and more periods of part-time work when participating than men. Mertens *et al.* (1995) point out the macro-level implications of individual decisions regarding labor market continuity, linking career interruptions in terms of life-time earnings to affordability of social pensions and even gross national product.

Human capital theory remains of particular importance in explaining inequalities in

13 In 2003, the proportion of divorces is estimated at 15% for marriages in 1960, and at approximately 30% for those dating from 1985 (Eurostat, 2005: 67).

labor market earnings. Other theoretical frameworks developed to explain wage differentials using theories like the discrimination theory (Oaxaca, 1973; Schippers, 1987) or the segmentation theory (Kalleberg and Sørensen, 1979) based on structural barriers in the labor market, have not been able to explain the persisting gap between men's and women's earnings. These theorists feel that structural barriers and a general lack of options force individuals to make career concessions in order to co-ordinate work and family life. These barriers lead to a reduction in women's work commitment when they start families (Becker and Moen, 1999). Hakim (1995) does not accept these kinds of structural constraints. She argues that it is all a matter of preference and that women are simply heterogeneous as such. Their preferences are decisive for the kind of career upon which they embark. This has lead to an ongoing debate in sociological circles in which Hakim's critics argue that discrimination and structural barriers do not truly allow women any options.[14]

Whatever the reason for women's more diverse career patterns, the fact remains, that women have been using the very labor market instruments that policymakers now want to promote as facilitators for an increased participation (more women working more hours) and longer working careers (for all).

1.6 Introduction to the main research question

According to many social scientists, a greater flexibility of labor careers has as a possible consequence that alternative career paths will not only increase in number but also in variety. This greater flexibility is in turn, often linked to the process of globalization (Ester *et al.*, 2001; Geelhoed, 1997). Thus the two sides of the labor market, driven by seemingly separate processes; supply – by emancipation and individualization creating individual requirements driven by individual needs, and demand – by globalization and new technologies creating new labor market priorities, stressing more flexibility, interact. Institutional arrangements are designed to facilitate a greater diversification in career paths. These alternative forms of labor are however not all that new and have in fact been utilized for the most part by women to combine work and home life with varying levels of success. Deviations in and from standard career paths are observable and are receiving an increasing amount of attention from policymakers and academic circles (Schmid, 1998; Spivey, 2005; Tilly, 1996; Visser, 2002; Warren, 2004).

There is a substantial amount of empirical research on some of these flexible labor forms, at least regarding their short-term effects. Much of this research has been concerned with explaining the wage gap between men and women (Corcoran *et al.*, 1983; Light and Ureta, 1995; Mincer and Ofek, 1982; Mincer and Polachek, 1974).

14 See Warren (2004) for a good overview of this debate.

Seemingly unaware of these academic discussions, policymakers have started up new rounds of policy initiatives that promote these 'new' forms of labor as the means to greater labor force participation without first having asked what their effects will be *in the long run*. Individual effects, no matter how small, can be of great magnitude on the macro economic level.

In researching these effects, a primary focus will be on women's labor careers since women have been the pioneers of the *career path detour*. Women have over approximately the last fifty years, appropriated several alternative forms of labor participation and for this reason, they will be a major but not exclusive part of this study. The patchy labor histories of women allow for unique insight into what may lie ahead. This thesis examines nonstandard career paths and their effect on labor continuity with the aim of understanding how this further affects individual careers.

The process of individualization has in this sense put more responsibility in the hands of individuals for their own unique choices. However this kind of freedom can prove too awesome if individuals are not equipped with the kind of information necessary to guide them in these choices (Ester *et al.*, 2003). A good deal of the information individuals need to make these kinds of choices is still lacking or limited in its accessibility. The new life course policies encourage the implementation of such labor market instruments as part-time work, institutionalized career breaks for periods of parental leave, and sabbatical leaves to better integrate paid work with other life course domains. There is very little known about how these detours on career paths will affect the further development of careers.

Dutch life course policy is designed and implemented without really knowing its effects, either short-term or longer-term, micro or macro.[15] Life course policy requires individuals to make decision around work and family life at very early stages in the individual career. These choices will have consequences, some which could continue to be felt throughout the career. The institutional career trajectories set out by policymakers now will have profound effects on the careers of the future. To mitigate any unintended or negative effects for individuals, a better understanding of these effects is essential. This brings us to the main research question of this thesis:

How do deviations from a standard career path affect individual careers?

Are these deviations pitfalls to be avoided, or are they alternative forms of participation providing exactly the types of life course labor market instruments needed to facilitate

15 One exception is the Emancipation Effect Report which predicts that the new life course policy will have no effect on the economic emancipation of women, little effect on the more equal distribution of household tasks, and generally little or no effect on the emancipation of women (SCP, 2004).

individuals in combining work with other important life domains and allowing more individuals to actively participate longer? Are there indications that this will effectively boost participation, particularly by those groups currently exhibiting low levels of participation? Or are these alternative forms of labor actually narrow paths that reduce the individual's chances, options and choices further on down the road? How will the individuals using these alternative types of labor participation fare in the long run? The rise in labor participation, however necessary must not be sought after at all costs. What are the risks to the individuals making use of these career detours in terms of career continuity and career development? Will the life course arrangements help employees retain their individual employability while trying to balance work and other life domains? Will the first impression of an individualized labor market where individual choice prevails lead to dead end streets for those who, either through a lack of information or a lack of understanding, make the 'wrong' choices? This leads to the next step which is to define the classic or standard career path and its transgressions, both those expected to increase because of these developments and those most likely to diminish, forming the basis of this research.

1.7 Operational definitions and focus of the research

To establish just what is meant by standard career deviations and detours, a definition of a classic or standard career path must first be made. A standard career path can be seen as a continuum starting after a period of initial schooling, entering the labor market in a full-time job and exiting some 40 years later with pension. Mobility during such a standard career path is limited to intra or inter-organization (job-job mobility). "Although the concept of a 'career' includes the connotation of an upward movement and although probably most individuals who change jobs do so in the expectation that it entails an improvement, job mobility does not necessarily imply that individuals experience upward mobility in any objective sense," (Bernasco *et al.*, 1998: 26). A standard career can thus be defined as continual full-time employment in which transitions are from job to job for a period of approximately forty years to be concluded by exiting the labor market into retirement. The word 'detour' literally means a divergence from a direct or intended route.[16] Detours can then be understood as any *modification* of the standard career path. Another important stipulation here is that a detour is not always chosen. Sometimes a detour is imposed and thus not a chosen path. Detours will also be referred to as deviations, transgressions, and alternative career paths. Some of these terms have negative connotations. Certainly the deviation in a career should not be mistaken for the sociological term of deviance. A better comparison is the use of deviation as a mathematical term, as in standard deviations where no (moral) value judgment is being made. By taking a detour in a career path, one essentially veers off from the main thoroughfare, while

16 Oxford English Dictionary, ninth edition, Oxford University Press: 1998.

maintaining the objective of arriving at the ultimate destination. The career path detours relevant for this research are those that we can assume will increase due to life course policies as stipulated in the previous section – part-time work and institutionalized career breaks as well as those expected to continuously fluctuate – periods of unemployment and those expected to diminish – voluntary nonparticipation due to increased need for individuals to participate and new life course policy facilitating institutionalized time-outs in favor of labor market exits. The following summary is a presentation of the deviations under scrutiny, the terms used, and how they relate both to theoretical models as well as current labor market developments.

Part-time work

Part-time work is structurally working fewer weekly hours than what is constituted as normal full-time hours. Definitions of part-time work are precarious for researchers who must take into consideration the many alternatives for full-time norms, labor reduction times, collective agreements, and organizational preferences (Dale and Glover, 1989). Another problem with comparing research results is the fact that there are so many variations for categories of part-time work (with excellent arguments for using each and every one). These differences are on national levels, per sector of industry, per organization and even per business unit.

Part-time work has long been considered an excellent means of retaining contact with the labor market (Mertens *et al.*, 1995: 477), reducing the effects of skills atrophy and human capital depreciation. It has also attracted a lot of attention from segmentation theorists because many part-time jobs are considered to belong to the secondary segment of the labor market where jobs are generally lower paid with poorer working conditions (Fagan and Rubery, 1996; Tilly, 1996). The real attraction of part-time work for social science researchers may be its singular resilience. Part-time work has increased not only in popularity, accounting for a major percentage of additional female labor participation, but also in prestige, earning legislative rights and recognition. Part-time work is praised as a facilitator for combining paid labor with other life domains (McRae, 2003). This may however, be one of the most difficult to eradicate fallacies, if not simply an overstatement at least in the case of working mothers. Current research shows that part-time work is beneficial in facilitating the combination of work and caring tasks but that leisure is not 'part of the bargain' (Warren, 2004: 109). Likewise, part-time workers receive less training than their full-time colleagues (Bassanini, 2003), which undermines the argument for part-time work's facilitating that particular combination of work with other important life domains.

Nonparticipation

Nonparticipation is a specific period of not actively engaging in paid labor. It does not imply that the individual is not taking part in another important activity in another life domain. Nonparticipation can be further divided into categories of voluntary and involuntary nonparticipation (unemployment).

Voluntary nonparticipation is essentially stating that one is not available to participate in paid labor while still being of working age. Women have been more inclined to have voluntary career interruptions due to household tasks and childrearing. These voluntary career interruptions, sometimes referred to as 'planned', are detrimental for their wage level not only because of the loss of experience during the period of time-out, but also because they are less likely to invest in training during the period before their labor market exit. Periods of full-time childcare and/or homemaking have until now mostly been reserved for women.

Periods of paid and unpaid leave for both men and women are priorities to ensure a good balance in work and family life. The possibility of taking leave to care for other family members or close relations is something only recently gaining ground on the policy agenda. Its increase in priority can be explained by the aging society, making this type of familial care increasingly important. Lastly, extended periods of travel or leisure are another relevant domain allowing labor market exits that replenish energy and reduce chances of premature permanent exits. The assumption is that nonparticipation in its current form (labor market exit) will increasingly make way for institutionalized forms of leave which will facilitate these types of break from active labor to better combine other important life domains.

The characterization of involuntary nonparticipation (unemployment) implies that the state of nonparticipation is beyond one's control. This is an example of a deviation that is imposed on individuals. In this realm one should think of any forced labor market exit with which a worker is confronted: lay-offs due to reorganization, being fired, etc. These deviations are related to what Schmid refers to as 'external risks' (Schmid, 2006). Disability is a type of external risk which can lead to involuntary nonparticipation. For the sake of clarity, the periods of involuntary nonparticipation under scrutiny in this study will be referred to as unemployment. Some researchers support the idea that individuals retain a stronger bond with the labor market during a period of involuntary nonparticipation because they seek reemployment (Groot *et al.*, 1990: 260). Others (McCall, 1997) look specifically at unemployment duration as influenced by the availability of unemployment benefits.

Unemployment throughout western industrialized nations has a battery of possible insurances and facilities behind it. These institutionalized social safety nets are too numerous to discuss at any length here. It is however very important to take into consideration these kinds of facilities when explaining longer-term effects on careers. It is one of the important strategic targets to be modernized and streamlined among the European member states in order to enable and enhance an increase in interstate mobility.

Unemployment is also one of the greatest threats to the European economy. "The importance of involuntary job separations for both men and women must be under-

lined for European countries, where more mobile employment histories might appear to be chiefly caused by rising labor market flexibility. Given that redundancies – and, in general, all involuntary job separations – create long-term effects on subsequent workers' labor market experience and their earnings' profiles" (Malo and Muñoz-Bullón, 2003: 120). This type of career path detour is not gender specific, although women's unemployment is higher than men's.[17] It is not sector specific, although certain sectors are more sensitive to economic fluctuations, resulting in greater risks for non-continuous employment. It is not age specific, although certain age groups are more at risk for unemployment.[18] Unemployment also carries with it a stigma that of itself can affect long-term career mobility (Albrecht *et al*, 1999).

Institutionalized career breaks

Specific types of time-outs from active labor participation are of interest for this research because they are facilitated by life course policies. Institutionalized time-outs provide employees a temporary period away from the workplace to attend to other important life domains. One of the most common types of career break is maternity leave. Parental leave is also on the rise in many of the European member states (Bruning and Plantenga, 1999; Deven and Moss, 2005). A rather new form of institutionalized time-out can be found in Belgium, allowing employees to use this type of leave for a complete break (total working hours) or as a reduction of working hours.

The Belgian career break system is an integrated labor market instrument allowing employees to combine work with other important life domains such as care, training and leisure. The Belgian career break provides institutionalized forms of temporary labor market exits or reductions in working hours, and does in this manner, have many similarities to both nonparticipation and part-time work. However, quite different from nonparticipation, during an institutionalized career break from the Belgian system the contractual labor agreement remains intact; the employee thus remains a participant in the labor market even though he or she is not necessarily active on the job. Also, contrary to part-time work, a reduction of working hours in the career break system is for a specified duration of time and thus temporary. The main differences here are the temporary nature of the institutionalized career break and the binding labor contract. Although the labor contract between employer and employee is temporarily interrupted and does not continue as such, there is a guarantee for the employee to return to his or her work, with continued pension rights, and protection against dismissal.[19] Up to now, human capital theory has not

17 Eurostat reports a 10.0% female unemployment rate in May, 2004 compared to 8.0% for males (Euro-Indicators News Release 84/2004).

18 The unemployment rate for persons under 25 years of age was 18.2% in May, 2004 (Eurostat Euro-Indicators News Release 84/2004).

19 In the Belgian career break system employees are protected from dismissal during both the full-time career break and the reduction of working hours. This protection begins on the day the career break contract is signed and continues three months after termination of the career break.

been (widely) used to build hypotheses regarding institutionalized career breaks. Even the more recent work modeling Mincerian wage equations (Kunze, 2002; Spivey, 2005) does not cover institutionalized forms of career interruptions.

Duration

A particular detour can also differ in terms of duration. When examining the effects of career detours, specific attention will be paid to the length or duration of the detour. A three-month period of unemployment will surely be less detrimental for careers than a two-year period of unemployment. It is thus quite possible that some career detours are better taken for shorter periods of time, whereas some may not show differing effects for duration. Part-time work, although an excellent solution for task combinations, may prove to cause financial problems for pension building if used for extended periods of time (Warren, 2004). The duration of the career detour has rarely been taken into account in previous research. It is most commonly seen as a total amount of nonparticipation and subtracted from work experience (Mincer and Ofek, 1982; Mincer and Polachek, 1974) or from potential work experience (Groot, *et al.*, 1990). This does not allow insight into how the actual duration can have different effects on further career mobility. Wherever possible, duration will for this reason be closely examined, both in the theoretical review as well as being discussed in the empirical analyses of chapters 3, 4 and 5.

Life course and career stage

Another element to take into consideration is the timing of the detour in regard to the stage in the life course and career. The different types of detours will have different effects depending on when they occur during the life course. The period most predominant in career literature is sometimes referred to as the rush hour of (working) life (SCP, 2001), the phase when career investments are highest, while at the same time most couples are bearing the responsibilities for young families. A period of voluntary nonparticipation at the beginning of the career to 'travel the world' may be seen as positive, and be to one's advantage when applying for jobs upon return. The same act may not be so beneficial if occurring during a phase more crucial to the upward mobility of careers. A time-out during this phase of the career may result in missing a major career promotion.

The element of timing is becoming increasingly important in women's career decisions. According to Eurostat, the mean age at which European women are giving birth is 29.4 years and the trend over the past two decades has been an increase in mean age (Eurostat, 2005). This late start in the creation of young families is partly due to the higher investment women are making in their education before entering the labor market. It is also caused by the fact that women are investing in their professional careers before starting families. When calculating lifetime earnings of women, Mertens *et al.* (1995) suggest that women are better off delaying childbearing years until their careers are further developed. It is with this background that

it is essential to capture the different effects career detours may have throughout the life course.

Sequences
It is not uncommon for sequences of detours to take place during the career. Some women will, for instance exit the labor market during the first year after having a baby, to return to work in a part-time position. A period of unemployment may be followed by a temporary period of part-time work when other options are not available. Part-time work is also a good re-entry option for persons who have had to withdraw entirely from the labor market for health reasons. With these alternative forms of labor being encouraged as facilitators of longer working careers, we can expect more working careers to have one if not several career path detours, creating a sequence.

There is no information on how sequences affect careers in the long run. In some research, the total number of years of work experience and/or the total number of years of nonparticipation are used (quite often as gross estimations) in the model as explanatory variables, but this reveals nothing of the effect of timing of the detour in the career, nor does it allow for insight into how sequences relate to future career mobility. This research area is a complete blank when sequences are very likely to occur if individuals choose these life course instruments to facilitate longer working careers. In analyzing effects of career detours it is important to look at all of these aspects when creating a framework. The type (and number) of detour(s), and also the length, the possible sequences and the timing of detours within the career and the life course framework are essential when addressing their longer-term effects.

1.8 Research questions

Now that the main research question has been presented and a summary of the types of deviations has been given, an overview of the operational research questions from the three studies is now relevant. A detailed analysis of the longer-term effects of part-time work is covered in the first empirical study addressing the following research questions:

- *How does part-time work affect careers?*
- *How does past part-time work affect careers?*
- *How does part-time work affect participation?*
- *Are the effects lasting?*

The second empirical study scrutinizes the effects of nonparticipation, both (voluntary) nonparticipation and unemployment on careers and addresses the following specific questions:

- *How does past nonparticipation affect careers?*
- *How does the nature of the interruption affect careers?*
- *How does the duration of the interruption affect careers?*
- *Are the effects lasting?*

In the third empirical study, the Belgian system of institutionalized career breaks is explored and the following research questions are answered:

- *How does an institutionalized career break affect careers?*
- *How does the duration of the institutionalized career break affect careers?*
- *How does the timing of the institutionalized career break affect careers?*
- *How does the type of the institutionalized career break affect careers?*

In total this brings us to four types of career detours that are researched in three studies. To establish the (longer-term) effects of career detours on individual careers, a diverse range of indicators is used. The first indicator is participation – both the chance of returning to work and the chance of remaining active in the labor market. The second indicator is socio-economic status and the change in socio-economic status over time.[20] The third indicator is the function level of the employee as derived from the occupational coding in the data. The fourth and last indicator is wage and wage growth.

Assessing the period of time for establishing effects (short-term, intermediate or longer-term, and long-term) depends first and foremost of course on the available data. The ideal situation is to follow workers over their entire career. However, this is not an option with most of the available data sets. Considering the fact that the length of a standard career is somewhere between 35 and 40 years, short-term is normally considered 0-5 years, intermediate-term is 5-10 years and long-term is 10 or more years. However, when considering the intermittent careers of women consisting of multiple exits and entrances, it is certainly true that the majority does not fulfill such a career path in terms of duration. All things considered, the intermediate or longer term of 5-10 years *is* long-term when regarding women's career paths. In addition, it is particularly difficult to isolate effects over extended periods of time, certainly in terms of causality. The main time frame for isolating the effects of career deviations in this study will be on the intermediate or longer term.

1.9 Outline and organization of this thesis

This thesis is structured as follows. In this chapter the broader societal and policy background of changing career patterns and emerging career path detours have

20 Socio-economic status is measured using the internationally standardized socio-economic index (SEI) scale developed by Ganzeboom and Treiman (1996).

been sketched. In chapter 2 the theoretical framework is laid out introducing key concepts to explain the (longer-term) effects of career detours. This theoretical chapter uses human capital theory as a foundation for hypotheses and, although this theoretical model is extremely useful, makes apparent the shortcomings of using a purely economic theoretical base for explaining the effects of career detours on individual careers.

To better capture the social and institutional aspects of career deviations, additional use is made of statistical discrimination theory and tournament models. Statistical discrimination theory states that as far as career opportunities are concerned, employers decide who gets to climb career ladders and who does not. Where this theory also leaves aspects of career detours on the wayside, a unique approach to tournament models is utilized for building hypotheses. Where the first two theories place the worker's productivity central, tournament models stress the competition between employees. With the addition of this third theoretical venue, it is possible to capture career detours in all their complexity: economical, institutional, and social.

Following this, a summarized selection of the available empirical research is presented that either focuses on career detours or uses them to explain earnings inequality. A critical review of the existing line of research will expose a number of major shortcomings such as a limited and very restricted use of theory whereby human capital theory is the most prominent. It also discloses a lack of longitudinal design, non-representative research populations, non-recent data, and limited indicators used in measuring the effects of career deviations (almost exclusively wage). As will be argued, the major aim of this study is to overcome these shortcomings by analyzing longitudinal (panel), representative, and recent data. This is done using a broader spectrum of indicators for career detours as well as looking beyond the effects on earnings to include other crucial variables such as participation and career continuity, socio-economic status, and function level.

The major contribution of this study is to provide an integral picture of the longer-term effects for four major career detours: part-time work, nonparticipation (voluntary and unemployment), and institutional career breaks. In chapter 3 the longer-term effects of part-time work are examined, whereby the focus is on the Netherlands, using European rates of part-time work as a reference. Chapter 4 investigates forms of nonparticipation, and their longer-term effects for labor continuity and individual careers. Here too the Netherlands is examined where the more traditional female labor market exit is making way for increased women's labor participation. Chapter 5 crosses the border over to Belgium for an exploration of the longer-term effects of the institutional arrangement of career breaks, a unique labor market instrument designed to promote participation and facilitate combinations of paid labor with other important life domains. Finally, chapter 6 summarizes the main findings, puts them into perspective, and points out the implications for both the policy and research agenda on life course arrangements.

2. *Theoretical framework and review of previous research*

2.1 Introduction

In this chapter the theoretical framework for building hypotheses to explain the effect of career deviations is constructed. The foundation for this framework, laid out in section 2.2, is based on human capital theory, an economic theory expounded among others by Mincer (1958, 1962, 1974), Schultz (1961), Becker (1962, 1964, 1985), and Ben-Porath (1967). Mincer's use of human capital theory has been invaluable due to its usefulness in explaining wage differentials. Mincer also made important additions to allow for a better modeling of women's careers with the ability to capture periods of nonparticipation. Still, one of the problems in using this basic model for career deviations is that the human capital model does not incorporate any measure of risk, or the wavering conditions of individuals (and household members) during their decision-making process. The model assumes that individuals are risk neutral and *know* which career path they will follow from the start. It would however, be an injustice to the complexity of career deviations to approach the problem using one economic model. The very concept of the career deviation is a social (and institutional) phenomenon requiring additional meso-level theory.

Another problematic assumption of the human capital model is that employees that are equally qualified and experienced can be substituted for one another and that their human capital is standardized. However, in a more transitional labor market, where transitions are not restricted to intra-organizational moves, there is in the case of a transition, a definite loss of job or organization-specific capital as described by Mincer (1964). In human capital theory, human behavior is based on individuals maximizing their goals while operating within unrestrained competing markets. Other behavioral forms are either excluded or considered to be distortions to the model. Block (1990) suggests that the dominant position of maximizing behavior in much economic analysis is itself a consequence of social arrangements. To better capture the complexitiy of career deviations it becomes essential to add theories from the organizational level into the model. Building on these social arrangements, or the possible failures of their workings, use is made of discrimination theory, and then more specifically statistical discrimination theory (2.3) as postulated by Arrow (1973) which introduces the position of the employer as 'gatekeeper' of career opportunities, to aid in arriving at hypotheses regarding effects of deviations on in-

dividual careers that human capital theory cannot. Following this, in section 2.4, tournament models (Rosenbaum, 1976) are used as additions to develop hypotheses to explain how competition between workers is influenced by detours on the career path. In section 2.5 a number of core empirical studies relevant to this research are examined and conclusions follow in section 2.6.

2.2 Human capital theory

Human capital theory argues that the earning potential of a worker is dependent on the sum of knowledge and skills which the worker has acquired during his or her life course so far (Becker, 1964). Knowledge and competences are mostly accrued during the initial educational period. Additional human capital can be gained during the career through experience and training. In the meantime, there is also a constant erosion of human capital. Just as the physical individual ages, the obtained human capital also ages. During periods of participation this aging – and usually until late in the career – is compensated through additional experience in the form of tenure as well as job specific capital. Tenure is capital acquired through duration of term. For example, a welder acquires more experience and becomes a better welder. Job specific is the cad/cam operator who masters a particular computer program designed specifically for the organization in which he works. If the welder leaves for another organization, he is an experienced welder wherever he goes. If the cad/cam operator leaves for another organization, they may use a completely different software program and he will first have to be (re)trained.

Another important form of human capital growth is through training. On-the-job training can have a positive impact on careers. During periods of nonparticipation there is no such compensation by work experience while the aging of human capital simply continues. According to human capital theory, during a period of nonparticipation there also occurs a reduction of earning power as a result of disuse of skills, sometimes referred to as *atrophy* (Mincer & Polachek, 1978). Through disuse in combination with a lack of maintenance of skills, the erosion annex aging process virtually increases in tempo.

Part-time work is an interesting phenomenon in human capital terms. Even though the intensity of use of available human capital is less during a period of part-time work than by a full-time job, the atrophy of human capital is avoided. However, there is less accumulation of actual work experience, so the interesting empirical question (in terms of occupation, function or sector of employment) is whether this is *proportionally* less. Regarding knowledge of products, technique and procedures it appears that it is especially the employee's initiation with such matters, and less an aspect of the frequency of the association. Against this background, is argued among other by Joshi *et al.* (1996) and Vlasblom and Schippers (2005), that women who wish to

combine paid labor and caring tasks, do not pursue full-time jobs, but do choose when possible to retain their ties to the labor market (by working part-time). This prevents atrophy and reduces the negative effect of lost work experience.

An important focal point of human capital theory is whether, during the period of nonparticipation, any form of human capital increase occurs which would be the case if an individual were to take part in training or a course. This way, the foregone experience and atrophy can be partially compensated by an update of skills (Groot *et al.*, 1990). The importance of this skills investment during periods of nonparticipation is greatly increased when considering that through advancements in information and communication technologies, skills redundancies occur at an increasingly faster rate. Human capital theory assumes that persons who do not actively participate in paid labor, are less likely to invest in training during their period outside of the labor market. Also, if the exit from the labor market is predetermined (as it often is in the case of women's departures to care for children at home), the individual is less likely to partake in training prior to (her) departure. This makes women even more vulnerable for training deficiencies because studies show that women are also less likely than men to take part in on-the-job training (Becker, 1975; Evertsson, 2004).

Human capital theory holds that a period of unemployment is less detrimental for the labor career because individuals want to return to working life and will thus partake in training, retaining a better bond with the labor market and experiencing less atrophy as well as having participated in training up to the moment of labor market exit. This of course is valid only if unemployment is considered an exogenous or external risk. If, however, unemployment is viewed in part as a 'manufactured risk', such as could be the case if an individual has insufficiently invested in his or her training and own employability, then in terms of the model, unemployment becomes more or less endogenous. It also makes allowances for the difference in the composition of the type of individuals not participating, as the classical nonparticipants are women who choose to stay at home to care for the household and children. It is especially the work of Mincer and Polachek (1978) that shows that the group of unemployed workers is more heterogeneous than nonparticipants. Although studies show that certain groups are more at risk of both becoming and remaining unemployed: women, youths, older workers, minorities and persons with disabilities. It is because of the conflicting results of many empirical studies (see section 2.5) that it is important to ascertain the effects of both nonparticipation and unemployment, and if these effects remain constant for different life course stages.

In terms of older or more experienced workers such as persons who possess quite an amount of specific organization knowledge and skills after a period of ten years, this kind of human capital is something that an employer is reluctant to put at risk or even worse, to lose. Institutional career breaks may be an answer to otherwise early withdrawal from the labor market and it may (due to planned return) alleviate

any consequences from the predicted anticipation effect. Investments in human capital made prior to career interruptions are an effective insurance for a successful return. Mincer and Ofek (1982) have pointed to the possible difference between the short-term and the longer-term effects of a career interruption. The effect is expected to be the greatest immediately following the interruption. After which follows the so-called rebound effect where out-of-date knowledge and skills can be refurbished and the loss of human capital can thus be at least partially compensated. The intermediate-term effects of a career interruption are thus expected to be less than the short-term effects. However, it is not precisely calculated just where this short-term turning point is located. One obvious conclusion is that it will certainly be dependent upon both the individual's profession and the type of human capital.

2.3 The theory of statistical discrimination

According to statistical discrimination theory (Arrow, 1973; Phelps, 1972) employers try to acquire insight into the future productivity of potential workers. However, this is not always possible and can be quite expensive. Although employers' preferences are to obtain reliable information, they will often opt for the next best thing. The term statistical discrimination refers to situations whereby a lack of information or incorrect information on employee or candidate employee productivity leads employers to base their selections on proxies. For instance, measurable or verifiable measures of achievement are educational attainment and work experience. But these do not give any guarantees regarding a prospective employee's future productivity. Employers will also make use of ascribed characteristics such as gender, race, or age if they feel that these will provide them with a better indicator for predicting productivity levels. The proxies are thus for groups. Individuals belonging to a discriminated group are paid less and have less chance for promotion because employers assume that they, belonging to the group, have less human capital on average. In this way 'face value' (man or woman, white or colored, young or old) are interpreted as indicators for the productivity. The employer bases these judgments on 'previous statistical experiences', experiences that he (or colleague employers) have previously had with members of a certain group. Until the opposite is proven to be the case, he will use these assumptions that the productivity of the member of the group x shall be such as the average productivity of all the other members of this group.

The reasons the employer discriminates are thus not (necessarily) founded in an irrational xenophobia or prejudicial motives. He or she is simply avoiding economic risk. If a group is seen as comprised of various levels of productivity, selection from this group will be risky. The major reason for using race, sex or age as a proxy is because productivity cannot be perfectly observed. Basic indicators such as educational level and work experience can be calculated as to how much this improves expected productivity. But the theory is actually based on the unobservable or less

than accurately observable human capital investments, such as how much effort an individual puts into his or her education. Prospective employees with career deviations (interruptions in the form of nonparticipation and unemployment), and part-time work, may be seen as a group with a variable level of productivity, thus a group to be avoided. Employers may see this as a possible indicator for (a lack of) commitment and reliability. A potential employee with a varied career path certainly merits consideration: 'How long will this employee stay with our organization?' Career deviations can thus be the cause of a certain amount of stigmatizing. Among others, Sprengers (1992) has pointed out that this form of labeling can have a self-intensifying effect: whoever has experienced such a period runs the risk of having difficulty becoming re-employed. The results are a downward spiral. A lengthy period of unemployment makes employers even more hesitant to employ such an individual.

The consequences of statistical discrimination can be revealed in one of several ways. Employers may decide not to hire from the 'risk' group, as established to be an untrustworthy group in terms of employment. This would be observable through a lower employment rate and labor participation by the risk group. A second possibility is that the employer does hire from the high-risk group, but demands a risk premium, in the form of a lower salary rate for this group. This compensates for the employer the expected lower productivity. And lastly there is a third possibility, namely that employers do hire from the risk group but only for specific functions and occupations. This would be the case for jobs where career breaks and part-time work would form no kind of hindrance for performance, because there is only a minimal amount of organization specific or function specific investment in human capital. This third possibility is often used to explain for instance why women are over-represented in 'dead-end' jobs. In terms of the main research question of this thesis, this form of statistical discrimination translates to a lower social economic status, a lower function level and lower wages.

2.4 Tournament models

Both the human capital and the statistical discrimination theories place the productivity of workers central in absolute terms in relation to (wage) costs. According to the so-called tournament models – certainly where internal labor markets are concerned (because here the salary structure is often set) – the important issue when searching for candidates for a certain function is not the actual level of productivity, but concerns the interpersonal competition (or differences in productivity within a certain wage base) between employees (Rosenbaum, 1979). Internal career ladders are climbed by beating the competition at each step. That may be by a length, but a nose is sufficient. In terms of a tournament model this means that career interruptions, i.e. a period of nonparticipation, unemployment or a career break, the worker is simply

not there, thus does not take part in a number of track rounds. The consequences of not participating can differ immensely. Unique to tournament structures is the fact that the prizes are awarded based on the rank order at the finish, not on the absolute performance of the participant (Becker and Huselid, 1992). This opens possibilities for more differentiation in hypothesizing effects on careers.

A female employee who during the first ten years of her career has already manifested herself as an ambitious and talented worker may, after a period of leave to care for her new baby, more easily return as a participant in the competition, even attaining a new, higher function than a worker whose presence is less manifest and exits to care for her child at 25 after only one year of working.

Rosenbaum (1979) is quite clear on the importance of the early phases in a career, stating that "mobility in the earliest stage of one's career bears an unequivocal relationship with one's later career, predicting many of the most important parameters of later moves: career 'ceiling', career 'floor', as well as the probabilities of promotion and demotion in each successive period." Bruderl *et al.* (1991) also stress the importance of early promotions in career paths. Those promoted relatively early on in the careers have more favorable career prospects. Brown (1989) establishes a relationship between wage level and number of working years that is not explained by training or tenure, but by actual productivity. Here too promotion due to ability was an explanatory factor. From this perspective, we can formulate a hypothesis that in cases of a *planned* period of nonparticipation, it is certainly worthwhile to first create a bridgehead before a period of reduced productivity, and from there pick up the pace again in the career.

2.5 Review of relevant empirical studies

The purpose of this section is to evaluate a number of the key empirical studies available to date on work histories entailing other than a standard career path. Specific attention will be paid to the effects of part-time work and career interruptions, both voluntary and involuntary as used by both men and women. Although many of the studies focus on women and deal with short-term effects, this framework can be applied to the entire labor market for answers regarding longer-term consequences. The intention is to make visible the gaps in research to use as a guide for the research in chapters 3, 4, and 5 which will provide answers regarding the effect these alternative labor forms have on the careers of individuals for the intermediate and longer-term. Studies are selected using a number of criteria leading to a division of the studies into four main groups.

The first criterion is to achieve a sampling of studies done by the pioneers of this research field, all of whom use human capital theory to model determinants of wage. The second criterion is to review studies using alternative theories to explain wage differentials. Here too, alternative career paths are a major part of the explanation.

The third focus of selection is studies concentrating on determinants of career detours. This is of particular importance to this research as it gives insight into the development of career path detours, allowing for an examination of the characteristics of individuals and groups adopting atypical forms of labor participation, their impact as well as using some important sociological indicators for quality of work life. The last selection criterion is to assess the empirical research focusing on the dynamics of career path detours and their effects on upward mobility.

The statistical methodologies used in the studies will be mentioned only succinctly. In chapters 3, 4, and 5 where the separate research questions are analyzed, the different methodologies from this empirical review will be discussed in relation to the research questions in more detail. The order of the empirical review will follow the division of the four groups: pioneer studies, alternative theories, determinants of career detours, dynamics of career detours, and their effects on upward mobility (i.e. wage growth). The studies will be discussed in relation to their use of cross-sectional or longitudinal data, the countries of data origin, wave years, type of detour in analysis, method of detour approach (number, duration, sequence), and any interesting use of additional control variables.

2.5.1 Pioneer human capital studies

Early studies using human capital theory to explain the wage differentials between men and women did not make any distinction in labor market participation. Mincer and Polachek (1974) are the first to amend this by modifying human capital models to better accommodate intermittent labor force participation using the 1967 National Longitudinal Survey of Work Experience (retrospective) data (NLS). According to human capital theory, the accumulation of human capital is a lifetime process. It begins with an investment in human capital through initial education. In the post-school stage of the life cycle, learning takes place in two forms: experience and on-the-job training. For men, this is often measured as the number of years since initial education, called 'potential work experience'. Mincer and Polachek observe that this approach is only satisfactory in cases where individuals have been continually employed since leaving formal schooling. They acknowledge that most women have intermittent labor force careers with multiple entrances and exits (depending on the number of children). This means that to adequately measure the earnings of women, longitudinal data are essential.

With longitudinal data both the accumulation of human capital (in the form of experience and training) as well as depreciation through disuse or atrophy (by measuring the time-out of the labor force) can be accurately measured. In empirical models this translates for example to experience accumulated before and experience accumulated after a career break. The expectation is that the experience after the career break will have a stronger effect. This expectation is first of all because the experience is more recent, and secondly because it has less to suffer in terms of erosion.

However, Mincer and Polachek take it a step further. They hypothesize that because women know that they will leave the labor force after marriage to fulfill responsibilities at home, their attachment to the labor force is weaker. This leads to a "weaker incentive to augment job skills over the life cycle," (Mincer and Polachek, o.c.: 80). They refer to this as *prospective discontinuity*. In human capital terms it means that women, knowingly invest less in their on-the-job training because they will eventually exit the labor market. This is in essence a lack of added human capital occurring *during* participation that could account for a substantial amount of the male-female wage differentiation. Their introduction of alternative explanations for the wage gap by modeling intermittent labor participation explains approximately 45 percent of the wage gap between men and women. Their conclusion is that, "this 45 percent is more than likely an understatement because women apply a smaller amount of time and energy to training due to a lowered attachment they refer to as prospective discontinuity," (Mincer and Polachek, o.c.: 103). Another important result is that the rate of depreciation of human capital is faster for individuals with a higher level of education and this is the case for both men and women. There is of course a greater wealth in terms of human capital to erode, hence the greater rate. This study remains, thirty years later, one of the most important landmarks studies on the gender wage differential.

In 1978, Mincer and Polachek repeat their study, this time using newly available panel data from the same survey with waves from 1967 and 1971 allowing them to eliminate possible measurement error in the first study contracted through the use of retrospective data. It also makes a measurement of wage growth possible. They are able to calculate the rate of atrophy for the total duration of nonparticipation occurring between 1967 and 1971 and also take up the total work experience accrued over the same period. This proves to be a far more accurate method for measuring the rate of human capital depreciation for the intermittent careers of women. Their original calculations on human capital depreciation due to nonparticipation have indeed been underestimated and they encounter a rate of depreciation that varies for different groups. Individuals with higher levels of education employed in high-skilled occupations experience a greater depreciation of human capital through nonparticipation which carries the inherent message that one can expect that individuals with less initial education and lower occupations will be more likely to interrupt their working careers and for longer durations. However, this is not tested in their model. They do ascertain a negative correlation between home time and occupational level as well as a negative relationship between home time and wage earnings and conclude stating, "Labor force continuity is important. With the most complete model we present, labor force *discontinuity* explains 19 to 49 percent of the wage gap," (Mincer and Polachek, o.c.: 133). With the additional elements of this later study, there is no information concerning the longer-term effects as they use only two points in time to measure change, reducing the actual panel character. No measure of the number of time-outs is used nor do they address the issue of part-time work

because the hours variable was used as total number of hours worked during the wave year. The studies demonstrate a negative effect of nonparticipation on wages and that this effect is stronger for those individuals with higher levels of initial education and in higher level occupations.

Mincer teams up with Ofek to further develop the framework laid down in the first two studies with Polachek. This study (Mincer and Ofek, 1982) looks both at depreciation and restoration of human capital again using longitudinal panel data from the American NLS for the years 1966 through 1974, this time including only married women.[21] Investigating what had become known as a 'rebound' phenomenon (a rapid initial growth in wages after return from nonparticipation to paid labor), Mincer and Ofek make the assumption that the reconstruction of atrophied human capital is less costly than its construction, which is the initial investment. The restoration of capital, shown at first to be quite swift, slows down again once the level is restored to the pre-interruption level, after which their earning capacity profile becomes parallel to that of comparable continuous workers. This leads to a redefinition for calculating atrophy because atrophy would then show various rates depending upon the point in time after re-entry that it is measured.

Their approach results in three major findings. The first is a longer-term negative effect of work interruption on wages. The second is that a period of time-out from paid labor also has a strong negative short-term effect. The differences in these effects are quite important. The short-term effect is almost completely due to a loss of tenure and job specific capital. Essentially, the initial loss of tenure and the skills specific to an organization are more difficult to compensate, but the price is paid immediately upon departure. Whereas the loss of experience and training (general capital) continues to increase with the duration of the period of nonparticipation, the loss of tenure and specific capital is a one-off debit, not dependent upon the duration of the time-out. They show that wages decline as a function of the duration of the period of nonparticipation. This means that the depreciation and restoration they observe pertain to general human capital, and not to specific capital. Intermittent workers are less likely to invest in skills, which explains why they often have lower than average wages. Here too, women with higher levels of initial education and higher occupational levels are less likely to have frequent, or lengthy periods of nonparticipation. This study has added the dimensions of short- and longer-term atrophy, explaining the rebound effect. It shows that the career interruptions of women during the years 1966 through 1974 have a longer-term negative effect on their wages. The information from this study regarding separate effects associated with the interruption is only regarding the duration of nonparticipation, not the specific type of work interruption. The effects of working hours or part-time work are also not part of the analysis.

21 For an exact description of selection by labor market participation see their footnote a from their appendix Table 1.

The fourth study from the pioneers group is that of Corcoran, Duncan and Ponza (1983). It is a longitudinal study using thirteen waves (1967-1979) from the US Panel Study of Income Dynamics (PSID). This study looks at differences in the short-term and long-term depreciation of capital due to nonparticipation. They also research the 'rebound' effect resulting in a decreased long-term effect. New to the model is a specific look at the differences in wage growth associated with part-time and full-time work. They look into the effects of prospective labor force exits and how they effect investments in human capital. These last two items will be discussed at more length. By re-running the analysis on short and long-term capital depreciation and using a broader age range in the research population, the short-term effect proves to be smaller and the long-term effect becomes stronger. This is where the effect of part-time work experience comes into play.

The researchers make a number of assumptions regarding part-time work. Part-time workers acquire fewer total hours in their working lives than full-time workers. Persons expecting to work part-time in the future are therefore less likely to invest in on-the-job training. Employers expect less job attachment from part-time workers than from full-time workers, which will discourage them from investing in the training of part-time employees. When the authors compare the wage growth rate for women with past-part time experience to women with past full-time experience, the rebound effect was only found for the women with full-time experience. Although they include the years of part-time, the years of nonparticipation and the years of full-time work experience in the model, they do not look at the number nor the duration of the career path detours. One of the most important conclusions of this study is, "Women are often urged to choose part-time work rather than stopping work altogether to keep their 'hands in'. We find little evidence that the wage consequences of these two alternatives differ" (Corcoran *et al.*, o.c.: 515). Both alternatives have comparable negative consequences for wage and wage growth.

2.5.2 Research using alternative theories

Stepping back from the economic models of human capital theory, it is useful to reflect on research using alternative theories to explain the effects of detours on careers. Structuralists will point out the barriers and lack of opportunities that inhibit certain groups in upward mobility in labor markets stating that this is due to a *segmented* labor market where primary or 'good' jobs are well paid with promotional chances and security, and secondary or 'bad' jobs are poorly remunerated both in terms of salary and benefits with few or no possibilities for upward mobility and a general lack of job security. Part-time work has long been suspect as belonging to this secondary labor market (Drobnic, *et al.*, 1999; Fagan and Rubery, 1996). Labor market gender segregation, although in decline since the 1970s (Bianchi and Rytina, 1986; Cohen, 2004; Wootton, 1997) mostly due to the rising number of women in management positions, is still an important issue when explaining inequality of earnings. *Discrimination* is a highly problematic type of barrier. It is very difficult to

measure in empirical analysis and quite often is only alluded to as a possible explanation for unexplained portions of the gender wage differential (Oaxaca, 1973). Discrimination theorists view much of the unexplained portion of the wage gap as evidence of the existing gender inequality in the labor market. But the problem lies in the question of whether women choose jobs and employment sectors that are more accommodating to their need for flexible, shorter hours, or is it more the case of making do with the lack of choice and availability? The fact remains that women are disproportionately represented in low-skilled, low paying jobs (Hakim, 1991; Kalleberg *et al.*, 2000; Oaxaca, 1973).

The last of the alternative theories to be presented is relatively new and deals with just this question in explaining the wage gap. The preference theory (Hakim, 1991) states that only a minority of women *prefers* careers in the labor market to domestic work and that this is the reason for any real gender gap in the labor market.

This section presents a sampling of empirical research based on the alternative theories of segmentation, discrimination and preference. Oaxaca (1973) estimates the extent of discrimination of women workers in the USA using cross-sectional data from the 1967 Survey of Economic Opportunity (SEO). Measuring effects on wage, he models, among others, work experience, employment sector, and part-time work. Oaxaca draws two important conclusions. The first is that for the same rate of return to work experience, males make higher initial investments and continue to do so for a longer period than women do. The second conclusion is that if both men and women make the same initial investments, males still earn a higher rate of return and continue to invest longer than women do. He discovers a generally high concentration of women in lower paying jobs and that a substantial portion of the male-female wage differential can be attributed to the effects of discrimination. Even though the study is relatively old, Oaxaca's work is still of importance because he points to the occupational barriers that deny women the opportunity to invest in their careers, if not initially, then certainly during their working lives. These types of barriers create and sustain segmented labor markets.

Budig and England (2001) pool the 1982-1993 waves of the American National Longitudinal Survey of Youth (NLSY) using only data for women with a minimum of two years employment in the sample and an average of almost 8 years participation in the panel for the more than 5000 women.[22] Using fixed-effects regression models, they show that there is a seven percent wage penalty for each child that a woman has. The reduction in work experience ensuing from the labor market exit after each child explains about two percent of the wage penalty per child. Up to this point, the model has been more or less straight human capital.

22 The ages of individuals included in the research population are 14 to 21. See Budig and England (2001: 211).

Next they look at job characteristics to test two assumptions. The first is that women might trade in higher wages for jobs that are more conducive to combining caring tasks. They refer to this as 'mother-friendly' jobs. The second assumption takes the opposite stance, stating that job characteristics could explain the wage penalty for motherhood if women are discriminated against by employers who deny them higher salaries and more chances of promotion. This is again the question: do women choose poorer quality jobs or are they forced into taking them simply due to a lack of any real choice? Entering all the job characteristics reduces the wage penalty for having children by less than one percentage point, half of which is contributed by one single job characteristic: part-time work.[23] Budig and England observe no support of the hypothesis that women choose occupations with high concentrations of women because they are more 'mother-friendly' jobs. Female-intensive jobs pay less and mothers are more likely than non-mothers to be employed in these jobs. Nor are they able to show evidence of discrimination, stating that better statistical methods are needed to isolate this kind of effect. With the exception of part-time work, no job characteristic changes the effect of the wage penalty for having children. Even after controls for past work experience, two-thirds of the wage penalty for motherhood remains. One-third of the originally found penalty for motherhood can be explained by their voluntary career interruptions. Budig and England conclude by stating that the remaining four percent wage penalty for motherhood may be from effects of motherhood on productivity and/or from employer discrimination.

A lively academic discussion on women's work orientations was launched after a publication from Hakim in 1991.[24] Hakim approaches the paradox that although the concentration of women's labor is in the secondary job market, women are in general highly satisfied with their jobs, more so than men who on average have higher quality jobs. After a thorough examination of existing work commitment research, she comes to the conclusion that the paradox can be explained by the simple fact that the life goals of women and men differ. She backs this statement by supplying empirical evidence showing that only one-third of the working women refutes Becker's (1985) explanation for enduring job segregation and wage differential: that being that most married women take up jobs that best accommodate their responsibilities at home.[25]

Hakim rallies for a new series of more refined sociological indicators to replace the old economic models used for measuring labor participation. For the basis of her

23 For a complete list see Budig and England (2001: 216).

24 Hakim, C. (1991), "Grateful salves and self-made women: fact and fantasy in women's work orientations" *European Sociological Review*, 7(2), 101-121.

25 In a qualitative study, Becker and Moen (1999) interview American middle class working couples concerning their strategies for combining work and home. Only a few couples fit the stereotypical image of both climbing the career ladder, almost all of whom were childless couples in their 20s and 30s or those in there 50s and 60s whose young adult children no longer lived at home (empty nest phase). They find that two thirds of those placing limits are women. The most commonly found strategy was for one of the partners to have a career and the other to have 'just a job'.

theory, she uses existing descriptive statistics. In 1995, *The British Journal of Sociology* published Hakim's 'Five Feminist Myths About Women's Employment'. In this article, she counters every argument made to date to explain why women earn less than men and why they are over represented in lower paying jobs. Then, using results from a 1999 national survey in Britain (Hakim, 2000), she arrives at three types of women's work-lifestyle preferences: *home-centered* comprising some 20 percent of British women, *adaptive* (60%) and *work-centered* (20%).[26] According to Hakim, the social function of occupational segregation has changed dramatically, from one of control (avoiding contact between the sexes), to one of accommodation, providing separate occupations to facilitate the work style preferences of married women. She states that this also explains the very high satisfaction with part-time jobs in preference to full-time jobs throughout the EU. The importance of Hakim's work is that she changes a traditional discussion, based on the *discrimination of women*, to a discussion regarding the *discriminatory preferences of women*.

McRae (2003) tests Hakim's preference theory using the Maternity Rights Survey, a longitudinal panel consisting of three waves: 1988, 1993 and 1999 with more than 1500 respondents. By using a maternity survey, McRae has made the sample more selective because Hakim's theory is based on all women and not just mothers. The dependent variable in the research model is employment behavior measured as full-time employment, part-time employment and nonparticipation. Using retrospective questions, entire work histories are built for the period 1987-1999. One of the most important results is that the continuity of women's full-time employment after childbirth is lower than has been stated in many previous reports. The reason for this lies in the fact that although many women re-enter the labor market in full-time positions within a year after the birth of their first child, few women continue to work full-time, opting eventually for part-time work or periods of nonparticipation. This further establishes the necessity of researching the effects of sequences on career path detours.

McRae encounters substantial support for Hakim's postulate that careers are of central importance for only a minority of women. "Ninety percent of the women appear to have a mixture of part-time employment, full-time employment as well as having periods of nonparticipation in their work histories eleven years after the birth of their first child," (McRae, o.c.: 332). While McRae does find empirical evidence, even with her more selective dataset, of a distinct group of women who maintain and develop careers; working continuously in full-time functions and/or having on average fewer children, she dismisses this fact stating that the "other women are not so much different in their preferences for particular lifestyles. They simply differ in terms of their abilities to act on those preferences" (McRae, o.c.: 333). Reading this statement, one could infer that only ten percent of these women are capable of acting

26 See Hakim, 2002: 436 for a complete specification.

on their personal preferences. McRae weakens her conclusions further by surmising that Hakim confuses voluntary action with genuine or unconstrained choice. However, it would seem that McRae mistakes the meaning of choice. Inherent in the very definition of choice is consequence. To choose one thing is not to choose the other. If a person does not want to deal with the consequences, he or she may try and procrastinate or simply refuse to make the choice. The pertinent question here is whether these women are capable of making *informed* choices. Do they know how these work lifestyle choices will affect their future careers? This relates precisely to our research questions.

2.5.3 Research on the determinants of career detours

The next studies look at the role of determinants in career detours. Starting with the classic study by Gronau (1988), he broaches the question of the *direction* of causality between gender related wage differentials and the intermittent labor patterns of women. Do women quit working because of low wage jobs? Or are women employed in low wage jobs because of their multiple labor market exits? He also attempts to establish a link between on-the-job training (or the absence of it) and women's planned career interruptions. This study uses the US Panel Study of Income Dynamics (PSID) waves 1976 through 1979, for a sample of about 1900 women and 2400 men. Data include questions on planned labor market interruptions. In a first analysis, Gronau demonstrates that on-the-job training has a positive effect on women's wages, and as expected, labor market exits have a negative effect on wages. Then using a simultaneous-equation system Gronau explains the causal direction of effects between wages and labor force separation. The results are contradictory to traditional theory. "Whereas lower wages are observed to encourage labor force separations for both men and women, separation (or plans to separate) seems to have no effect on wages," (Gronau, o.c.: 285). The negative effect of time-outs on wages that he found in the first analysis was actually the effect of (low) wages on labor market exits. Gronau also establishes a direct link between *plans* to exit the labor force and less on-the-job training, which leads to lower wages which in turn influences decisions to leave the labor market.

McCall (1997) researches the determinants of work hours (part-time or full-time) following unemployment. He uses the 1986 wave from the Canadian Displaced Worker Survey (workers displaced between 1983 and 1985 from a full-time job) to estimate the effect of institutional arrangements (unemployment benefits) in returning to part-time or full-time work after losing a full-time job. Women who lose their jobs have a longer period of unemployment than men and once reemployed are more likely than men to work part-time. All workers who reported receiving unemployment insurance reported longer periods of unemployment than workers not qualifying. Receipt of unemployment insurance increases the likelihood of part-time reemployment for both men and women. Unmarried women with children are less likely to work part-time following reemployment. It would seem that, given the

(financial) opportunity, both men and women are more likely to work part-time (at least so long it lasts) in Canada. This study provides some insight into institutional influences on employment behavior. Working part-time has the potential to become a widespread phenomenon if individuals and households can afford it.

2.5.4 Research on the dynamics of career detours

At this point in the review, the focus will turn more specifically to studies based on the dynamics of careers, and more specifically longitudinal career studies using career path detours as predictors of wage differentiation. Groot *et al.* (1990), use 1982 data from Statistics Netherlands (CBS) and Tilburg Institute for Social Policy Research and Consultancy (IVA) with retrospective questions including men and women. Researching the effects of temporary periods of nonparticipation and part-time work on wage rates, they model potential experience and total amount of non-participation. They show negligible effects for less than one year of nonparticipation on wage rate. By adding one year of nonparticipation to the equation, wages drop by one percent for men and two percent for women. The results present the first empirical findings in this review for the separate effect of *duration* of a career path detour. This effect is the strongest for younger women.

Regarding part-time work, Groot *et al.* state that it does help reduce the rate of depreciation of human capital for both men and women (as compared to nonparticipation) but that depreciation still occurs. This shows that part-time work had longer-term negative effects on wages for both men and women during its introductory period in the Netherlands. An interesting additional finding is that investing in training during a period of nonparticipation results not only in a total alleviation of human capital depreciation, it adds one percent growth in human capital for men. For women, the effect is not as strong, resulting in a reduction in depreciation to 0.5 percent. Still, these are very important signals for the future. The negative effects of periods of nonparticipation can be assuaged through additional training to at least reduce the rate of human capital depreciation.

Mertens *et al.* (1995) use the 1988 wave from the Institute for Labour Studies (OSA) panel (retrospective questions) for a simulation analysis to estimate how the timing and spacing of childbearing affects the lifetime earnings of women. They encounter higher lifetime earnings for women who become mothers later in their careers.[27] Regarding the spacing of children they see that the effects of spacing depend on the age of the mother at the first birth. If women start families at a young age, they are better off spacing the births of the children close together. For women having children later in their careers, lifetime earnings are higher when there is more time between childbirths. This study offers no information on part-time work. The analysis provides

27 The model only measures first and second births using a maximum age for the mother of 45 years (Mertens *et al.*, 1995: 484).

information essential for making career and family life choices. If women want both careers and families, they are best advised to invest first in establishing their career.

Light and Ureta (1995) estimate a wage model to better capture the effect of *timing* of career interruptions on wages. Using a sample of young (ages 24 to 30) workers from the American National Longitudinal Survey of Labor Market Experience (NLS) waves 1966-1984, they compare two models, one with potential experience and the second with cumulative actual experience, both with standard quadratic functional form (Mincer, 1974). Light and Ureta demonstrate that the work history model (actual cumulative experience) gives a far more precise measurement than the conventional wage equations. Building further on the work history model, the specific focus is on the timing of participation, and they observe that it accounts for some 12 percent of the wage gap. Using data for both men and women, they do not specify whether the reason for the work interruption is voluntary or involuntary. Upon returning to the labor market after a career interruption, the drop in earnings for men (as compared to colleagues who are continuous workers) is 25 percent and 23 percent for women. Men still suffer a 10 percent wage penalty four years after their return, whereas women have completely caught up with their colleagues. The explanation here may be that the career interruptions experienced by men are (more than likely) involuntary and these have a scarring effect.

The Albrecht *et al.* (1999) study uses retrospective Swedish data collected in 1992 to construct complete work histories of respondents. This research uses human capital theory to explain wage differentials. The information on the types of interruption is quite detailed with information about whether the interruption was voluntary or not. Work history information includes details on full-time and part-time positions, including the sector of work. Albrecht *et al.* observe that time-out has a negative effect on wage, and that the effect of unemployment has a stronger negative effect than the effect of a voluntary time-out. This is in sharp contrast to earlier research supporting the hypothesis of a stronger bond with the labor market during unemployment than voluntary nonparticipation as well as the hypothesis that persons will be less willing to invest in their human capital if they know they will be leaving the labor market (Mincer and Polachek, 1974). One explanation for the wage differential between the sexes is that because women *plan* their career interruptions to bear and raise children, and thus know they will be leaving the labor market for an extended period. Therefore, their motivation to invest in training (as well as the incentive of employers to invest in the training of women employees) is less.[28] Many studies tested this line of reasoning, discovering at least some evidence to support it (Gronau, 1988; Mincer and Ofek, 1982; Schippers, 1987). It has only been in some of the more recent studies that, especially with the help of advanced statistical procedures, a better differen-

28 Mincer and Polachek (1974) only modeled the lack of investment in human capital, adding that their findings in wage differentials due to intermittent participation were in this manner an understatement.

tiation of the facts allows for a clear picture. By controlling for individual fixed effects, they are able to eliminate most of the difference in effects across different types of work interruptions. Albrecht *et al*. demonstrate that voluntary career interruptions have a lesser negative effect than involuntary time-out and that unemployment has a stronger negative effect on wages than do other types of time-outs.

Now here is an interesting conclusion which supports statistical discrimination theory: "One could interpret the strong negative relationship between time-out for formal parental leave and subsequent wages that we find for men in Sweden as the outcome of a separating equilibrium. That is, one might view the outcome as one in which men who are highly committed to their careers find it worthwhile to take little or no parental leave, while less committed men find it less costly to take time-out. Employers, recognizing the correlation between men's leave-taking behavior and their degree of career commitment, respond by penalizing those who take significant parental leave" (Albrecht *et al*.,o.c.: 310). For women, this is not the case because virtually all women (with children) in Sweden take parental leave. This conclusion is speculative at best considering that they have a very small number of men in the sample taking parental leave. It does, however, give an interesting twist to Hakim's preference theory (some men have preferences too). It also has important policy implications for the future. The total lack of a negative effect on wages for women's time-outs is more than likely a case of 'safety in numbers'. The very magnitude of the occurrence has eliminated any negative effects. Men, on the other hand, are still a minority when it comes to taking periods of parental leave. The effects of parental leave and household time are much stronger for highly educated women than for women with low levels of education (Albrecht *et al.* o.c.: 309). This study regards wage penalties based on subsequent wages. There are no long-term measurements of effects because the study calculates wage upon re-entry with no follow up to control for possible rebound effects. Effects for part-time are not reported in the study.

The last piece of empirical research for this review is by Drobnic *et al.* (1999) on the dynamics of women's employment patterns over the family life course, comparing two countries, Germany and the United States of America. They use event history analysis to compare the effects of life course events on women's careers by analyzing their transition rates. For the USA, the National Survey of Families and Households (NSFH) is used, a 1987-1988 survey with retrospective questions. This does not allow for the transition from full-time to part-time work or the reverse. Neither does it differentiate between types of nonparticipation. The German data is from the German Social and Economic Panel (GSOEP), of which they use the 1984-1993 waves. The transitions captured in the model are from full-time to nonparticipation, from part-time to nonparticipation, from nonparticipation to full-time and from nonparticipation to part-time work.

They observe that the longer an American woman works full-time, the less likely it

is that she will leave the labor market. Also, the higher her educational level, the less likely it is that she will leave the labor market. This is not so for German women. Their exit rate actually *increases* by the duration of employment with no intervening effect from educational level, decreasing only after 12 years of full-time employment. Part-time work shows a higher rate of exit for American women. Women are more likely to leave their jobs if they work part-time. German women are less likely to leave their part-time jobs. The longer the career interruption, the less likely either German or American women are to return to their jobs, be they part-time or full-time positions. Marriage has a strong negative effect on women's careers in both countries. Pre-school children reduce the likelihood of women working full-time in both countries. Once children are old enough to go to school, women in both countries show an increased tendency to take up part-time jobs. This study encounters some evidence that part-time employment for women in the USA represents a kind of "stop-gap solution in women's employment, rather than a systematic strategy to combine family responsibilities and career," (Drobnic *et al*. o.c.:144). This is based on the fact that family indicators do not affect reemployment into part-time or full-time work with the exception that once children are school-aged, American women are more likely to work part-time. They also state that part-time jobs in the USA are mostly from the secondary job market whereas part-time jobs in Germany are 'good' jobs.[29] The conclusions are a bit strong for the evidence upon which they are based.[30]

2.6 Conclusion

Reflecting on societal and policy developments is essential now when assessing the knowledge and omissions that have become evident from the empirical review. The in-depth analysis of the empirical studies comprises numerous pieces of research. The selection of these studies is aimed at portraying a representative sample of the kind of empirical research available to explain the consequences of career detours. By no means is this selection meant to be exhaustive. One of the biggest problems is finding studies that look at indicators for the consequences of career detours other than wages. Measures of occupational status are present in several studies but are most often used as control variables and not to measure effects and are for this reason not included in the empirical review.[31] There is a vast amount of literature regarding the participation (and the hours) decisions (see for overviews: Grift, 1998;

29 As long as a woman is absolutely sure of her financial security now and well into her pension years.

30 An alternative explanation for the stop-gap solution could be that it is culturally more acceptable for women with children to work in the USA, so part-time work is only a temporary solution until a suitable full-time position can be found. Whereas German women have only recently returned to labor market participation after having children, and are in this manner quite cautiously 'getting their feet wet' and remaining in their part-time jobs.

31 See among others: Elliott, Dale & Egerton (2001); Gangl (2003); Hank (2004); Jacobs (1995); Scherer (2005); Watts (2005).

Killingsworth, 1983; Siegers, 1985; Vlasblom, 1998), but this literature only indirectly broaches the consequences of career detours on the current participation and labor continuity. Important additions to this review are MaCurdy (1981) who points out path dependency as a consequence of career interruptions, as do Vlasblom and Schippers (2005, 2006).

For this overview, care was taken to go beyond classic models using human capital theory and include studies that take alternative approaches in their theoretical model. Reviewing studies from countries in North America, and Western Europe allows for a broader basis for comparisons of results. A sample of the available studies for each of the four selection criteria (pioneer human capital studies, alternative theories, determinants of career path detours, and career dynamics) has been reviewed and evaluated based on their addition to what is known about the effects of career detours on individual careers. Table 2.1 presents a summary of the information deficits ascertained in the review of empirical research. The top section of the table addresses the intrinsic aspects of the empirical research: what types of career path detours are covered and in what manner are they researched? The second section of the table is an overview of the use of key control variables and other methodological aspects such as longitudinal design, whether the data are representative, number of waves used, etc. The table shows that our knowledge regarding the effects of career path detours is extremely limited at best. With respect to the types of career deviations being promoted, we know little if anything about their longer-term effects, only a bit about the short-term effects and very little concerning how multiple use or differing durations may affect individual careers.

Moving on to the second half of the table, key control variables are covered in the studies on part-time work and time-outs, although partner income is usually absent. The general assessment of the data is not positive. It encompasses many non-representative samples, and there are few cross-national comparisons. The data are relatively old, and with the exception of Corcoran, Duncan and Ponza (1983) little use is made of multiple waves of longitudinal data. There is only some use of labor participation as an indicator and the remaining studies all center on the (short-term) effects on wage.

Regarding a period of time-out, we observe that the depreciation rate of human capital is faster for men and women with higher levels of education (Mincer and Polachek 1974), that the effect is very small if the duration is under one year (Groot *et al.*, 1990) and if longer, the wage penalty lasts longer for men than for women (Light and Ureta, 1995). The studies in which the type of career interruption is distinguished are almost entirely limited to the voluntary withdrawals of women. Budig and England (2001) calculate the wage penalty women suffer per child (with a maximum of two). A short-term negative effect of periods of nonparticipation on women's wages is found by Mincer and Ofek (1982) and Corcoran *et al.* (1983).

Table 2.1: Information gaps revealed by review of empirical studies on career detours

Content factors				
	Number	Duration	Short-term effects	Intermediate-term effects
Detour type				
Time-out (not spec.)	–	–	++	–
voluntary nonparticipation	– –	–	–	–
unemployment	– –	– –	–	– –
Part-time	– –	–	++	– –
Sequence	– –	– –	–	– –

Methodological factors	Type of detour				
	Time-out	Voluntary nonparticipation	Unemployment	Part-time	Sequence
Key controls					
Gender	+	–	– –	–	– –
Age	+	–	– –	++	–
educational level	+	–	– –	++	– –
marital status	+	–	– –	++	–
partner income	–	–	– –	+	–
number of children	+	–	– –	++	–
age youngest child	+	–	– –	++	–
Data					
representative sample	–	– –	– –	–	– –
cross-national comparisons	–	– –	– –	–	– –
recent waves	– –	– –	– –	– –	– –
number of waves	–	– –	– –	–	–
Range of indicators	– –	– –	– –	– –	– –
labor continuity	–	– –	–	–	– –
wage	++	–	++	+	– –
socio-economic status	– –	– –	– –	– –	– –
function level	– –	– –	– –	– –	– –

++ Well covered, + covered, – poorly covered, – – not covered

Women's wages decline as a function of the duration of the period of nonparticipation (Corcoran *et al.*, 1983). Albrecht *et al.* (1999) find a negative effect on wages for men and women.

The long-term negative effects are found by Mincer and Ofek (1982) and Corcoran *et al.* (1983). Periods of unemployment are only distinguished by Albrecht *et al.* (1999), showing a short-term negative effect on wage for both men and women. Nothing is known with respect to number of unemployment spells. Groot *et al.* (1990) model

the effect of duration of nonparticipation, showing that the effects are negligible for periods lasting less than a year, but are more detrimental to wages when they last longer. Results for longer-term effects are also not available. The pattern in results on the effects of part-time work is mottled. Often, part-time work is included as a control variable without specifically discussing the effects. Neither the number of part-time periods, nor the duration of periods of part-time work is present in the literature reviewed. Regarding the short-term effects, Budig and England (2001) observe a negative effect on women's wages. And for the long-term, Corcoran *et al.* (1983) discern negative consequences for wage growth due to part-time work. Groot *et al.* (1990) observe that part-time work has longer-term negative effects on wage for both men and women. Little is known about how combinations of part-time work and periods of nonparticipation affect careers.

Moving on to the data issues, although studies were immediately included that use longitudinal data, the actual data analysis often remained cross-sectional, and in a few cases not more than two waves were used resulting on the whole in a lack of longer-term conclusions. Six empirical studies included in the review use panel data, only four of these studies look at the effects of career path detours. All four of these studies restrict their mobility indicators to wage. Only three actually measure the longer-term effects by looking at the wage growth. Of these three studies, two are restricted to women (Corcoran *et al.*, 1983; Mincer and Ofek, 1982) and the single study including men as well (Mincer and Polachek, 1978), uses only two waves of a panel, which diminishes any conclusions based on an actual longitudinal design. Additionally, there is the issue of how recent these studies are and whether the effects would still be found today, in many cases, we are referring to a time difference of some thirty years.

Certainly the most impressive use of data in the review has been in the studies by Corcoran *et al.* (1983) and Mincer and Ofek (1982) in which their most recent data were from 1979 and 1974 respectively. Inasmuch as more than a quarter of a century has elapsed since the data were collected for these monumental studies, particularly in view of the considerably changed policy context, it would not be presumptuous to state that another look is now merited. Beyond the issue of longitudinal design and timeliness of data used, just looking at the more recent work, especially coming from the UK, we see a lack of essential facts. McRae (2003) researches determinants of employment types (part-time, full-time, nonparticipation) after childbirth, showing 90 percent of the 1500 women in the panel have a mixture of part-time, full-time and nonparticipation in their work histories eleven years after the birth of their first child, but how they have faired or whether their careers have suffered is not known. At the end of the review, we can conclude that very little is known about how these women are making out after so many years of career detours.

Ostensibly unaware of this total lack of knowledge, we move forward in creating new

life course arrangements to increase labor participation and labor continuity. In doing so, individuals are encouraged to use career path detours they might never have chosen had they been properly informed regarding the far reaching consequences of their choices. This review forms the basis for the three empirical studies in this thesis.

3. The effect of part-time work on careers [32]

3.1 Introduction

The career detour under study in this chapter is part-time work and answers the research question: how does a period of part-time work affect the careers of individuals? The focus of this study is on the Netherlands as they break all records as a part-time working nation and there is still potential for growth. Whatever the future may bring, part-time work is currently an integral part of the Dutch labor system and a growing phenomena in the rest of European labor markets as well.

The Netherlands is to part-time work what Everest is to mountain tops, which makes it even more sensible, when researching the effect of part-time work, to include the Netherlands as the subject of investigation, if only to ascertain just how high the top is, not to mention providing an excellent perspective. The Netherlands holds a unique position within the global economy as having the first 'part-time economy in the world' (Visser, 2002). Unlike Everest, which is reported by Chinese authorities to be shrinking, part-time work is on the rise, the growth of which owes its origins to the increase in women's labor market participation (Salverda, 1998).[33] As a labor market instrument, part-time work could very well be the perfect solution to a better division of labor that will enable individuals to coordinate caring tasks, educational training, and leisure while at the same time give them the opportunity to maintain a longer working career as stipulated in the transitional labor market for developing new ways of defining and facilitating the necessary flexibility both for employees and for employers (Schmid, 1998). But what are the longer-term effects of working part-time on individual careers?

This research poses the question whether part-time work has any negative effects on individual careers in terms of participation continuity and three career related variables: wage, function level, and socio-economic status. How does part-time work affect continuity in the labor market? Does a period of part-time work help to reduce labor market exits and if this is the case, are workers then capable of compensating

32 This chapter is based on Román, A., D. Fouarge and R. Luijkx (2004) 'Career consequences of part-time work: results from Dutch panel data 1990-2001,' Tilburg: OSA, Institute for Labour Studies.

33 http://www.cbc.ca/story/science/national/2005/01/25/mount-everest (250105).

possible negative effects upon returning to full-time careers? Do we really know what the longer-term effects of part-time work will be in the labor market or even on the economy?

Most of the European social insurance schemes are based on full-time participation and are thus paid out as a proportion of the whole for part-time workers. Legislation in the UK has still not incorporated all part-time jobs to include pensions, although women can bring suits against employers on grounds of indirect sexual discrimination.[34] Beyond future securities, fewer working hours translates directly into less income and less consumer strength now. This has consequences for the current economies as well as the economy of the future. Increased economic welfare through a higher level of productivity, achieved through new technologies and a more efficient organization of work, can only partially compensate for the total reduction in working hours. The total reduction of working hours is drastically depleting any gains made through greater productivity.

In moving towards a transitional labor market, flexibility is a key issue and part-time work provides flexibility on all levels. On the macro-level, part-time work provides a buffer for growth and reduction of labor necessary to adapt to different economic conditions. On the meso-level, part-time work provides an important source of dynamic flexibility for many sectors of industry (see Friesen, 1997). The service sector is a good example of the additional flexibility attained through the use of call centers, where neither the length of the shift nor the geographic locality of the worker forms a barrier to work. The healthcare industry has traditionally used 24-hour shift-work, much of which is done by women working part-time.

However, the amount of flexibility won in the labor market due to part-time work is questionable. Women working part-time with young children are generally *not* flexible workers, with the constraints of daycare opening hours, school schedules, and holidays (Visser *et al.*, 2004). This places all kinds of restrictions on the internal scheduling of personnel. On the micro-level, it provides flexibility within households for combining paid labor and caring tasks. On the macro-level, the increased level of labor participation (by women) accounted for most of the economic growth of the nineties and awarded the Netherlands the dubious honor of bearing the title of *part-time economy*. We are now in a position to reflect on a history of more than 20 years experience with part-time work in the Netherlands, an experience of such magnitude that there are certainly lessons that can be learned by other European countries. While

34 Employers are not required to include part-time workers in company pension schemes but women can contest not being included in the pension scheme on grounds of indirect discrimination. On February 8, 2001 the House of Lords ruled that part-time workers, who had been indirectly discriminated against could make claims for pension rights dating back to 8 April 1976 (or the begin date of employment, if later). Claims must be made within six months of leaving employer's service (http://www.eoc.org.uk/cseng/advice/part-time_work_decisions.asp) (160206).

acknowledging the importance of meso- and macro-level effects, this research concerns *micro-level* effects, the effect that part-time work may have for the individual career.

Several studies show that part-time work has a negative effect on income, and labor market position in terms of security, upward mobility, etc. Previous research illustrates that part-time jobs pay less on average, are lower in function, and have less status than full-time jobs (De Beer, 1996; Tam, 1997; Van der Lippe, 1993; Visser, 1999). These studies have almost all encompassed a direct comparison of part-time work with full-time work. With the exponential growth in part-time jobs during the second half of the 1990s coupled with increased legislation granting improved working conditions for part-time workers in the labor market, it is very likely that many of these previously established inequalities have diminished. This study asks:

1. *How does part-time work affect careers?*
2. *How does past part-time work affect careers?*
3. *How does part-time work affect participation?*
4. *Are the effects lasting?*

What is the effect of a period of part-time work on one's career? Are any possible negative effects permanent, or are employees (mostly women) capable of overcoming any negative impact of a period of part-time work when rejoining the labor force as full-time workers? This study also looks specifically at the effects of a *history* of part-time as well as current part-time work on career continuity (continuing participation) and (upward) mobility in careers for which three job related variables are used: wage, function level and socio-economic status. The question is whether part-time employment has a positive or negative effect on the continuing labor market participation and if there are lasting negative effects for persons with a history of part-time work.

Although researchers in the past have been able to assess the negative impact that part-time work has on wage, these studies have not looked into whether this is only a temporary setback to one's career. In other words, if this is only a transitory part of the career path, are workers (indeed mostly women) capable of regaining their human capital lost through a period of part-time work? If part-time work (and certainly small part-time jobs of 20 hours and less) is to become an institutionalized career instrument enabling smooth transitions to better accommodate life course events, it is essential to know what kind of repercussions it may have for individual careers.

In order to establish and isolate this effect, individuals are followed through time by using data from the Dutch Socio-economic Panel (SEP; see section 3.3.2). The length of an average career is somewhere between 30 and 45 years, and the panel data available covers a time span of only 18 years. There are also limits to the amount of compatible information available in the data, which allows an analysis of only those

data from the waves between 1990 and 2001. First, four-year 'micro-careers' are analyzed using the working histories of the first three years to explain effects on careers. Next, a more selective group is used in an analysis of individuals working full-time for the last three years of their six-year micro-career, counting the number of years these individuals have been working part-time in the first three years of their micro-career. In this way comparing this group to the group that has exclusively worked full-time isolates the effect of (past) part-time work. By using career periods to compare the effect of part-time work, it should be possible to establish a more realistic view of part-time work as experienced on the Dutch labor market.

After looking thus far into the effects on upward mobility, the longer term effects on labor market continuity are examined using eleven years of the panel. Do part-time workers keep working? Does part-time work function as a facilitator of labor market participation? The last set of analyses also includes two wage growth models using eleven years of the panel providing answers to questions regarding the duration, placement of the part-time work experience, as well as whether any effects are lasting. If there are lasting negative effects on careers, no matter how small, the effect is magnified simply due to the magnitude of part-time work in Dutch society and its growth potential. If it is indeed true that part-time work generates systematic negative micro-effects on personal career advancement, this poses a major social problem at the aggregated level which calls for strategic labor market policy responses.

The structure of this chapter is as follows. Section 3.2 provides both a brief history of the part-time work phenomenon in the Netherlands as well as an overview of its current development both in the Netherlands and the European Union. Section 3.3 introduces part-time work as an instrument on the transitional labor market, placing it in perspective as a career detour alternative to full-time employment and how it affects labor market continuity. Also in section 3.3 the theoretical framework is applied to part-time work leading to the hypotheses, and this section is completed with a brief overview of the known effects of part-time work. Section 3.4 is a presentation of the data, the indicators used for measuring effects, and a description of the various research populations used for the analytical models. Section 3.5 presents the analyses for the four-year micro-careers. Section 3.6 elaborates on the analysis further using a more selective six-year micro-career. Section 3.7 uses eleven panel years to answer questions on the effect on participation as well as long-term effects on wage and wage growth. Section 3.8 is a summary of all the findings from the four analytical sets and draws conclusions.

3.2 The part-time phenomenon

This section first provides a sketch of the development of part-time work in the Netherlands and the European Union (3.2.1). The next section (3.2.2) is an overview

of the legislation that has been implemented concerning part-time work in the Netherlands. Section 3.2.3 gives an overview of the amount and intensity of part-time work on the Dutch labor market in comparison to the European Union.

3.2.1 Part-time work in the Netherlands and the European Union

A division of labor where women are responsible for running the home and caring for the children and men are the wage earners has characterized the development of western societies (Van der Lippe and Van Dijk, 2002). This typical western division of labor had been the model for the breadwinners' society in the Netherlands until the beginning of the 1980s (Baaijens *et al.*, 2004; Bruyn-Hundt, 1988; Van der Lippe, 1993). The modus household in Dutch society consisted of a man that (went to) work and a woman that stayed at home with the children. This changed when, in the early 1980s women in the Netherlands re-entered the labor market after spells of nonparticipation, though now, for the most part, in part-time jobs, creating a new alternative for working careers. It was only at this time that the Netherlands surpassed Sweden, Denmark and the UK in its percentage of part-time workers in the labor force (OECD, 2003).

Part-time work has been an excellent means for women to rejoin the labor market, dismissing their more traditional nonparticipation in paid labor after having children. It looked for a while as though part-time work would fill the function of a stepping-stone or bridge for women to access the labor market but things changed. In the early 1990s, most women did not leave the labor market at all after having children. Where women in the past achieved social recognition almost exclusively by taking care of the home and bringing up the children, having paid work increased in acceptance as one of the instruments for achieving social recognition. The more prestigious the job, or the higher the income, the more status and thus the more socially appreciated the individual (Baaijens *et al.*, 2004). Considering this aspect, one would expect that part-time work would eventually have served its purpose and disappear from the labor market. But women in the Netherlands not only joined the labor force on a part-time basis, this development resulted in a *part-time prerogative* and has, since its introduction, been institutionalized by means of legislative reforms, the so-called right to work more or fewer hours per week.

Possibly more illustrative of just how serious the Dutch are about part-time work is the Dutch legislation regarding non-discrimination of part-time workers. Dutch women do choose and prefer to work part-time. Two-thirds of all women working in the Netherlands have a part-time job of 12 to 34 hours a week, making the phenomenon, in the case of women quite common and no longer a deviation from (their) norm.[35] At the same time, a new, slower growing development is taking place: a minority of Dutch men is opting for part-time work. Results of the Institute for

35 http://www.cbs.nl/nl/cijfers/statline/index.htm (20-11-2003).

Labour Studies' (OSA) 2002 Labor Supply survey show that 28 percent of working men would prefer a part-time position. The fact that it is so widely accepted and even preferred by a majority of the working women and a growing minority of men (Fouarge and Baaijens, 2003) has created a basis for further institutionalization. But this part-time prerogative (the right to work fewer hours) may turn out to be a problem if preferences are for shorter working hours when an increase in participation is needed.

Working part-time is preferred by two-thirds of Dutch working women and is catching on quickly with men. For example, 16 percent of Dutch working men are now employed in part-time jobs. Another twelve percent of Dutch men currently working full-time would like to work part-time (Fouarge and Baaijens, 2003). Dutch women generally prefer working part-time to having full-time jobs. Also Dutch women still widely prefer to personally do at least part of the caring for young children rather than placing them full-time in daycare (Esveldt *et al.*, 2001).

One could argue as to just how much this preference is motivated by the relatively high costs of childcare in the Netherlands, or the low number of schools providing lunch time facilities and supervision, thus their *preference* can be at least partially explained by structural impediments. The very coordination of having to physically be present four times a day at the school gate may be, at least in part, an explanation of Dutch women's preferences for part-time jobs.[36] The OSA Labour Supply panel shows that in 2002, only 24 percent of the women participating on the Dutch labor market work full-time. Working time preferences from the same year show that 81 percent of the working women is satisfied with the number of hours they work. This desire to work part-time has also been increasing for men (Fouarge and Baaijens, 2003). In that same year, 16 percent of the men working in the Netherlands had a part-time job. In this sense, part-time work, a more or less spontaneously occurring phenomenon on the Dutch labor market, has evolved to become a widely practiced and generally accepted labor market instrument.

3.2.2 Institutional changes regarding part-time work in the Netherlands

The initial attempts by government to better facilitate part-time work met with opposition from the labor unions. Dutch labor is highly regulated, with some 80-85 percent of all Dutch workers covered by collective agreements. The government coalition in the mid-1970s had a labor majority and this party saw part-time work as a facilitator for the emancipation of women. It was also promoted as a way to employ more people, which was a key issue at the time because the youth unemployment rate was extremely high and continued to be so through the first half of the 1980s (Visser *et al.*, 2004). The unions felt that general working time reduction was a better tool to create and distribute labor and that part-time work undermined this higher

36 A recent study by Portegijs *et al.* (2006) refutes this stance.

goal (Van Klaveren and Tijdens, 1998). The Wassenaar agreement of November 1982 finally brought all parties together: the unions, employers and government. Wage moderation, working time reduction, early retirement and part-time work were all included as part of an integral labor market agreement that would restore the health and vitality of the Dutch economy.

The Dutch economy picked up speed and flourished again by the end of the 1980s. This return of economic growth tempered the need for working time reductions, and was replaced with a new labor form: part-time work (CPB, 1991). The Foundation of Labor (StAr) made recommendations for collective agreements with guidelines regarding part-time work. A careful first step towards more equality for part-timers was made in 1992, by removing the so-called 1/3 criterion from the Minimum Wage and Minimum Vacation Pay Act.[37] In 1996, the Prohibition of Discrimination by Working Hours Act became effective. The Committee for Equal Treatment monitors all cases for discrimination, with respect to sex, race or (since 1996) one's part-time position. This is a unique example of just how important part-time work is to Dutch society. A third piece of legislation, the Adjustment of Working Hours Act (WAA) that came into effect in July 2000, makes explicit the right to the adjustment of working hours. This is not particular to part-time work, as the adjustment can be to working either more hours or less.

3.2.3 Who works part-time?

Part-time jobs accounted for at least half of the total employment growth over the past decade in 50 percent of all OECD countries, and for a considerable share of new jobs in quite a few more (OECD, 2003). During the period 1992-2002, the European Foundation for the Improvement of Working Conditions reported a total growth (as percentage of total employment) of four percent in the EU. The growth was by no means equally distributed among the member states, showing high rates of growth and a generally high concentration of part-time work in the northern countries, and relatively low rates in the southern member states. The Netherlands tops the ranks with the greatest percentage of part-time workers (43.8% of total employment), followed by the United Kingdom (25.0%), Sweden (21.4%), Germany (20.8%), and Denmark (20.6%). The lowest presence of part-time employment can be found in the southern European countries: Portugal (11.3%), Italy (8.6%), Spain (8.0%), and Greece (4.5%) (see Table 3.1)

It is clear that no other country comes close to the part-time wonder of the Netherlands. It is for this reason that it makes the most sense to examine the effects of part-time work on careers by using the Netherlands as a focus. This will be done however,

37 Stb. 1992, 536 Act of 24 September 1992, to change the minimum wage and minimum vacation pay in accordance with the rights of workers who as a rule work no more than one third of the normal working week.

Table 3.1: Part-time employment in the European Union, 1992 and 2002, by gender and Member States (% of total employment)

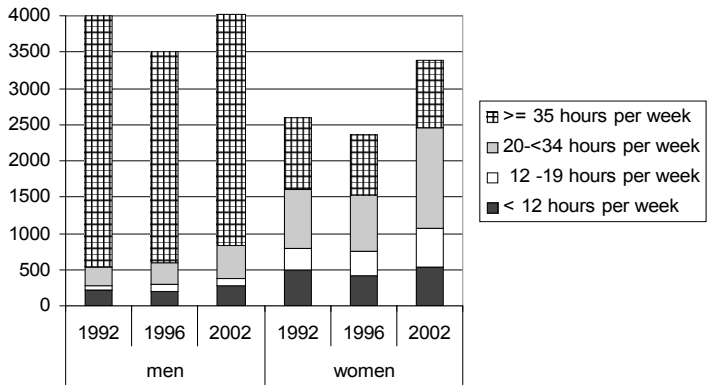
Member states	Total		Male		Female	
	1992	2002	1992	2002	1992	2002
Austria	12.6	18.9	3.6	5.1	24.5	35.7
Belgium	12.7	19.4	2.3	5.9	28.9	37.7
Denmark	23.0	20.6	10.7	11.0	37.1	31.4
Finland	10.4	12.4	7.3	8.0	13.7	17.1
France	13.1	16.2	3.8	5.0	25.2	29.7
Germany	14.5	20.8	2.7	5.8	30.9	39.5
Greece	4.5	4.5	2.6	2.3	8.1	8.1
Ireland	9.1	16.5	3.8	6.5	18.7	30.5
Italy	5.5	8.6	2.5	3.7	11.2	16.7
Luxembourg	6.5	11.7	1.0	1.8	16.2	26.4
Netherlands	34.8	43.8	15.2	21.5	64.4	72.8
Portugal	7.2	11.3	4.1	7.1	11.1	16.4
Spain	6.0	8.0	2.2	2.6	13.8	17.0
Sweden	20.5	21.4	6.8	11.2	36.0	32.9
United Kingdom	22.9	25.0	6.3	9.4	43.8	44.0
Total EU	14.2	18.2	4.2	6.6	28.8	33.5

Source: © European Foundation for the Improvement of Living and Working Conditions, 2005. Initial data for Italy and Sweden refers to 1993, initial data for Austria refers to 1994. Source: Eurostat Labour Force Survey 2002. Data for 1992 provided in Employment in Europe 2003, Recent trends and prospects.

by reflecting on how part-time work as an ever-increasing alternative form of labor is developing on the European labor market. The employment growth in the Netherlands during the second half of the nineties was almost exclusively due to the growth of part-time jobs. According to Statistics Netherlands, between 1992 and 2002 there was an increase in the percentage of individuals working part-time from 25 to 35 percent. Over the same period, the number of part-time jobs increased by 150 percent (see Figure 3.1). The vast majority of part-time workers are women. More than half of the female working population in 1992 had a part-time job consisting of 12 to 34 hours per week. This share increased to two-thirds of all working women in 2002. Although there has been a slight increase in the number of men working part-time during the same period, it has been more modest. The share of part-timers within the male working population grew from seven percent in 1992 to eleven percent in 2002. The average total number of working hours in the Netherlands is lower (both men and women) than in any other EU country (see Appendix A, table A1).

The growth in total employment during the period 1992-2002 was almost exclusively due to women working part-time. The shift in total number of hours part-time

Figure 3.1: Number of employees by weekly working hours by sex 1992, 1996, and 2002 (x1000)



Source: Statistics Netherlands Statline (2005-11-08)

isalso evident, with the majority of women working 20 to 34 hours per week. This category is becoming increasingly popular among men as well as can be observed by the increase in 2002.

3.3 Theory and empirical background

This section first introduces the transitional labor market model as developed by Schmid (3.1). Next the three theoretical frameworks are discussed in their relation to part-time work leading to testable hypotheses (3.2). In the last section (3.3), a brief overview of the known effects of part-time work are reviewed.

3.3.1 Transitional labor market model

There has been some speculation about the potential of the part-time model as a new form of 'full employment' over the life cycle, within the framework of a transitional labor market (Rogowski and Wilthagen, 2002; Schmid and Gazier, 2002). This original definition of full employment is no longer realistic and the traditional 40-hour a week job will no longer be attainable for all.[38] However, a part-time model seems indeed to be within reach, and certainly, an instrument to keep otherwise would be nonparticipants actively participating in the labor market for a longer period of time. In this manner, part-time work takes up a key position in the evolution towards a transitional labor market. It can be used to accommodate longer working careers, something essential due to the current demographic developments in Europe. Part-

38 The European average unemployment rate for the period 1990-2000 was nine percent or more than 17 million EU citizens of working age that are not actively participating in the labor market. (OECD, 2003).

time work also allows for working men and women to better combine paid labor and caring tasks. It can be used as an instrument to alleviate or even deter burnout through working time reduction. It can be helpful in reintegration of sick or handicapped workers. It can be used to combine paid labor with training and education enabling lifelong learning. Up to now, the reference has been mainly on women working part-time, simply because it has, in its relatively short tradition, been for the most part women who are working in part-time jobs. But with future perspectives of longer working careers and lifelong learning coupled with the demographic influences of lower fertility and an aging society, part-time work is an excellent option for keeping just about everybody working.

Schmid (1998) introduced his model of transitional labor markets as a new European employment strategy providing flexibility capable of serving as a buffer, expanding in times of economic recession and contracting during periods of economic growth, he identifies two fundamental processes taking place: globalization and a micro-level differentiation. Schmid states that the second process is even more important for re-defining our labor markets. This differentiation is integrally coupled with life course processes.[39] Individuals are making choices around work and family life that no longer fit the classic biographies.

Europe faces a demographic deficit and the Netherlands is no exception to this problem. The average life expectancy in the Netherlands has increased for men from 70 years in 1950 to 75.5 years in 2000. For women over the same time span this has increased from 72.6 in 1950 to 80.6 in 2000 (Statistics Netherlands). We are living longer and will need to work longer.[40] Longer working careers will need facilities embedded in our everyday lives allowing for flexible transitions to, within, and from the labor market in accordance with the domains of caring tasks, education, and leisure.

3.3.2 Theoretical perspectives

Part-time work has received a considerable amount of attention in empirical research, much of which uses segmentation theory to explain its effect on individual wage levels or career continuity (Beer, 1996; Kalleberg *et al.*, 2000; Tilly, 1996).

39 Within a life course framework, events or transitions within one's life occur following a certain structure based on three time dimensions: *biographical time* or the chronological order of personal events, *historical time* or how historical events, opportunities and impediments affect one's chances and *social time* or how society places the individual according to the age group in which he or she belongs. The basis of the life course approach is in the interaction of these three time dimensions (Dykstra and Van Wissen, 1999).

40 In the Netherlands the average age for retiring from the labor market has decreased between 1950 and 1995 from 66,4 to 58,8 years of age (NIDI, 2003). This means that the average period of active participation in the labor market has decreased from three-fourths of our lives to approximately one half over the last one hundred years. This downward trend turned around in 1995 showing a gradual but steady increase in retirement age.

Segmentation theory states that part-time work is mostly found in the secondary segment of the labor market where chances for promotion are scarce, remuneration is poor, and labor conditions are generally worse than in the primary labor sector. Developments regarding the improvements in legal status of part-time work during the last decade in the Netherlands (see section 3.2.2), makes segmentation theory a less likely candidate for building hypotheses for this study.

Human capital theory offers a number of interesting approaches to explaining how part-time work may affect careers. According to human capital theory, capital can be refurbished and even gained through investments in (on-the-job) training. A direct test of whether part-time workers invest equally in training is very difficult to model. For instance, in the case of an established lesser investment in training; is this due to the worker's lack of accessibility or a lack of willingness? And in the case of the latter, whose willingness is the issue here, the worker's or the employer's? Human capital theory has its focus on capital *accumulation*, which regarding part-time work is considered to be less simply due to a lesser number of working hours per week in which experience is gained. Current hourly wage levels of part-time workers may be comparable to their full-time working colleagues. This is because relatively little time has elapsed during which the build-up of capital (proportionally less) has taken place. Another reason is due the protective legislation of part-time workers. However, if the part-time period has been for the duration of a number of years in the past, the lesser accumulation of capital should be observable through lower wages. This implies that workers with a *history* of part-time work will earn less than their colleagues who have only worked full-time bringing us to the first hypothesis.

> *Workers with a history of part-time work will have lower wages than workers who have only worked full-time*

Labor market exit is triggered by an external event such as the illness of an elderly parent. The decision to actually exit the labor market is made by the employee in a cost-benefit analysis. Although due to legislation the expectation is that part-time workers will earn comparable wages to their full-time working colleagues, they do earn *proportionally* less. This is a simple arithmetic sum. We can assume that the likelihood of exit due to an external event is greater by part-time workers than by full-time workers due to the greater sacrifice of earnings that a full-time worker makes by a labor market exit. There is a lesser sacrifice of earnings in the case of the part-time worker as compared to the full-time worker. In this line of reasoning, the expectation is that part-time workers will show a lower labor force continuity and a higher chance of labor market exit than a full-time worker. This is the second hypothesis:

> *Part-time workers will have a greater chance of exiting the labor market than full-time workers*

Another approach to the issue of training is the second line of theory, statistical discrimination which states that in the case of part-time workers, it is highly likely that employers would be less likely to invest in their on-the-job training as their productivity due to a part-time contract will be less (Schippers, 1987). Employers may see part-time workers as less dependable, and in any case, *proportionally* less profitable when investing in expensive training courses. How much more likely are these part-time workers to just get up and go than their full-time colleagues considering that they are only 'partly' bonded to the workplace? This would also be visible through a lower percentage of part-time workers in higher function jobs as according to statistical discrimination theory, employers will be less likely to trust part-time workers with jobs entailing a greater responsibility. Because part-time work is legally protected in terms of wages, employers cannot pay a lower hourly wage to part-time workers. However, promotions and high level job vacancies could be made available only to full-time workers. This leads to the third hypothesis.

> *Part-time workers will demonstrate a lower function level and socio-economic status than their full-time colleagues*

Tournament models offer another option for hypotheses on the effect of past part-time work on individual careers. Without being able to directly test a tournament model (for this longitudinal enterprise data is needed), it is possible to indirectly derive testable hypotheses. Considering that tournament models are based on competition between employees for occupational promotions, it is only fair to compare the careers of workers who are employed in sectors of industry in which part-time work is highly prevalent. The promotional chances of the part-time worker in the metal industry will certainly be less, considering that this sector displays low levels of part-time work. However, in sectors, such as the public sector and education, and the health and welfare sector, where a great number of women are employed, and where a considerable proportion works part-time, we can expect that full-time and part-time work are 'equal'. In these sectors, part-time workers will be just as capable of climbing career ladders as continual full-time workers. This is the fourth hypothesis:

> *In labor market sectors where part-time work is prevalent, the socio-economic status and function levels of (past) part-time workers will equal that of continual full-time workers*

3.3.3 Known effects of working part-time

Original concepts of part-time work show a division of the labor market, where primary jobs (or good jobs) are higher on the function scale, long-term or permanent contract, and full-time. Secondary jobs (bad jobs) are lower on the function scale, short-term contract, and part-time. Tilly (1996) makes a further distinction between secondary part-time jobs and retention part-time jobs. The first refers to low-level

jobs that in every way are more poorly compensated than their full-time counterparts. Retention part-time jobs are prime jobs for skilled workers and therefore remunerated much the same as full-time workers. In this manner, the original poor reputation of the part-time job has been somewhat refined. The conception of part-time work may have improved, but research shows that the remuneration remains behind that of full-time workers. Corcoran *et al.* (1983) find very little evidence that a period of part-time work was any better than nonparticipation for women's careers and that the wage consequences of these two alternatives do not significantly differ on wage and wage growth.

Warren (2004) analyzes the effects of part-time work on achieving a successful 'work-life' balance using cross-sectional analysis of women workers from the 1999 wave of the British Household Panel Survey (BHPS). To do this, she concentrates on two life domains: satisfaction with leisure and satisfaction with their economic situation. Warren notes that although part-time jobs in the UK are for the most part concentrated in the secondary segment of the labor market, part-time workers are seemingly quite satisfied. Warren assumes that this is because these women are achieving a good work-life balance. Dividing the occupational levels into high, medium and lower-level, she discovers that the majority of the part-time jobs (58 %) are indeed located in the lower-level (manual occupational grouping). Women working part-time are slightly more satisfied with their amount of leisure time. Women without children were the most satisfied with their leisure time. Even part-timers were less satisfied with leisure if they had children. Part-time work is good for integrating other life domains, like leisure or care, not leisure *and* care.

The effect of part-time work on satisfaction with one's economic position is negative and is even more negative for the long term. Part-time workers report having lower wages than their full-time colleagues and their household incomes are also lower. Part-time workers are less likely to save or accumulate other forms of assets (own home, pension). She concludes, "In the longer-term and on retirement in particular, it is assets and a secure pension that will underpin access to key resources. Therefore, if women remain in these jobs, then their current financial problems could well intensify, with severe consequences for their life quality in old age," (Warren, 2004 o.c.: 113).

Research by Bardasi and Gornick (2000) shows a range from 8-22 percent part-time wage penalties (meaning that part-time workers earn that much less than their full-time colleagues established in five countries using cross-nationally comparable data from the Luxembourg Income Study (LIS).[41] Hu and Tijdens (2003) find relatively large wage penalties for part-time workers in Great Britain but no substantial wage gap in the Netherlands using data from the European Community Household Panel.

41 Canada, Germany, Italy, the United Kingdom, and the United States of America.

In their research, they compare longer hour part-time jobs (22-29 hours per week) with full-time (30 hours and more). Fagan and Rubery (1996) call for a better comparative classification of part-time work and suggest that further study should not be to compare full-timers with part-timers but analyze them together. These studies have all been on cross-sectional data and provide no answers for the longer-term. Blackwell (2001) finds some evidence for 'occupational recovery' in her longitudinal research when women return to full-time work. But this cautious conclusion is based on the assumption that many women deviate from career paths and take low-level part-time jobs during periods of child rearing.

Dekker *et al.* (2000) use the Dutch Socio-economic Panel (SEP) data, for the period 1985 to 1994, to distinguish wage differentials. In their model, the effects of part-time work on wage, differentiated in short and long part-time, shows a modest positive effect on the hourly wage of full-time working women. Thus, there is some evidence of effects of working part-time. However, the issue is whether these effects have a more lasting impact on individual careers in terms of wage, function level and occupational status. This research as outlined in the introduction explicitly aims to build on these findings, using SEP data from 1990 up through 2001 and measuring the upward mobility not only for wage but function level and socio-economic status as well. In addition the growth in income and socio-economic status is measured which is an indicator of the ability to recuperate from the initial setback experienced during the period of part-time employment.

3.4 Data and methodology

This section begins with an introduction to the Dutch panel data used for this research (3.4.1). Next a description of the indicators for measuring effects is given in 3.4.2. The last section presents the different samples that are used for the various models (3.4.3).

3.4.1 Data

The data used for this research are from the Dutch Socio-Economic Panel (SEP). The panel was started by Statistics Netherlands in 1984. In each wave, approximately 13000 persons (5000 households) are interviewed. All household members aged 16 years and older are interviewed about their socio-economic situation, education, labor market participation, income, assets and debts. Preferably the head of household provides the information regarding the living conditions, the ownership of durable goods, the perception of the household's financial situation, etc. Information on sex, date of birth, marital status, nationality and position in the household is available for all household members, including those younger than 16 years of age. Since 1990, the survey is conducted once a year in the period April/May (before that, there were two waves each year). In the analyses, only the waves 1990 through 2001

are used, because these twelve waves provide comparable information on wages. All analyses in this chapter have been weighted using the appropriate cross-sectional and longitudinal weights provided with the data. Only persons of working age (16 through 64 years) are included in the analyses.[42]

There are a few reservations concerning the data that should be stated. First is the decrease in the panel population during the period used in our research, 1990 through 2001. This, in combination with the low numbers of working women throughout the entire panel history, and the small numbers of men with a history of part-time work, is grounds for caution when drawing conclusions.

3.4.2 Indicators used for measuring effects on careers

Socio-economic status
The effect of part-time employment upon a person's career is measured using three variables: the socio-economic status, the function level and the hourly wage rate. The first variable used to measure the effect of a period of part-time work on careers is socio-economic status. This variable is constructed by recoding the Dutch occupational codes, using the recoding schemes from Ganzeboom *et al.* (1992) into ISEI status scores (running from 16 (low) to 90 (high). ISEI scores are the weighted averages of standardized measures of the income and education of incumbents of each occupation.

Function level
The second variable used is the function level. The function level is a classification by which occupations are ordered according to the estimated period needed to be competent in the activities required for the occupation (Huijgen *et al.*, 1980). The function level is a recode of the Dutch occupational codes. The function level variable ranges from 1 (low) to 7 (high). The function level is based on the most appropriate education and the length of the professional experience required for the function.

Hourly wage
The last indicator is the gross hourly wage rate. In the SEP, retrospective information on the annual gross wage in the year prior to interview is available. The data also include retrospective information on the number of months worked and information on the number of hours currently worked. This information is used to derive gross hourly wages. The use of retrospective information implies that there is no wage information for the last wave of the panel (2001). Wages are expressed in euro and are corrected for price inflation (base year 2001).

42 Note that the models estimated in Section 3.5 have also been estimated for respondents age 25-55 but that this made no difference for the parameters of interest.

Part-time employment
Part-time work is measured as a minimum of twelve and a maximum of 34 working hours per week. The wage analyses include an initial selection of a minimum of 16 working hours per week. This is because there are too many inconsistencies found in the registration of income for persons working less than 16 hours per week.

3.4.3 The four samples used for the models
With our data, it is impossible to follow respondents throughout their entire career, as the average career has a length of 30 (in the case of early retirement) to 40 years. Therefore, a micro-career model is used to characterize a section of a person's career. In order to establish the direction and the magnitude of any effect, the first analyses are run on a sample that includes the maximum number of respondents. Any effect found from this first set of analyses will help to refine the further analyses. In total four different samples are needed to enable analysis of the research questions. A first rather basic sample is used to establish if there are effects, and, if so, the direction of these effects. The first two research questions are applied to this first sample:

How does part-time work affect careers?
How does past part-time work affect careers?

The four-year micro-career
Employees are followed for a period of four years, and an estimate is made how their function level, socio-economic status and wage level in the fourth year is affected by their current part-time employment status and their part-time history in the previous three years. The sample consists of almost 16000 men and 11000 women, who have been working for four consecutive years.

Figure 3.2: Employment pattern of the four-year micro-careers under scrutiny

	Year			
	1	2	3	4
Employment status	Either part or full-time	Either part or full-time	Either part or full-time	Either part or full-time
				↑
				Function level; socio-economic status; wage level

The six-year micro-career

Now the second research question is the focus:

How does past part-time affect careers?

Up to now, research on the effects of part-time work has almost exclusively been comparing part-timers to full-timers. By investigating the six-year micro-career periods, it is possible to observe how a past period of part-time work affects the career (i.e., the function level, socio-economic status and hourly income) after a return to full-time employment has taken place. This set of analyses is run on a more restricted sample to better isolate in particular any effect found for past part-time employment. This was constructed by following those respondents who were in the panel for a minimum of six consecutive years, during which they were active participants in the labor market. In order to establish the effects of a period of part-time work (defined as 12-34 hours a week) on the career as compared to a career made up only of full-time work, a further stipulation is made that the last three years of the career must have been working full-time. The first three years can be any variation of part-time and or full-time work (see Figure 3.3). Basically, the number of years is counted that a person working full-time in the last three years of our time window has worked part-time in the three years prior. With these data, such a time window can be defined for the period 1990-1995, 1991-1996, ... , 1996-2001.

Figure 3.3: Employment pattern of the six-year micro-careers under scrutiny

	Year					
	1	2	3	4	5	6
Employment status	Either part or full-time	Either part or full-time	Either part or full-time	Full-time	Full-time	Full-time
						↑
						Function level; socio-economic status; wage level

Next, the analyses for status change and wage growth is performed for the same population of working respondents on the basis of the six-year micro-careers (see Figure 3.4). This will allow some preliminary answers to the fourth question regarding whether the effects are lasting. By ascertaining the effect on growth, we can establish whether there can be any recovery. To do this status and wage growth are measured between years four and six. The sample comprises some 9500 men and 6100 women who have worked for six consecutive years.

Figure 3.4: Employment pattern of the growth model sample under scrutiny

	Year					
	1	2	3	4	5	6
Employment status	Either part or full-time	Either part or full-time	Either part or full-time	Either part or full-time	Either part or full-time	Either part or full-time
				↑		↑
				Socio-economic status; wage level	→ Growth	Socio-economic status; wage level

Lastly, eleven years of the panel are used to answer the third (now with a longer time window) and the fourth research questions: How does part-time employment affect labor market participation, and are the effects lasting?

In this sample using eleven of the panel years, fewer restrictions are made and this means that respondents will have different work history durations. The only restrictions are that respondents are of adult working age in the year measured (18 to 65 years), not enrolled in full-time (initial) education, and not restricted from working by handicap or illness. The model measures the number of years in their part-time working history (counting three years in the past), and whether the respondent is currently working part-time or full-time. For the question regarding labor continuity, the chance of being employed in the next year (T_{+1}) is analyzed by the part-time history (counting three years back T_{-1} through T_{-3}), and the current employment status.

Figure 3.5: Employment pattern of the 11-year panel

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
wh	wh	wh	cws	pw						
	wh	wh	wh	cws	pw					
		wh	wh	wh	cws	pw				
			wh	wh	wh	cws	pw			
				wh	wh	wh	cws	pw		
					wh	wh	wh	cws	pw	
						wh	wh	wh	cws	pw

wh=work history, cws= current working status, pw=probability of working.

The wage models make use the same sample for two different regression models. The first uses the logarithm of the gross hourly wage in T_0 to explain the wage growth between T_0 and T_1. The second model uses the logarithm of the gross hourly wage in T_0 to explain the wage growth between T_0 and T_3.

3.5 The effect in the four-year micro-careers

This set of models has been estimated using a sample including all respondents that have worked for a period of four years regardless of whether that has been part-time or full-time. This set focuses on the question of whether being employed part-time (*PT*) or having a past history of part-time work (*PPT*) has an effect on the wage level, ISEI and the probability of being in a low level job.

The models for the level of the dependent variables are written as follows:

$$\ln(y_{t=4}) = \alpha + \beta X + \lambda PT + \gamma PPT + \varepsilon \quad [1]$$

$$ISE_{t=4} = \alpha + \beta X + \lambda PT + \gamma PPT + \varepsilon \quad [2]$$

$$pr(lf_{t=4}) = \alpha + \beta X + \lambda PT + \gamma PPT + \varepsilon \quad [3]$$

In these equations, *X* denotes the set of covariates including age (and age squared to control for curvilinearity in the age effect), level of education (up till lower secondary, higher secondary, college bachelors, and college masters), marital status (married or not), children younger than 16 years of age (distinguishing between no children and the number of children), industry sector (industry/agriculture, construction and transport, trade, services, public sector/education, and healthcare), and dummies for the year of observation. *PT* is the current working status part-time with full-time as reference. *PPT* is the number of years the respondent has worked part-time in the first three years of each of the micro-careers. α, β, λ and γ are the parameters to be estimated with ε being the error term. Of particular interest is in γ being the effect of past part-time employment on current wage level, socio-economic status and the probability of being employed in a low-level job. All models have been estimated for men and women separately and standard errors are corrected for the repeated observations.

Table 3.2 presents the results of the wage regression. Age has a significant positive effect on wage level, the effect is equally strong for men and women. This effect levels off, however, such that the maximum wage for males is reached at age 52 and at age 45 for females. Being married shows a significant effect on wage level for both sexes but with opposite signs. Marriage has a positive effect on the wage level of men. Unmarried women, however, tend to have higher wages than married women. These opposite signs for the sexes are also found for having children younger than 16 years of age and the number of children younger than 16 years of age. The conclusion can be that married men earn more than single men and will earn even more when the number of children increases, which suggests a typical 'male breadwinner' pattern.

Table 3.2: Results of gross hourly wage regression (logarithm) (four-year micro-careers)

	Men	Women
Age	0.049***	0.049***
Age squared (/100)	-0.047***	-0.055***
Married	0.081***	-0.032**
Children younger than 16 years of age	-0.035*	0.005
Number of children younger than 16 years of age	0.019**	-0.013
Educational level (reference=primary school and lower secondary school)		
higher secondary school	0.138***	0.150***
higher professional education	0.357***	0.291***
university	0.505***	0.481***
Currently working part-time	0.128***	0.134***
Number of years past part-time	-0.058***	-0.071***
Sector of activity (reference=industry/agriculture)		
construction/transport	-0.007	0.081**
trade	-0.068***	-0.080***
services	0.064***	0.009
public sector/education	0.029*	0.100***
healthcare	-0.052**	0.046*
Year (ref=1993)		
1994	-0.047***	-0.050***
1995	-0.061***	-0.115***
1996	-0.073***	-0.090***
1997	-0.066***	-0.049***
1998	-0.075***	-0.087***
1999	-0.072***	-0.057***
2000	-0.094***	-0.047***
2001	-0.099***	-0.066***
Constant	1.446***	1.500***
Observations	13550	9574
R-squared	0.32	0.18

Source: SEP 1990-2000, * significant at 10%; ** significant at 5%; *** significant at 1%

The higher the education, the stronger the positive effect on wage level for both men and women but this is only significant for men. Once again, it can be seen that the positive effect of a higher secondary level of education is stronger for women than for men. It can be concluded that the private return on education is higher for male workers compared to female workers, however, it is possible that this wage differential is caused by the fact that female workers have, on average less experience in the labor market which favors a human capital hypothesis. Women with part-time work experience accrue less capital whereby their income is lower. Concerning the sector of industry, employment in the construction and transportation sector has a significant positive effect on wage level for women. Working in wholesale and retail trade has a significant negative effect on wage level for both men and women. Working in the

service sector has a significant positive effect on wage level for men. Working for the public and educational sector has a significant positive effect on wage level for men and women. This effect is stronger for women. Compared to the industry, working in healthcare has a significant negative effect on wage level of full-time working men and a significant positive effect on the wage level of women.

Working part-time has a significant positive effect on wage level and this effect is slightly stronger for women than for men. This has already been found in previous research using Dutch panel data (Dekker *et al.*, 2000). A possible explanation is that because of these higher wages, some Dutch employees can 'afford' working part-time, while maintaining an acceptable level of living. A history of part-time work however has a significant negative effect on wage level for both sexes. This means that full-time working employees with a history of part-time employment earn less. Part-time working male employees also earn less when they have worked part-time in the three previous years (0.128-3*0.058= -0.046). Part-time working females earn lower wages when they have been working part-time in two or three of years in the past (0.134-2*0.071= -0.008). This evidence suggests a dual part-time labor market with some employees on high wage jobs which are mobile towards full-time jobs and back, and others who remain in low paid part-time jobs (Tilly, 1996). But it also indicates that working part-time is fine for a short period of one to two years. As soon as this period becomes longer, there are repercussions in terms of wage. This supports the human capital hypothesis whereby the ability to accumulate capital during a period of part-time work is less. Coupled with the natural erosion of capital in terms of aging, this catches up once the period of part-time work exceeds approximately two years.

In Table 3.3 the results of the socio-economic status multivariate regression are presented. The leveling-off effect with age in this model is consistent with that in the previous one. The highest socio-economic status is reached at the age of 52 for male workers en at the age of 45 for female workers. Neither marriage nor the number of children younger than 16 years of age has a significant effect on the socio-economic status. Educational attainment shows a strong linear relation with occupational status. Again, this effect tends to be stronger for men than for women. Concerning the sector of employment with industry and agriculture as reference category, construction and transportation show a significant positive effect for women but no significant effect for men. All the other sectors have a significant positive effect on the level of occupational status for men and women as compared to industry. The current part-time variable indicates that, contrary to the wage regression, working part-time leads to a lower socio-economic status, especially for men. This would indicate that jobs with a high socio-economic status could not be carried out in a part-time capacity which supports the statistical discrimination hypothesis. This negative effect is further exacerbated for women by a history of part-time employment.

Table 3.3: Results of ISE regression (four-year micro-careers)

	Men	Women
Age	0.463***	0.650***
Age squared (/100)	-0.441**	-0.718***
Married	0.435	-0.553
Children younger than 16 years of age	-0.036	0.820
Number of children younger than 16 years of age	-0.036	-0.576
Educational level (reference=primary school and lower secondary school)		
higher secondary school	5.988***	4.119***
higher professional education	18.546***	13.855***
university	23.805***	21.887***
Currently working part-time	-2.345***	-1.068***
Number of years past part-time	-0.127	-0.605***
Sector of activity (reference=industry/agriculture)		
construction/transport	0.538	3.700***
trade	4.797***	4.176***
services	10.116***	6.581***
public sector/education	8.502***	11.156***
healthcare	3.579***	-2.889***
Year (ref=1993)		
1994	-0.664***	-0.527**
1995	-1.000***	-1.033***
1996	-0.31	-0.621**
1997	-0.918***	0.023
1998	-0.753**	-0.178
1999	-0.814**	-0.084
2000	-1.301***	-0.954**
2001	-1.701***	-0.320
Constant	26.198***	28.921***
Observations	15441	10628
R-squared	0.42	0.44

Source: SEP 1990-2001, * significant at 10%; ** significant at 5%; *** significant at 1%

Table 3.4 displays the results of a probit model that estimates the probability of being employed in a low function job. The age effect for the women tells us that the chance of being employed in a low function job decreases with age. After age 40, however, this probability increases again, leaving a small time window for career building. Neither the marital status nor the number of children affects the odds of being employed in a low level job. Educational attainment has a significant negative effect on one's chances of working in a low function job. Women with a higher secondary education have a lower probability of working in a low function job than men with a higher secondary education. At this level of education, women seem more capable of redeeming their educational investments on the job market. For employees with higher professional education and or a university degree the effect is stronger for men than for women. In regard to the sector of employment, the construction and

transportation sector remains a good place for women to be employed. It shows a significant negative effect on their probability of a low level job. This effect is the opposite for men. Services, the public sector, education and healthcare all show a significant negative effect on one's chances of employment in a low level job.

Working part-time has a significant positive effect on the probability of working in a low function job for both men and women. For men this effect is stronger than for women. A history of part-time work also shows a significant positive effect, but this time the effect is stronger for women. This shows that men working part-time have a higher probability of working in a low function level job, but women seem less capable of recovery after a history of part-time work upon returning to a full-time function. These findings support the hypothesis from the statistical discrimination theory.

Table 3.4: Probability of low-level job (four-year micro-careers)

	Men	Women
Age	0.027	-0.150***
Age squared (/100)	-0.058*	0.189***
Married	-0.116	0.024
Children younger than 16 years of age	-0.087	0.102
Number of children younger than 16 years of age	0.015	-0.017
Educational level (reference=primary school and lower secondary school)		
higher secondary school	-1.154***	-1.213***
higher professional education	-2.925***	-2.614***
university	-3.616***	-2.436***
Currently working part-time	0.727***	0.237**
Number of years past part-time	0.197***	0.258***
Sector of activity (reference=industry/agriculture)		
construction/transport	0.193*	-0.590**
trade	-0.164	0.115
services	-1.010***	-1.024***
public sector/education	-1.161***	-2.258***
healthcare	-0.692***	-2.348***
Year (ref=1993)		
1994	-0.023	-0.048
1995	0.024	-0.006
1996	-0.086	-0.034
1997	0.083	-0.239**
1998	0.020	-0.197**
1999	0.047	-0.140
2000	0.016	0.113
2001	0.143	-0.117
Constant	0.414	2.996***
Observations	15691	11099
R-squared	0.21	0.28

Source: SEP 1990-2001, * significant at 10%; ** significant at 5%; *** significant at 1%

3.6 The effect in the six-year micro-careers

The next research questions to be answered are:

1. How does the occurrence of part-time work in one's work history (micro-career) affect function level, socio-economic status and wage level?
2. And how does it affect the growth in hourly wage and socio-economic status?

To perform the analyses, the longitudinal dataset was transformed into a stacked person-period data file in which for each person a maximum of nine observations containing the micro-careers for the periods 1990-1995 up until 1996-2001 and for the periods 1990-1993 up till 1998-2001. An observation is only included if persons worked for all six consecutive years distinguished in each micro-career. To answer the first research question, the analysis is done on the data restricted to all persons working full-time (35 hours or more) during the last three years of the micro-career. In the persons-year dataset, there are about 8400 men and 1500 women having this pattern. In those analyses, the effect of part-time experience on the function level, socio-economic status and wage level in the last year of the micro-career are measured.

3.6.1 The six-year models for effect on level

The following statistical models are estimated:

- an OLS regression model to predict the level of hourly gross wage using the logarithm in last year of the six-year micro-careers (see Figure 3.3):

$$\ln(y_{t=6}) = \alpha + \beta X + \gamma PPT + \varepsilon \qquad [4]$$

- an OLS regression model to predict the level of socio-economic status (*ISEI*) in the last year of the six-year micro-careers:

$$ISE_{t=6} = \alpha + \beta X + \gamma PPT + \varepsilon \qquad [5]$$

- a probit regression model to predict the probability of working in a low-level job (*lf*: function levels 1, 2, or 3) in the last year of the six-year micro-careers:

$$pr(lf_{t=6}) = \alpha + \beta X + \gamma PPT + \varepsilon \qquad [6]$$

In these equations, *X* denotes the set of covariates. These are the same as in the previous models. *PPT* is the number of years the respondent has worked part-time in the first three years of each of the micro-careers. α, β, and γ are the parameters to be estimated with ε being the error term. Of particular interest is in γ being the effect

of past part-time employment on current wage level, socio-economic status and the probability of being employed in a low-level job. All models have been estimated for men and women separately and standard errors are corrected for the repeated observations. Results are reported in Table 3.5 (hourly wage), in Table 3.6 (*ISEI*), and Table 3.7 (low function level). In Table 3.5 a significant, positive effect of age on wage level for both men and women is observable. This effect is stronger for women. Including age squared allows for possible curvilinearities in the relation. At a certain point, the positive effect of age levels off as the negative significant effect of age squared indicates: the turning point for men is 63 years and for women 50 years. Being married has a significant, positive effect on wage level for men. The effect is not significant for women but the sign is negative. With respect to the presence of children in the household, there is no difference between employees with one or no children younger than 16 years of age, but that having more than one child has a positive effect on the wage rate of male workers.

Table 3.5: Results of gross hourly wage (logarithm) regression (six-year micro-careers)

	Men	Women
Age	0.029***	0.040***
Age squared (/100)	-0.023***	-0.040***
Married	0.058***	-0.038
Children younger than 16 years of age	-0.026	0.049
Number of children younger than 16 years of age	0.028***	-0.058
Educational level (reference=primary school and lower secondary school)		
higher secondary school	0.128***	0.134***
higher professional education	0.352***	0.274***
university	0.531***	0.481***
Number of years past part-time	-0.043***	-0.030**
Sector of activity (reference=industry/agriculture)		
construction/transport	-0.003	0.079
trade	-0.018	-0.039
services	0.109***	0.074*
public sector/education	0.035**	0.086**
healthcare	-0.009	0.034
Year (ref=1995)		
1996	-0.003	-0.001
1997	-0.009	-0.004
1998	-0.026***	-0.032
1999	-0.029***	-0.032
2000	-0.041***	-0.033
2001	-0.033***	-0.060**
Constant	1.763***	1.581***
Observations	7334	1243
R-squared	0.35	0.28

Source: SEP 1990-2000, * significant at 10%; ** significant at 5%; *** significant at 1%

The effect of educational level on wage is also positive and significant for each category for both men and women. The higher the educational level, the higher the wage level. Furthermore, this pattern is stronger for male than for female workers. Concerning the sector of activity, it turns out that when compared to industry, the service sector and the public sector and education pay higher hourly wages. The positive effect for the service sector is stronger for men than for women and a stronger positive effect for women is observed for the public sector and education. This effect is strong enough to mitigate the negative effect of past part-time work for women in these sectors. This is partial support for the hypothesis from the tournament model where workers with a history of part-time work can still compete in sectors where part-time is prevalent. However, no effect is found in the healthcare sector where part-time work is also abundant.

Turning now to the parameter of interest, the number of years working part-time in the past has a significant negative effect on the wage level for both men and women. This effect is stronger for men. This means that even at least three years after a successful re-entry into full-time employment, past years of part-time employment still carry a negative wage effect. This supports the human capital hypothesis.

Table 3.6 shows the results for socio-economic status. In comparison with the model for the hourly wage rate, this model gives a better fit. Age has a significant positive effect on occupational status and this effect is stronger for women than for men. Again, age squared shows a significant negative effect meaning that the original positive effect is not linear and does level off. This leveling-off takes place at a higher speed than in the case of the wage equation: the highest socio-economic status is found at age 51 for males and 44 for females.

Marriage and having (any) children younger than 16 years of age has no significant effect on socio-economic status for both men and women. As in the previous model, the educational level has a positive and significant effect. Again the effect of the educational level is stronger for male workers than for female workers. The sector of activity seems to be very important for both male and female employees. Employees in trade, services, the public sector and education tend to have a higher socio-economic status than similar employees in the industry. This also holds true for males in the healthcare sector, but the opposite is true for women. Women employed in the healthcare sector have lower socio-economic status levels than women working in industry and agriculture. The strong positive effect on socio-economic status for women observed in the service sector and the public and educational sectors are strong enough to mitigate the negative effect of past part-time work. This supports the tournament model hypothesis. The number of years spent in part-time employment not only has a negative effect on the hourly wage of female workers, but it also affects negatively their socio-economic status when they work in a full-time job. For male workers, however, there is no observable effect of past part-time employment on the socio-economic status.

Table 3.6: Results of ISE regression (six-year micro-careers)

	Men	Women
Age	0.512**	0.765**
Age squared (/100)	-0.502*	-0.878**
Married	0.641	-0.501
Children younger than 16 years of age	-0.434	0.837
Number of children younger than 16 years of age	0.038	-1.280
Educational level (reference=primary school and lower secondary school)		
higher secondary school	6.300***	2.898**
higher professional education	18.998***	11.561***
university	23.346***	20.044***
Number of years past part-time	-0.128	-1.043**
Sector of activity (reference=industry/agriculture)		
construction/transport	0.745	1.836
trade	4.931***	2.311*
services	9.830***	6.391***
public sector/education	7.171***	10.033***
healthcare	4.516***	-3.888**
Year (ref=1995)		
1996	0.797***	1.195*
1997	0.119	1.396*
1998	0.440	0.163
1999	0.450	0.699
2000	-0.280	-0.060
2001	-0.895*	0.532
Constant	24.211***	29.095***
Observations	8300	1452
R-squared	0.39	0.43

Source: SEP 1990-2001, * significant at 10%; ** significant at 5%; *** significant at 1%

The last model from the first set of multivariate analyses is presented in Table 3.7 The model estimates the probability (probit model) that one would 'end up' working in a low function level, i.e. function level 1, 2 or 3. A significant positive effect for age was found for men. The effect means that the probability of working in a low function job increases up to the age of 36 and decreases thereafter. An age effect was not found to be significant in the case of females. Their chances of ending up in low-level jobs do not diminish with age. For both men and women, being married or having children younger than 16 years of age has no significant effect on one's chances of having a low function level. Just like in the case of wage and socio-economic status, the educational level has a strong impact. The higher the educational level, the less likely both men and women are to work in low-level jobs. Again, the effect is stronger for men than for women for all levels of education. This means that men are more able to 'cash-in' on their educational investments than women are.

Concerning the sector of employment with industry/agriculture as reference category, a significant negative effect is found for the service sector, the public sector

and education and the healthcare sector for both men and women. Working in these sectors decreases one's chance of having a low function job.

A history of part-time work prior to the entry in full-time employment increases significantly the probability that one will work in a low-level job, even after three years of full-time employment. This effect is stronger for women than for men. This supports the hypothesis from the statistical discrimination theory.

Table 3.7: Probability of low level job (six-year micro-careers)

	Men	Women
Age	0.094*	-0.121
Age squared (/100)	-0.132**	0.141
Married	-0.049	0.009
Children younger than 16 years of age	-0.003	0.397
Number of children younger than 16 years of age	-0.026	-0.332
Educational level (reference=primary school and lower secondary school)		
higher secondary school	-1.151***	-1.130***
higher professional education	-2.944***	-2.811***
university	-3.355***	-2.083**
Number of years past part-time	0.180*	0.318**
Sector of activity (reference=industry/agriculture)		
construction/transport	0.225	-0.664
trade	-0.244	-0.136
services	-0.972***	-1.962***
public sector/education	-0.995***	-2.549***
healthcare	-0.581**	-1.422***
Year (ref=1995)		
1996	-0.088	-0.181
1997	0.107*	-0.163
1998	-0.040	0.188
1999	0.066	-0.110
2000	0.064	0.235
2001	0.199*	0.303
Constant	-1.136	2.530
Observations	8408	1466
R-squared	0.19	0.24

Source: SEP 1990-2001, * significant at 10%; ** significant at 5%; *** significant at 1%

3.6.2 The effect in the six-year growth models

This set of models aims at answering the second research question of this study. The question is whether or not part-time employment in the past or currently being employed in a part-time job has an effect of the level of wage *growth* or on the level of change in socio-economic status. The idea behind these models is to establish insight into the ability to recover from initial setbacks in wage or socio-economic status. If growth is higher upon returning to a full-time position, this means that the initial scarring can be compensated after some period of time. For the *growth* models, six-year periods are again used, whereby respondents have been employed all years,

this time measuring the level of change between year 4 and year 6. This allows not only a test of whether part-time experience results in cross-sectional difference in wage and employment status, but also whether these differences persist over time.

The growth models are specified as follows:

$$\ln\left(y_{t=6}/y_{t=4}\right) = \alpha + \beta X + \delta \ln(y_{t=4}) + \lambda PT + \gamma\ PPT + \varepsilon \qquad [7]$$

$$\left(ISE_{t=6} - ISE_{t=4}\right) = \alpha + \beta X + \delta\ ISE_{t=4} + \lambda PT + \gamma PPT + \varepsilon \qquad [8]$$

where the set of covariates *X* is the same as in the previous analyses. The wage level and socio-economic position are now included in order to control for bottom and ceiling effects. Note that there is not an estimate model for change in the function level. The scale only counts 7 levels and for this reason does not allow for sufficient variation.

Wage growth

Table 3.8 shows the growth in wage between year four and six in the micro-career. Age has a significant positive effect on wage growth for women. This effect levels off at the age of 45. The men show no effect of age on their wage growth. Being married results in a significant positive effect on the wage growth of men. This supports earlier findings showing that men experience an increase in wage when married as influenced by the additional responsibility towards their spouse (Becker, 1985).

Educational attainment has a strong linear relation with wage growth. The higher the educational level, the stronger the wage growth and this effect is stronger for women than for men. While investment in education was found to yield lower wage returns for women than for men, it now turns out that this difference declines over the years, due to the higher growth rate of female wages.

In regard to the sector of employment being employed in the construction and transportation sector, the public sector and education or in health services has a significant positive effect on the wage growth for women. Employment in the service sector has a significant positive effect on wage growth for men.

Working part-time results in a lower wage growth rate for both men and women. However, this effect is stronger for men than for women. So while part-time workers were found to enjoy a higher wage, in the intermediate term, their prospects for wage increase are poor. A history of part-time work has a negative effect on the wage growth of female workers. For male workers, the effect is found to be positive, which means that some catching up is taking place (remember from Table 3.5 that past part-time employment had a negative effect on the wage level). All in all there is some strong evidence that where a short spell of working part-time has no immediate negative effect on wages, it will if the part-time period continues.

Table 3.8: Wage growth between t=4 and t=6 (six-year growth model sample)

	Men	Women
Age	0.002	0.015**
Age squared (/100)	0.000	-0.017**
Married	0.033***	-0.007
Children younger than 16 years of age	0.004	0.019
Number of children younger than 16 years of age	0.001	-0.004
Educational level (reference=primary school and lower secondary school)		
higher secondary school	0.055***	0.082***
higher professional education	0.146***	0.171***
university	0.196***	0.288***
Ln(hourly wage)	-0.366***	-0.584***
Currently working part-time	-0.103***	-0.070***
Number of years past part-time	0.017**	-0.012*
Sector of activity (reference=industry/agriculture)		
construction/transport	-0.010	0.060**
trade	-0.017	-0.031
services	0.049***	0.009
public sector/education	0.013	0.055**
healthcare	-0.011	0.034*
Year (ref=1993-1995)		
1994-1996	0.009	0.035**
1995-1997	0.024**	0.075***
1996-1998	0.023**	0.056***
1997-1999	0.021**	0.067***
1998-2000	0.035***	0.097***
1999-2001	0.001	0.070***
Constant	0.850***	1.137***
Observations	8765	5768
R-squared	0.19	0.30

Source: SEP 1990-2000, * significant at 10%; ** significant at 5%; *** significant at 1%

Change of socio-economic status

Table 3.9 presents the results from the last model estimated. It is concerned with the change in socio-economic status between year four and year six in the micro-career. Age has a significant negative effect on the growth in occupational status for men. No age effect is found for women. Neither marriage nor the presence of young children has a significant effect on the change to a higher occupational status. Educational attainment shows a strong linear correlation for both men and women. The higher the level of educational attainment, the higher the occupational status will become, an effect which is stronger for men than for women. This is consistent with the findings up to now.

Concerning the sector of employment, with agriculture and industry as reference category, again, working in the construction and transportation sector shows a significant positive effect on the change in occupational status for women. Trade, services,

public sector and education all show significant positive effects on the upward mobility in terms of occupational status for both men and women. Healthcare is a bit different. In terms of occupational status, there is a significant positive effect for men and a negative albeit insignificant effect for women.

Working part-time shows no significant effect on a change in occupational status for men and women. Given that part-timers have a lower socio-economic status to begin with (see Table 3.3), it can be concluded that because there is no catching up, this will continue to be the case. Furthermore, a history of part-time does have a significant negative effect on socio-economic mobility. This effect is not significant for male workers.

Table 3.9: Change in ISE level between t=4 and t=6 (six-year growth model sample)

	Men	Women
Age	-0.144*	0.006
Age squared (/100)	0.138	-0.028
Married	0.409	-0.021
Children younger than 16 years of age	-0.533	0.011
Number of children younger than 16 years of age	0.179	-0.038
Educational level (reference=primary school and lower secondary school)		
higher secondary school	1.749***	0.804***
higher professional education	4.601***	3.184***
university	5.372***	4.947***
ISE	-0.254***	-0.250***
Currently working part-time	0.301	0.094
Number of years past part-time	-0.049	-0.291**
Sector of activity (reference=industry/agriculture)		
construction/transport	0.141	0.947*
trade	1.100***	0.929**
services	1.857***	1.135***
public sector/education	1.724***	2.663***
healthcare	1.787***	-0.229
Year (ref=1993-1995)		
1994-1996	-0.290	0.668**
1995-1997	-0.407	0.860**
1996-1998	-0.226	0.521*
1997-1999	0.076	0.316
1998-2000	0.384	0.384
1999-2001	0.187	0.873**
Constant	13.279***	11.073***
Observations	9490	6105
R-squared	0.12	0.12

Source: SEP 1990-2001, * significant at 10%; ** significant at 5%; *** significant at 1%

3.7 The effect in the eleven-year panel

This section presents the last two multivariate analyses answering questions concerning the longer-term effects of part-time work. Of particular interest, is the effect on labor continuity that has not been addressed in the previous models. These analyses are run on the panel making use of eleven of the panel years to include a maximum number of respondents and to achieve a better understanding of how life course and life course related issues interact with career paths.

3.7.1 How does part-time work affect participation?

In this section the multivariate analyses are presented answering the question: what is the chance of remaining an active labor market participant given one's part-time working history and current working status? 'Stay' is the indicator for labor market continuity measured as the chance of working (next year) according to the current labor market status (part-time or full-time) and the recent history of part-time work (in the last three years. For these analyses some changes in the covariates have been made compared to the previous sets of analysis. To better isolate life course effects over this extended period under analysis, the age covariate is now included as a series of dummies for age categories. This has also been done for the age of the youngest child.

The first question to be addressed is how part-time work affects labor participation in terms of continuity. Labor market exit is initiated by an external occurrence, for instance, a female worker who exits for caring tasks. Human capital theory states that a part-time worker will be more likely to exit the labor market than a full-time worker due to the lesser sacrifice of earnings. Our hypothesis is in this line of reasoning as we can expect that part-time employees will show less labor continuity than their full-time colleagues.

This will be analyzed using logistic regressions over the period of eleven years, measuring the odds that individuals working part-time will continue to be working the following year. By using dummies for the age groups, and doing the analyses separately for men and women, it is possible to analyze how current and past part-time employment actually effects the active labor participation of these groups. The analysis is done on the chance of having paid work in the next year (T_{+1} as predicted by the current working status in T_0 (part-time or full-time) and the recent past part-time employment counted in the last three years (T_{-1}, T_{-2}, T_{-3}). The first year measured as T_0 is 1993 as this is the first year for which a three year work history can be made (1990, 1991, and 1992). This probability is modeled by a logistic regression, in which the chance of having paid work in the next period, P_1, is defined by:

$$\frac{p_1}{1-p_1} = e^{a+bX} \qquad [9]$$

where a and b are the regression constants and X is the vector of independent variables.[43] This vector contains both personal characteristics as well as the recent part-time labor market experience. By using a 'sliding' time window, maximal use of the panel is possible and the analysis includes almost 31000 observations.

Table 3.10: Logistic regression of probability of work in next year by current part-time status, and past part-time history (eleven-year panel)

	Men	Women
Current part-time status	-0.843***	-0.845***
Number of years past part-time (ref. = none)		
one year	-0.041	0.192
two years	-0.124	0.400**
three years	0.383*	0.152**
Partner	0.261	-1.033***
Educational level (ref. primary and lower secondary level)		
higher secondary	0.396	0.516***
higher professional and university	0.680	0.870***
Age (ref. = 55-64 years)		
18-24 years	1.704***	1.371***
25-34 years	1.421***	0.922***
35-44 years	1.451***	1.233***
45-54 years	1.351***	1.063***
Age youngest child (ref. = no children)		
0-5 years	-0.286**	-1.396***
6-11 years	0.054	-0.815**
12-17 years	0.314*	-0.446***
18-20 years	0.331**	-0.258***
Constant	1.797***	1.936***
Observations	19580	11400
R-squared	0.04	0.12

Source: SEP 1990-2000, * significant at 10%, ** significant at 5%, *** significant at 1%

Table 3.10 presents the probability of *staying* in the labor market as influenced by one's current working status (full-time or part-time) and the recent past part-time history measured in the three previous years. The analysis is done separately for men and women. The model only explains four percent of the variance in the men's population due to the much smaller number of men currently working part-time and with a part-time working history. Even so, the effect of *currently* working part-time is almost as strong for men as it is for women. The chance that a part-time worker will continue to be working in the next year is significantly reduced. Working part-time increases the chance of exiting the labor market for both men and women.

43 Because the sector effects have been clearly established, they are now excluded from this set.

This supports the human capital hypothesis. Past part-time has a negative sign in the men's analysis for one and two years, but this turns positive at three years. At this point a positive effect for past part-time experience on continuity is observable for men, although this is only significant at 10 percent. Women exhibit a significant positive effect for two and three years part-time work experience, which is strongest at two years. One year of part-time experience has no significant effect on women's labor market continuity. This demonstrates that part-time work does facilitate women's labor market continuity. It is quite possible that part-time work allows individuals (especially women) to enter the labor market who would otherwise not participate at all. But this analysis illustrates that the likelihood of remaining an active participant is significantly reduced by *current* part-time employment. This supports the human capital hypothesis. The strongest age effect (and this is positive) for both men and women is observed for the age group 35-44 years. This age is measured in T_0. This means that the effect of past part-time is felt more strongly when this occurs for the younger age groups. This gives some support to the tournament model based idea of establishing a bridgehead before cutting back on working hours.

3.7.2 What is the longer-term effect on wage growth?

In terms of wages on the Dutch labor market, legislation prohibits discrimination of part-time work, and the hourly earnings of part-time employees should be equal to those of full-time workers (*ceteris paribus*). But persons with a recent history of part-time work may earn less (due to a lower accumulation of capital) than their continual full-time working colleagues. The effect of the lesser accumulation of capital due to past part-time employment should, with a longer time window in the data, be observable in a difference in the effect of past part-time and current part-time on wage growth. The expectation is that employees with past part-time will earn less than their colleagues who have only worked full-time, and that although an initial rebound effect may be observable, this will not continue long enough to make up for the lesser capital accumulation.

A current part-time employment status has a negative effect on wage growth for men. Past part-time exhibits a short rebound effect in the first growth model measuring growth between T_0 and T_1. The wage growth is positively affected by past part-time experience. This effect lessens both in strength and significance over the longer wage growth period between T_0 and T_3. This indicates that men with a history of part-time employment experience a rebound effect during which their wage growth accelerates and brings them back up to the level of growth before the period of part-time work. The diminishing effect demonstrates that this is a short-lived effect meaning essentially, that the period of part-time better not be of longer duration or the growth will not be sufficient to compensate the missed earnings. This is very much in accordance to the expectation. The additional growth model, covering the longer period demonstrates that the rebound is cursory. This may be sufficient if the past part-time period is brief as well. The longer the duration of the part-time working spell, the less likely the (complete) recovery will be.

Table 3.11: Two wage (logarithm) growth models for men (eleven-year panel)

	Wage difference T_1- T_0	Wage difference T_3-T_0
Wage T_0	-0.444***	-0.498***
Current part-time	-0.112***	-0.117***
Past part-time (ref. = no part-time history)		
one year	0.014	0.017
two years	0.062**	0.017
three years	0.068***	0.046*
Partner	0.032**	0.026*
Educational level (ref. primary and lower secondary level)		
higher secondary	0.065***	0.072***
higher professional and university	0.193***	0.238***
Age (ref. = 55-64 years)		
18-24 years	-0.221***	-0.114**
25-34 years	-0.147***	-0.119***
35-44 years	-0.091***	-0.093**
45-54 years	-0.054**	-0.064*
Age youngest child (ref. = no children)		
0-5 years	0.023	0.021*
6-11 years	0.005	0.016
12-17 years	-0.002	0.015
18-20 years	-0.007	-0.010
Constant	1.233***	1.389***
Observations	14452	8716
R-squared	0.24	0.30

Source: SEP 1990-2000, * significant at 10%, ** significant at 5%, *** significant at 1%.

Table 3.12 presents the same analysis for women. Here too, current part-time employment has a negative effect on wage growth for both periods. This means that although part-time employees may realize respectable hourly wage levels, their prospects for wage increase are not at all good. But unlike the men's model, women exhibit both a short-term positive effect on wage growth and a positive effect for past part-time over the longer term. This means that their history of part-time employment does not keep them from climbing career ladders once they have returned to full-time employment. Past part-time has a positive effect on their wage growth which continues to be felt as long as four years afterward.

This is different than the findings in the six-year micro-career wage growth model (see Table 3.8). The first period of wage growth observed in this model is between 1993 and 1994. This is repeated for each successive year (1994-1995, 1995-1996... up to and including 1999-2000). For the longer period, the first period observed is 1993-1996, and further 1994-1997, etc. By observing so many time windows, it has been possible to capture a more accurate effect of past part-time on wage growth

Table 3.12: Two wage (logarithm) growth models for women (eleven-year panel)

	Wage difference T_1- T_0	Wage difference T_3-T_0
Wage T_0	-0.586***	-0.646***
Current part-time	-0.098***	-0.127***
Past part-time (ref. = no part-time)		
one year	0.074***	0.094***
two years	0.047**	0.055**
three years	0.068***	0.075***
Partner	0.008	-0.021
Educational level (ref. primary and lower secondary level)		
higher secondary	0.099***	0.111***
higher professional and university	0.211***	0.222***
Age (ref. = 55-64 years)		
18-24 years	-0.163***	-0.042
25-34 years	-0.050**	-0.026
35-44 years	0.002	0.035
45-54 years	0.006	0.035
Age youngest child (ref. = no children)		
0-5 years	0.027**	0.027
6-11 years	-0.040**	-0.050**
12-17 years	-0.046***	-0.060**
18-20 years	-0.048**	-0.066***
Constant	1.469***	1.656***
Observations	11192	6461
R-squared	0.31	0.36

Source: SEP 1990-2000, * significant at 10%, ** significant at 5%, *** significant at 1%

both for the short-term and the longer term. In the six-year micro-career model, a positive, albeit slight effect of past part-time on wage growth was found for men. The fact that a stronger significant positive effect is now found, may be due to the total period of analysis (1990 through 2000) making a longer time window available as well as a larger population under scrutiny. Also, in the six-year micro-career model it was further stipulated that respondents has been working full-time for at least three years.

The explanation for the women's analysis is similar, with the change in sign being the most significant difference in the two analyses. Past part-time does have a positive effect on women's wage growth. Women do not suffer set-backs in career building (regarding their wage growth) by having past-time employment if it has been for a period of two years or longer. There is still an important part of the explanation to be made. Women often take a step down when making the transition from part-time to full-time work. The sacrifice is (often) made in hourly wage when taking on a full-time job that is still possible to combine with their other important life domains. The selection criteria for job quality shift from high hourly wages to the secondary and tertiary job emoluments, such as flexible working hours, more vacation time, and child-care cost compensation, etc. This effect was (indirectly) observable in the results from

the wage analyses on the six-year micro-careers where respondents are working a minimum of three consecutive years in a full-time function. One crucial message still needs to be stressed: current part-time employment remains a deterrent for wage growth for men and women.

3.8 Conclusion

This chapter addresses the question of how the career detour of working part-time affects individual careers. The career detour part-time work is of particular interest because of its relative resilience over time, its considerable growth over the last two decades, as well as its propensity for even further growth. A majority of Dutch working women and a growing minority of Dutch working men are working part-time. This sizeable group of part-timers has even more growth potential as can be seen by the results of the OSA Labor Supply Panel (2002) in which among the persons currently working full-time, another 13,5 percent of the men and 6 percent of the women state a preference for working *fewer* hours than they currently do. This, coupled with the growing number of women entering the labor market (again a majority of whom one can only assume will take up part-time jobs) suggests that the peak (unlike Everest) in part-time work in the Netherlands has not yet been reached. A transition to or from part-time work is an excellent means of adding flexibility to labor markets. The role of part-time work within a transitional labor market is integral; it allows for a combination of paid labor and caring tasks. This is the first and foremost reason for its explosive growth as a phenomenon on the Dutch labor market.

Part-time work also enables working men and women to make smooth transitions to and from the domains of education and care albeit at their own expense. These are transitions that will become increasingly important in the evolution towards the kind of labor market flexible and resilient enough to adeptly respond to economic swings. The very necessity to make these modifications in the labor market is not only due to the recent emphasis on the knowledge-based economy, but also because of demographic changes. The demographic developments of a lower fertility rate and a higher life expectancy have resulted in an aging society. The Netherlands is not unique in this respect; it is faced by Europe as a whole. This aging society is dependent on a labor market that is characterized by a high level of participation and strong economic performance to enable and ensure the continuity of the Dutch and European welfare states. Part-time work appears to be an excellent solution for keeping more people working longer, which is exactly the mandate from the European Commission to all of its Member States.[44] The Netherlands breaks all records as a part-

44 The European Council set targets for employment population ratios (number of active labor market participants as a percentage of the total working age population) at the Lisbon top in 2000. The EU target for 2010 is 70 percent, or 7 out of 10 persons of working age (15-64) should indeed be actively participating in the labor market. The current EU average is 51 percent (OECD, 2003).

time working nation with prospects for even further growth. The enormous diffusion of part-time work in the Netherlands certainly has advantages, but are there unanticipated and unintentional repercussions on the micro-level? Just what are the consequences for individual careers set in motion by a period of part-time work? To answer these crucial questions, research on panel data is necessary as it enables the tracking of individuals through time. The aim of this study is to establish and isolate the effects of (past) part-time work on the upward mobility of careers. Data from the Dutch Socio-economic Panel (SEP) are used to follow individual careers measuring labor continuity as well as using three job related indicators: wage, socio-economic status, and function level.

In this section, multivariate analysis techniques have been applied to measure the effect of past and current part-time work on function level, socio-economic status, and hourly wage. Whether or not such differences are only temporary and some catching up is taking place is also looked into. The analyses have been run on four-year, six-year, and eleven-year panel models. The results are summarized in Table 3.13.

Labor continuity:
Regarding the effects of current and past part-time on labor force continuity, the results are similar for men and women. Current part-time has a negative effect on the chance of being active in the labor market in the following year for both men and women. The chance of a labor market exit is higher if currently employed in a part-time job. Regarding the history of part-time, the effects for men are only significant after three years of part-time experience and the effect is positive. Women with part-time work experience have a greater chance of remaining active in the labor market.

Table 3.13: Summary of the results

	Men		Women	
	Current part-time	Past part-time	Current part-time	Past part-time
Four year models				
Wage level	+	–	+	–
ISE	–	n.s.	–	–
Probability of low level function	+	+	+	+
Six year models				
Wage level		–		–
ISE		n.s.		–
Probability of low function		+		+
Wage growth	–	+	–	–
Socio-economic mobility	n.s.	n.s.	n.s.	–
Eleven year panel models	–	n.s.	–	–
labor continuity	–	n.s.	–	–
one year wage growth model	–	+	–	+
three year wage growth model	–	n.s.	–	+

– negative, + positive, n.s.: not significant.

Socio-economic status:
Female workers have a lower occupational status whether they currently work part-time or have worked part-time in the past. This is observed in the four-year model, the six-year model and the six-year growth model. The evidence suggests that they are also unable to make up for their lower socio-economic position, even after a successful transition into a full-time job.

Men show fewer negative effects on their socio-economic status. Only currently working part-time has a negative effect on the socio-economic status of men. No significant effect was found for past part-time employment and no effect was found on socio-economic change.

Function level:
Function level is quite clear concerning the effects of part-time employment. Part-time work is not to be combined with higher functions. This applies equally to men and women. Past part-time employment makes it more likely that men and women are working in a low level job. Current part-time employment has negative consequences for both men and women, indicating an incompatibility of higher level jobs with part-time work.

Wage level:
The wage level of men and women is positively affected by a current part-time employment status. Current employment in a part-time job, is correlated aith a higher hourly wage rate indicating that men and women are capable of realizing a relatively high hourly wage level in part-time jobs.

However, *past* part-time affects the wage level of men and women negatively. Part-time experience implies a cost in terms of lower wages for both male and female workers, and this is the case even after a successful transition to a full-time job. This is evidence suggesting that the labor market is a dual one with some employees in high wage jobs that are mobile towards full-time jobs and back, and others who remain in low paid part-time jobs.

Wage growth:
While part-timers do enjoy a higher hourly wage, in the intermediate term, their prospects for wage increase are poor. In the six-year growth models a positive effect for part-time experience is observed for men but not for women. In this model, only full-time workers are observed who have been working full-time for a minimum of three years. This positive effect on men's wage growth is on the real wage growth. In the eleven-year models, more individuals are followed and for a longer period. No stipulation for (currently) working full-time is made, and the growth model is the *relative* growth over a one-year period first, and following this, a three-year period. A negative effect for current part-time employment on wage growth is observable for both men and women.

However the results from the eleven year models exhibit a positive effect of past part-time on the wage growth for men and women. For men, this catching up occurs after approximately three years of part-time experience. For women, this is after two years of part-time experience. This implies that although the effect of current part-time employment on wage growth is negative, part-time workers, who continue working part-time (on the Dutch labor market) can realize sufficient wage growth. Despite the fact that past part-time experience has a negative effect on the wage level, a positive effect on wage growth is observed, which means that the set back in wage is only temporary and that part-time workers are able to catch up.

4. The effect of nonparticipation on careers[45]

4.1 Introduction

In this chapter the career detour focused upon is a period of nonparticipation, answering the research question: how does a period of nonparticipation affect the careers of individuals? Taking a break from working life has not been an option open to most individuals in the past. Historically speaking, at least since the early 1950s, men started their working careers following a period of initial education, often remaining at the same organization until retirement. Women literally dropped out of the labor force after marriage to run the household and take care of children. Only the affluent were able to *choose* to exit the labor market for any extended period of time. But times are changing and this has consequences for the very meaning of working lives. The most important change here is the massive influx of women into the labor market during the last quarter century. With this event, driven for the greater part by the increasing emancipation of women, part-time work and career interruptions have become more common phenomena on the Dutch labor market. Liefbroer and Dykstra (2000) and Schippers (2001) point out an increasing diversity in life course biographies. Persons entering the labor force may, during their career, have periods of nonparticipation in paid labor where time for educational training, caring tasks, and leisure will be dominant. These periods of re-training or simply 're-grouping' will facilitate workers in lifelong learning and reduce chances of a premature labor market exit due to burnout.

There has been much research in the past regarding the effects of periods of involuntary nonparticipation (unemployment) for the further careers of workers. And one may wonder whether a period of voluntary nonparticipation in the labor market has similar effects for one's career path. Unemployment is regarded in policy discussions by its very definition as not a state of one's choosing. In economic theory however, there is a differentiation made in voluntary and involuntary unemployment. Unemployment carries with it a negative emphasis, which can affect the further career path development. Nonparticipation is commonly referred to as unpaid work. The distinction between *paid* and *unpaid* work is an important one just as many

45 This chapter is based on Román, A. and J.J. Schippers (2005), 'To work or not to work: a vital life course decision and how it affects labor careers,' Tilburg: OSA, Institute for Labour Studies.

nonparticipants are quite avidly *participating* in housekeeping, childcare, volunteering or re-training, to name but a few of the possible unpaid activities. With a future of longer working careers in perspective, coupled with the increase in labor participation by women, the study presented in this chapter asks four fundamental questions:

1. *How does nonparticipation affect careers?*
2. *How does the duration of the interruption affect careers?*
3. *How does the nature of the interruption affect careers?*
4. *Are the effects lasting?*

To answer the research questions, individuals are followed through time using data from the Dutch Socio-economic Panel (SEP). Issues regarding how recent past labor behavior affects mobility, whether that mobility is in and out of the labor market, (from job to job), or questions regarding upward or downward mobility are not addressed in this study.

The structure of this chapter is as follows. Section 4.2 introduces some relevant theoretical perspectives, as well as going deeper into aspects of theory presented earlier in chapter 2. It also presents a brief overview of some of the more pertinent studies regarding the effects of nonparticipation on labor careers. Section 4.3 presents the data in the form of a descriptive analysis of the research population by demographic characteristics, answering the question "How can the current labor career of Dutch men and women be characterized?" Section 4.4 contains the multivariate analysis of the effects of a temporary period of voluntary nonparticipation on careers. This chapter also addresses these consequences dependent upon the nature and the reason for the labor market exit. Lastly, section 4.5 closes this chapter with a summary of the most important findings.

4.2 How not working changes careers in theory

This section begins with a brief definition of just what is meant by nonparticipation in the labor market and gives a description of the focus group in this research (4.2.1). Next, an introduction to some of the current theories regarding the effects of nonparticipation on labor careers is made (4.2.2) leading to the hypotheses to be tested.

4.2.1 Defining nonparticipation

Nonparticipation is defined for this research as being of adult working age (18 through 64) and not working for remuneration. Part of the job of assessing just who the voluntary nonparticipants *are* is describing just who they are *not*. Although the data do enable including persons aged 16 and 17, these respondents will not be included in the analysis because most of the Dutch youth younger than 18 are following full-time educational courses and much of the international literature uses

the age of 18 years of age as a demarcation for adulthood allowing for better comparison of research results. For this reason, persons age 16 and 17 years will not be included in the research population.

Nonparticipation can be further differentiated into categories of involuntary and voluntary nonparticipation. The characterization of involuntary nonparticipation implies that the state of nonparticipation is beyond one's control. In this realm one should think of any labor market exit with which a worker is confronted: lay-offs due to reorganization, being fired, etc. Periods of involuntary nonparticipation will thus be more simply referred to as *unemployment*, having the status of being unemployed, not having paid work and being both willing and available to take part in paid labor. This is not the main focus of this research, although the effects of this labor market status will be compared with the effects of voluntary nonparticipation. Persons with a chronic illness or other disability who do not participate in paid labor because of their very specific situation are not included in the research population.

Voluntary nonparticipation differs from the system of career breaks analyzed in chapter 5 in that the latter is an institutionalized form of temporary labor market exit, facilitated and entailing guarantees of job return. Voluntary nonparticipation is then a specific period of deliberately not engaging in paid labor. The distinction between voluntary and involuntary for this research shall be made based on the data as predefined in the survey questions. Not being employed, while being of adult employable age (18 through 64 years) and not actively seeking employment will be referred to as nonparticipation. Individuals who are seeking employment, whether previously employed or not, will be referred to as unemployed.

Applying such a rigid demarcation for voluntary nonparticipation and involuntary nonparticipation (disability or unemployment) neglects facing a very relevant issue regarding the very understanding of the concept of nonparticipation. Do women voluntarily stay at home, caring for young children and tending to their housekeeping duties? It is here that current literature and studies such as those by Hakim (1991, 1995, 2002) or Warren (2004) or McRae (2003) to name but just a few are essential for a better insight into the very nature of the kinds of preferences, restraints, and barriers women are confronted with upon their entrance into the labor market. Is it the nature of the woman herself that guides her in her preference for career or home as is suggested by Hakim? Or do women face too many hurdles, not the least of which is a traditional task division (Becker, 1991) which in effect bar them from any kind of genuine labor market participation? Empirical research shows (Vlasblom and Schippers, 2005) that the moment at which many women actually weigh the pros and cons concerning labor market participation is linked to *critical life events*, such as the birth of a first child or a divorce. This research shows that it is not only the occurrence of the event itself that has an effect, but that this continues to affect the participation decisions of women over a longer period of time

(path dependence). In modeling effects of nonparticipation, it may not be sufficient to take up the events themselves (marriage, birth, divorce), but instead to take broader indicators of life course stages initiated by events.

In the framework of the discussion concerning a differentiation in external and manufactured risks in the social security literature, there are those that argue that risks traditionally considered to be external such as unemployment and disability are in some cases at least partially due to individual choices (Koopmans *et al.*, 2004; Schippers, 2004b). This does bring a certain amount of nuance into the involuntary character of unemployment, for example. This discussion is not only relevant but also necessary to better understand the patterns of labor participation, the differences in upward mobility between the sexes, and to expedite the emancipation of women.

The current situation in the labor market in the Netherlands is one of dynamics, experiencing an enormous increase in the labor participation of women, something not only positive in the emancipatory sense, but a development quite necessary to ensure economic growth and stability.[46] Thus, when pragmatically using the categories of voluntary and involuntary nonparticipation, there is in a sense an avoidance of a timely and essential discussion. This discussion is however, beyond the scope of this research question, which looks into the *effects*, both short-term and longer-term consequences of (non-institutionalized) career interruptions in the form of nonparticipation.

4.2.2 Theoretical perspectives

The theory in this section will build on what was stated in chapter 2 using only those segments essential to nonparticipation. This will be done first for human capital theory, and second, by statistical discrimination theory. The theoretical section is closed with a few additional remarks concerning tournament models.

Human capital theory

Human capital theory states that the earning potential of a worker is dependent on the sum of knowledge and skills, which the worker accrues during the initial educational period. Additional human capital can be gained during the career. In the meantime, there is also a constant erosion of human capital. Just as the physical individual ages, the obtained human capital also ages. Throughout periods of participation this aging – and usually until late in the career – is compensated through work experience. During periods of *nonparticipation* there is however no compensation by work experience, while the aging simply continues. In a period of nonparticipation there also occurs a reduction of earning power as a result of disuse of skills, referred to as

46 There is also an observable choice in the number of hours that women prefer to work (Fouarge & Baaijens, 2003; Román *et al.*, 2004) where a smaller number of weekly working hours will not lead to economic emancipation for most women.

atrophy (Mincer and Polachek, 1978). Through disuse in combination with a lack of maintenance of skills, the erosion annex aging process virtually increases in tempo.

An important focal point of human capital theory is whether, during the period of nonparticipation, any form of human capital increase occurs which would be the case if an individual were to take part in training or a course. In this manner, the missed experience and atrophy can be partially compensated by an update of skills (Groot *et al.*, 1990). Persons who voluntarily do not participate in paid labor, are less likely to invest in training during their period outside of the labor market. Also, if the exit from the labor market is predetermined (as it often is in the case of women's departures to care for children at home), the individual is less likely to partake in training prior to (her) departure. In this way a period of unemployment is less detrimental for the labor career because individuals *want* to return to working life and will thus partake in training, retaining a better bond with the labor market and experiencing less atrophy as well as having participated in training up to the moment of labor market exit. This classic line of reasoning continually produces conflicting empirical results. The assumption is that voluntary nonparticipation will be more detrimental to careers than unemployment. For this reason it essential to include it as the first hypothesis to test.

Past voluntary nonparticipation will have a stronger negative effect on careers than past unemployment

Mincer and Polachek (1978) demonstrate that unemployed workers are a more heterogeneous group with various studies showing that certain groups are more at risk of both becoming and remaining unemployed. These risk groups are again women, youths, older workers, minorities and persons with disabilities. It is because of the conflicting results of many empirical studies that it is important to ascertain the effects of both nonparticipation and unemployment, whether these effects are the same for men and women, and if these effects remain constant for different life course stages. Where voluntary career interruptions are for the most part used by women, unemployment is less selective. Unemployment is not gender specific, although women's unemployment is higher than men's.[47] It is not labor market sector specific, although certain sectors are more sensitive to economic fluctuations, resulting in greater risks for non-continuous employment. It is not age specific, although certain age groups are more at risk for unemployment.[48] Mincer and Ofek (1982) have pointed to the possible difference between the short-term and the long-term effect of a career interruption. The effect is expected to be the greatest immediately

47 Eurostat reports a 10.0% female unemployment rate in May, 2004 compared to 8.0% for males (Euro-Indicators News Release 84/2004).

48 The unemployment rate for persons under 25 years of age was 18.2% in May, 2004 (Eurostat Euro-Indicators News Release 84/2004).

following the interruption, after which follows the so-called rebound effect, where out-of-date knowledge and skills can be refurbished and the loss of human capital can thus be at least partially compensated. The longer-term effects of a career interruption are thus expected to be less than the short-term effects. This should be observable in the wage levels of individuals returning to paid labor.

Statistical discrimination
According to statistical discrimination theory (Arrow, 1973; Phelps, 1972) employers try to acquire insight into the future productivity of potential workers in the most economically feasible manner possible. In this way 'face value' (man or woman, white or colored, young or old) are interpreted as indicators for the productivity. The employer bases these judgments on 'previous statistical experiences', experiences that he (or colleague employers) have previously had with members of a certain group. Until better or more accurate information is available, he will use these assumptions that the productivity of the member of the group x shall be equivalent to the average productivity of all the other members of this group.

Periods of nonparticipation (a gaping hole in a person's work experience) can be a signal to employers of a possible indicator for (a lack of) commitment and reliability. A potential employee with a patchy career path, in which periods of participation and nonparticipation alternate certainly give grounds for some doubt. For someone who has been unemployed for the last five years, a certain concern about a lack of working routine can be expected. If employers are less likely to hire individuals with past nonparticipation histories, this should be observable in their chances of being employed.

> *The longer the period of past nonparticipation (voluntary or unemployment), the less likely the employment chance*

Voluntary or involuntary nonparticipation can be the cause of stigmatizing. Unemployment can also be the source of stigma that of itself can affect long-term career mobility (Albrecht *et al.*, 1999). Among others, Sprengers (1992) has pointed out that this form of labeling can have a self-intensifying effect. Whoever has had a period of unemployment runs the risk of having difficulty becoming re-employed. A lengthy period of unemployment makes employers even more hesitant to employ such an individual. In much the same manner, one can assume that now it is no longer so self-evident, that women exit the labor market upon becoming mothers. Thus the danger grows that women who do exit will risk becoming stigmatized. The more that continuous participation becomes the norm for women as well, career interruptions for the sake of caring tasks will become more exceptional and re-entry after such an interruption will become more difficult (see Schippers, 2004a). One assumption is that this effect is absent in the case of voluntary nonparticipation on the paid labor market. However, because of the increase in combining different life

domains that took place during the 1990s, actual exits from the labor market become more abnormal (even for women) and have a signaling effect for the employer: this employee is not committed to working, or the ability to combine tasks is lacking. It is likely that this stigma-effect of labor market exit has changed during the nineties. In addition, an interaction with educational level can be expected in the sense that labor market exits would in this manner be less acceptable for women with a higher educational level than for women with lower educational levels. Building on this we can expect that women from younger cohorts will suffer more from periods of nonparticipation than women from older cohorts. This should be observable both in their chances of employment as their chances for promotion. This leads to the second hypothesis.

> *Women from younger cohorts will experience a stronger negative effect from voluntary nonparticipation on their careers than women from older cohorts*

Tournament models

According to tournament models, the important issue when searching for candidates for a certain function is not the actual level of productivity, but concerns the interpersonal competition between employees. Internal career competition is won by competing with colleagues every step of the way. In terms of a tournament model this implies that during career interruptions, i.e. a period of nonparticipation, the worker simply is not there and thus does not take part in a number of laps. The consequences of not participating can differ immensely. Rosenbaum (1979) places emphasis on the importance of the early career stages. From this perspective, the hypothesis can be formulated that, in cases of a *planned* period of nonparticipation, it is certainly worthwhile to first create a bridgehead before a time-out and from there, pick up the pace again in the career. In terms of human capital, a person possesses quite an amount of specific organization knowledge and skills after a period of ten years. This kind of human capital is something that an employer is reluctant to put at risk or even worse, to lose. With the predicted anticipation effect from human capital theory there should be no such consequence. Investments in human capital made prior to career interruptions are an effective insurance for a successful return. This leads to the third hypothesis.

> *Periods of voluntary nonparticipation taken by women later in the career will be less detrimental than periods of nonparticipation taken in the earlier career stages*

The theoretical framework as sketched in this section, forms the guideline for the empirical analysis in the next sections of this chapter.

4.3 A closer look at the sample

This section presents a description of the research population, including a closer look at those individuals who, on a voluntary basis, do not participate in paid labor. Section 4.3.1 is a general description of the data used for the analysis and a first breakdown of the sample. Section 4.3.2 is an overview of the population by demographic characteristics including persons working, and unemployed persons as well as voluntary nonparticipants. Section 4.3.3 applies the first descriptive analysis based on the research questions and draws conclusions concerning the main questions arising from the descriptive analysis and leads to the foundations for the multivariate analysis in section 4.4.

This research is based on assessing the effect of voluntary nonparticipation on careers and compares this effect with that of involuntary nonparticipation. For this purpose, a base population is needed containing only those individuals who satisfy the following criteria. They are of adult working age (18 to 65 years), and have taken part in the survey for a number of consecutive years, with a minimum of four (more is better but this is a minimum for the longitudinal analyses). To enter and remain in the population, respondents must belong each year to one of the following exclusive categories:

- working – this can be self-employed, salaried, full-time or part-time;
- voluntarily not participating – as indicated earlier, this is restricted to respondents who have for the survey years 1990 through 1993 said to be homemakers, and for 1994 through 2001, homemakers and volunteer workers;
- unemployed – not working but available for the labor market and seeking employment as is defined by the survey questions (see questionnaire for complete description of this category).

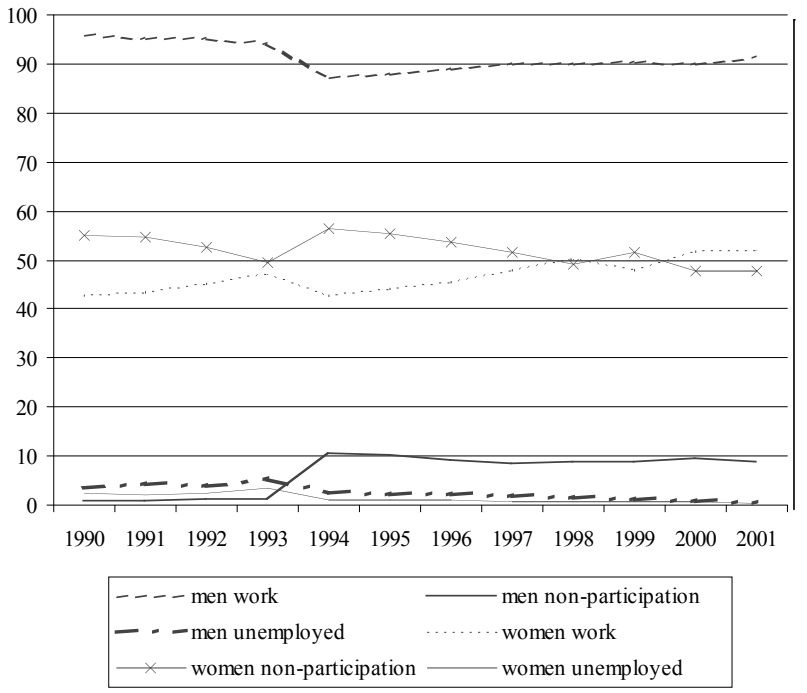
4.3.1 Data

The data used for this research are from the Dutch Socio-Economic Panel (SEP). The panel was started by Statistics Netherlands in 1984. For a more detailed description see section 3.4.1. All analyses in this chapter have been weighted using the appropriate cross-sectional and longitudinal weights provided with the data. Only adult persons of working age are included in the research population. The first figures show percentages within the adult population of working age. For the years 1990 through 1993, a distinction is only possible for persons doing unpaid work at home. In the years 1994 through 2001, an additional answer category provided the selection of volunteer work, consisting of tasks without any economic remuneration for services rendered.

Figure 4.1 presents the percentages per year of persons working, voluntarily not participating, as well as the percentage of unemployed. The addition of the answer category volunteer work as an activity in 1994 is clearly evident by the increase in

this category that year. The percentage of men working has declined steadily over the period until the year 1999 when it starts picking up again.[49]

Figure 4.1: Percentages for paid work, voluntary nonparticipation, and unemployment during the period 1990-2001



Source: SEP 1990-2001

For women the additional answer category of volunteer work is also evident. This makes the initial impression of developments somewhat unclear. In 1994 there is suddenly an increase in the percentage of female nonparticipants (almost seven percent). But this is again due to the introduction of volunteer work as an answer category. Across the entire period, there is a decrease in the percentage of women nonparticipants reflecting the entrance of women into the Dutch labor market with the increase in their participation in paid labor.

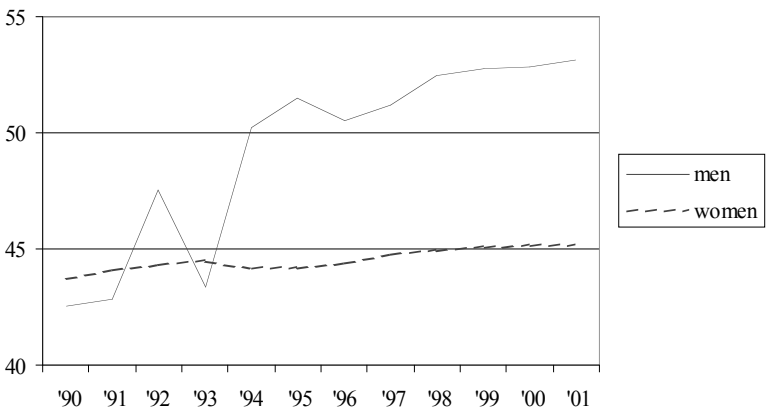
The following descriptive data analysis is based on persons who are of working age (18 to 65 years), who are not attending full-time educational courses as part of their initial schooling and includes those who are voluntarily not participating in paid labor.

49 The multivariate analyses were checked for this trend break between the first (1990 through 1993) and later years. The effects do not significantly differ.

4.3.2 Who voluntarily does not participate in paid labor?

The average age of persons not participating in the labor market on a voluntary basis has slowly increased over the period 1990-2001. Figure 4.2 presents the mean age for men and women voluntary nonparticipants for the period 1990 through 2001. From 1990 through 1993, there were very few observations in this category for men. Starting in 1994, mostly due to the additional answer category of volunteer work, the percentage of men increases. The gradual increase in the average age of women in this category can be interpreted as a reflection of a societal trend where fewer women exit the labor market after the birth of a child but instead continue to participate in the labor market most frequently with a reduction in the number of weekly working hours. What is also obvious is that men use this career deviation not as a detour, but as an exit from the labor market into early retirement.

Figure 4.2: Mean age voluntary nonparticipants 1990-2001



Source: SEP 1990-2001

4.3.3 The dependent variables

The first indicator used to measure the effect of a period of past nonparticipation on careers is whether the individual is actively participating in the labor market, which allows insight into many factors. This is a simple measure of participation (either salaried or self-employed) versus nonparticipation in any form.

The second indicator used to measure the effect of a period of nonparticipation on careers is *socio-economic status*. This variable is constructed by recoding the Dutch occupational codes, using the recoding schemes from Ganzeboom *et al.* (1992) into ISEI status scores (running from 16 (low) to 90 (high). ISEI scores are the weighted

averages of standardized measures of the income and education of incumbents of each occupation.

The third indicator is the *gross hourly wage rate*. In the SEP, retrospective information on the annual gross wage in the year prior to interview is available. The data also include retrospective information on the number of months worked and information on the number of hours currently employed. This information is used to derive gross hourly wages. The use of retrospective information implies that there is no wage information for the last wave of the panel (2001) included in the analysis. Wages are expressed in euro and have been corrected for price inflation (base year 2001).

The multivariate analysis in section 4.4 is designed to establish effects, which makes the use of longitudinal data essential. In preparation of this analysis, the dependent variables paid work, socio-economic status, and hourly wage rate are examined. To simplify the presentation of the descriptive analysis the twelve years are divided into three four-year periods. In this way, no overlapping of wave years occurs which might distort the descriptive presentation. The population analyzed is restricted to those individuals who have taken part in the survey for four consecutive years and who are of adult working age. Those individuals with a 'score' on work in year four, be that 0 as in no work or 1 working, are presented by their previous three year history. This history can be any composite of voluntary nonparticipation (students are not part of this group), workers (part-time or full-time) or unemployed persons. These are the individuals that have been described in the previous chapter. The most recent 'newcomers' to the labor market have thus been in one or more of these categories for at least four years.

Figure 4.3 is an illustration of how the sample is constructed depending on which part of the first research questions is guiding the analysis. The first part addresses those individuals who have either been voluntarily not participating in paid labor, have been working, or have been unemployed (or any combination) during all four consecutive years. The second part addresses those respondents who are working either part-time or full-time in the fourth year, and the three years prior have been either working, unemployed or voluntarily not participating in paid labor (or any combination).

The first research question asks: "How does past voluntary nonparticipation affect careers?" It can be divided into two parts. "How does a (recent) history of voluntary nonparticipation affect one's chances of having paid work?" Furthermore, "How does a (recent) history of voluntary nonparticipation affect one's career in terms of socio-economic status en wage?" To answer the first part of the first research question, each four-year period enables a calculation of respondents' chance of having paid work by their history of voluntary nonparticipation. Table 4.1 presents the percentages with paid work for the years 1993 through 2001 by nonparticipation history for men and women.

Figure 4.3: Employment patterns of the sample under scrutiny

	Year			
	1	2	3	4
Employment status	Either nonparticipation, paid work or unemployment	Either nonparticipation, paid work or unemployment	Either nonparticipation, paid work or unemployment	Either nonparticipation, paid work or unemployment
				↑
First question addresses				Probability of working

If working in fourth year:				
	Year			
	1	2	3	4
Employment status	Either nonparticipation, paid work or unemployment	Either nonparticipation, paid work or unemployment	Either nonparticipation, paid work or unemployment	Paid work
				↑
Second question addresses				Socio-economic status; wage level

Table 4.1 is based on a population consisting of adults of working age who are employed and presents their voluntary nonparticipation experience which can be anywhere from zero to three years. The percentages shown in the category 'none' under history of nonparticipation are the percentages of working adults with no past voluntary nonparticipation.

The following is an example of how the table should be interpreted. The percentage in the cell represents those working in 1993 according to their recent history. In the first column can be observed that 99.6 percent of the men are engaged in paid labor in 1993 that have no history of voluntary nonparticipation during the previous three years (four-tenths of a percent have one year of voluntary nonparticipation experience).

During the twelve-year period, the total percentage of working men declines from 99.6 percent to just more than 95 percent. The picture for the women necessitates some interpretation as well. One observes that the percentage of women with no history of voluntary nonparticipation also declines over the twelve-year period, albeit less than by men. In 1993, of all the working women in the population, more than

Table 4.1: Percentages working in year four by recent voluntary nonparticipation history and sex

	1993	1994	1995	1996	1997	1998	1999	2000	2001
Men									
Nonparticipation history:									
none	99.6	99.7	97.8	96.8	95.3	95.2	95.2	95.6	95.7
one year	0.4	0.3	2.2	2.9	3.9	4.1	4.2	3.7	3.6
two years	0.0	0.0	0.0	0.2	0.9	0.5	0.5	0.6	0.7
three years	0.0	0	0.0	0.0	0.0	0.2	0.1	0.2	0.1
Total	100	100	100	100	100	100	100	100	100
N	2077	1996	2143	2161	2152	2122	2042	1915	1810
Women									
Nonparticipation history:									
none	74.6	81.3	79.3	75.4	71.5	71.0	72.6	73.3	73.1
one year	11.4	8.8	10.2	12.2	12.1	13.5	11.8	11.7	9.9
two years	8.4	5.2	5.6	7.5	9.6	8.2	9.1	7.0	7.7
three years	5.6	4.7	4.9	4.8	6.8	7.9	6.4	8.0	9.2
Total	100	100	100	100	100	100	100	100	100
N	1075	958	1091	1127	1169	1193	1148	1146	1127

Source: SEP 1990-2001

eleven percent has at least a one-year history of voluntary nonparticipation. More than twenty-five percent of the working women in 1993 had in the previous years voluntarily not participated in paid labor before (re)entering the labor market. This percentage of working women with a history of voluntary nonparticipation diminishes until around 1997 where a leveling off occurs. The Dutch labor market consists of a different working population at the beginning of the nineties than at the close of that decade.

Table 4.2: Average socio-economic status by sex, age, and educational level per four-year period

	Men			Women		
	90-93	94-97	98-01	90-93	94-97	98-01
Sex	49.5	49.5	51.0	49.6	50.6	51.0
Age						
18 through 24 years	40.4	37.2	39.1	45.7	46.1	48.0
25 through 34 years	47.4	46.7	51.3	49.3	49.8	52.2
35 through 44 years	50.9	51.0	50.9	50.8	50.9	50.7
45 through 54 years	51.4	51.0	51.2	50.0	52.2	51.3
55 through 64 years	49.3	49.3	52.9	50.6	51.4	49.5
Educational level						
primary and lower secondary	39.1	38.8	39.1	43.4	44.0	41.6
higher secondary	47.0	46.8	46.1	46.8	47.4	47.4
higher professional and university	64.7	62.5	63.0	61.5	60.3	60.5
N	2007	1956	1414	1035	1065	879

Source: SEP 1990-2001. Range: from 16 (low) to 90 (high).

The second part of the first research question is: "How does a history of voluntary nonparticipation affect one's career in terms of socio-economic status and hourly wage after returning to the labor market?" This is descriptively answered in Table 4.2, which presents the average socio-economic status by demographic characteristics based upon the research population as established using these and previously described selection criteria for age.

The first two of the four-year periods shows a slightly higher average socio-economic status for women than for men employed in year four. These findings are in accordance with earlier research done by Plantenga *et al.* (1990) showing that the socio-economic status of working women and men is more equal than, for instance, their rates of labor participation or their earnings. In this case, the women have caught up and even slightly overtaken their male colleagues. Concerning the relationship to age, young women have higher average socio-economic status levels than young men do, and older women are less well off than older men in terms of the level of their socio-economic status.

The variation in socio-economic status between the youngest cohorts and the older workers has increased over the twelve-year period. One noteworthy change is the age group in which the highest socio-economic level is reached has also shown some dynamics over the years. It has gradually shifted to the oldest age group for the men, and the 25-34 year old group for the women. The status level for education presents a similar picture. Women seem to fare better in the labor market in terms of their lower educational investments. With primary and lower secondary educational levels, women still are able to appropriate jobs with a reasonable level of status. Men do much worse in this case. Women have even left men behind at the higher secondary level of education during the last period. Consequently, at the higher professional and university level of education, women are not able to procure jobs with the same status level as men with the same educational level. This is at least some indication of the 'glass ceiling', supporting earlier findings (Baxter and Wright, 2000; Cotter *et al.*, 2001). When presenting the cross-tabulation for wages, the first two periods will cover four years and the last period will consist of three years due to the fact that there are no data available for income in the last year of our survey (2001). The demographic characteristics by income are presented in Table 4.3.

Table 4.3 shows that the general pattern for average gross hourly wage is extremely consistent: the average hourly wage levels are higher for men throughout the eleven years than they are for women. There is little evidence here that women have made any great improvements in this situation. Wage level has a strong correlation with age and educational level as can be seen in the table. The older the worker, the higher the average gross hourly wage is. The higher the educational level, the higher the average hourly wage. It would appear that both for age and educational level, there is no evidence of a leveling. Further, throughout the entire period, there seems to be

Table 4.3: Average gross hourly wage (in euros) by sex, age, and educational level for three periods

	Men			Women		
	90-93	94-97	98-00	90-93	94-97	98-00
Sex	15.5	17.6	18.1	14.9	14.9	15.2
Age						
18 through 24 years	12.2	10.3	11.2	12.4	13.3	14.5
25 through 34 years	16.0	14.6	15.5	14.2	14.9	15.1
35 through 44 years	19.5	17.9	17.8	15.3	14.9	14.9
45 through 54 years	20.8	19.6	19.6	16.4	14.6	15.4
55 through 64 years	20.9	21.2	21.9	18.9	17.4	17.2
Educational level						
primary and lower secondary	14.7	14.1	13.9	13.2	12.7	12.0
higher secondary	17.5	16.4	16.3	14.2	13.5	14.3
higher professional and university	24.4	22.4	22.7	18.3	18.5	17.6
N	1800	1709	1463	931	925	867

Source: SEP 1990-2000

a steady decrease in the returns on education, and more so by those with a higher level of education than by those with a lower educational level. This could be evidence of the inflationary rate that education has taken during the last decades which is exhibited in the increasingly higher educational level of employees found per function.

The beginning of this section focuses on the research group: voluntary nonparticipants. This group consists for the greater part, of women, who following the traditional pattern in Dutch society exit the labor market after marriage or the birth of their first child. One can observe that the average age of this group has increased significantly over the twelve year period, reflecting a societal trend in which more women are opting to continue their labor careers either without exiting the labor market or if they do depart, leaving for only a short while. This is the reason that evidence is found of an 'aging' population of voluntary nonparticipants.[50] There is an increase in the educational level of female voluntary nonparticipants over time, which supports our assumption that there is still a group of women, women with a higher educational attainment than their predecessors, who leave the labor market for a temporary period of time to care for their young children. Added to this population, are the respondents that have had a history of unemployment before returning to paid labor. This broader population provides insight into the distribution of wage levels and socio-economic status. Women fare more poorly than men on both indicators and they have not made any real headway during the eleven or twelve years that can be observed through descriptive analysis. There also appears to be an increase in the level of inequality by age with younger cohorts at a greater disadvantage.

50 It also reflects a gradual increase in the average age of mothers at the first birth from 27.5 in 1990 to 29.2 in 2001 (CBS, Statline: 2006-09-11).

4.4 How does past nonparticipation affect careers?

This section addresses the four research questions and uses multivariate analyses to estimate several models. The first three research questions are modeled using the data described in section two. The first model is a logistic regression predicting the chance that an individual is working in year four by his or her work history in the three previous years. It is not designed to measure mobility. This means that the sample will contain persons working as well as persons not working in the fourth year. The model is illustrated as follows:

a) a logistic regression to predict the chance of having paid work as predicted by recent work history:

$$\frac{p_1}{1-p_1} = e^{a+bX} \qquad [1]$$

The logistic regression predicts the chance that the dependent variable (paid labor) is equivalent to 1,[51]; a and b are the regression constants and X is the independent variable. This model attempts to answer the first of our research questions: "How does recent past voluntary nonparticipation affect the chances of having paid work?"

The next two models measure indicators in the fourth year only for persons working and answers the second part of the first research question: "How does recent past nonparticipation affect one's career in terms of socio-economic status and wage?" It also answers the questions: "How does the duration of the interruption affect careers?" and "How does the nature of the interruption (voluntary nonparticipation or unemployment) affect careers?" This population differs from the population used for the first model. An OLS regression is used to compare the level of socio-economic status, the second of the dependent variables, of individuals with a history of nonparticipation (one, two, or three years) with those persons who have continuous work histories (zero years of nonparticipation). An OLS regression is used to predict the hourly gross wage in the fourth year (T4), the third of our dependent variables. The models can be illustrated as follows where α is the constant, X denotes the set of covariates, measured in the same year as the dependent (T4), *PNP* is the number of years past nonparticipation and ε is the error term:

b) an OLS regression model to predict the level of socio-economic status (ISEI) (Y) in year four (T4) by the history of nonparticipation in the three previous years:

$$ISE_{(T=4)} = \alpha + \beta X + \gamma\, PNP + \varepsilon \qquad [2]$$

51 Where e is the base for the natural logarithm (e = 2.71828...).

an OLS regression model to predict the level of hourly gross wage (Y) in year four (T4) by the history of voluntary nonparticipation in the three previous years:

$$\text{Wage}_{(T=4)} = \alpha + \beta X + \gamma\, PNP + \varepsilon \quad [3]$$

To answer the fourth research question regarding whether the effects are lasting, it is necessary to follow individuals over a longer period of time. The unfortunate consequence is a smaller number of respondents in the sample. For these analyses, an additional two years are added making a full six years that respondents are observed. Here, two OLS regressions are used:

d) an OLS regression model to predict the level of socio-economic status (ISEI) (Y) in year six (T6) after working part-time or full-time for a minimum of three years by the history of voluntary nonparticipation in the first three years:

$$ISE_{(T=6)} = \alpha + \beta X + \gamma\, PVNP + \varepsilon \quad [4]$$

e) an OLS regression model to predict the level of hourly gross wage (Y) in year six (T6) after working part-time or full-time for a minimum of three years, by the history of voluntary nonparticipation in years one, two and three:

$$\text{Wage}_{(T=6)} = \alpha + \beta X + \gamma\, PVNP + \varepsilon \quad [5]$$

In these equations, X denotes the set of covariates to control for variables affecting participation while still remaining flexible for life course variation. These covariates are measured in the same year as the dependent variable (T6). The control variables are:

- sex (the analyses are run separately for women and men);
- age (included in the models as five age group dummies: 18-24, 25-34, 35-44, 45-54 and 55-64);
- educational level (dummies for three levels: primary and lower secondary, higher secondary, and higher professional and university);
- marital status (here using *living* with partner whether cohabitating or married);
- children and age of the youngest child (dummies for 0-5, 6-11, 12-17 and 18-20 with no children as the reference category);
- part-time work (16-34 hours per week) used only in the OLS regression models;
- year of survey (because some of the variables are counters of years, not all years will be included in every analysis, also for the wage models, 2001 is not included).

Because the analysis for both socio-economic status and wage require that the popu-

lation under scrutiny has paid employment, the analysis runs the risk of selectivity bias. Participation chances are being distributed unequally and the group for which socio-economic status and wages can be analyzed will not be a random selection from the whole research population. For this reason, a Heckman two-step test of selectivity bias will be done for men and women separately for each analysis requiring the selection (Heckman, 1979). On top of this, a filter is used for the wage regressions to include only those individuals who are working a minimum of 16 hours. This is because the financial data available on persons working fewer hours per week are found to be unreliable.

4.4.1 Effect of nonparticipation on careers

Returning to the labor market after a period of nonparticipation is a first hurdle, one being made by an increasing number of women. The cross-tabulation presented in Table 4.1 gave an initial insight into the probability of return for persons with a history of voluntary nonparticipation. In assessing whether a period of voluntary nonparticipation affects careers, it is necessary to establish whether the effect is simply due to (the length of) a withdrawal from the labor market or whether the effect is also dependent on the nature of the withdrawal. This makes it necessary for a comparison with the effects of a period of *in*voluntary nonparticipation.

The question to be answered here is thus: how do the established effects of a past voluntary nonparticipation differ from the effects of a period of involuntary unemployment? This set is restricted in its analysis of involuntary nonparticipants to individuals with a period of unemployment without including those unable to participate due to illness or a physical disability. The first model is using the likelihood of having paid work, a 0-1 dependent variable for which a logistic regression is used, which is presented in Table 4.4. The analysis is done for men and women separately. Dummy variables are added in the model to capture the effect of whether or not an individual has a history of nonparticipation, and if so, whether voluntary or involuntary, and the duration of this incidence. In this way it is possible to better establish the difference these effects have and whether this is the same for men and women.

The model explains 48 percent of the variance in the paid work variable for men and 72 percent for the women. Having a history of unemployment has a negative effect on the chances of being employed one, two or three years later. Being unemployed for one year in the recent past decreases the chance of having work. Two years of unemployment further decreases the chance of employment for men. After three years of unemployment, the likelihood of returning to the labor market decreases even more. All of the results for the main explanatory variables are significant. The important question is how this compares to a history of voluntary nonparticipation. One year of voluntary nonparticipation has a stronger negative effect on the chances of a successful return to the labor market than a year of unemployment, and this is

Table 4.4: Logistic regression of paid work by history of voluntary nonparticipation and past unemployment (model 1)

	Men	Women
History of voluntary nonparticipation (ref. = none)		
one year	-2.252***	-1.737***
two years	-3.468***	-2.633***
three years	-6.424***	-4.634***
History of unemployment (ref. = none)		
one year	-1.922***	-1.044***
two years	-3.422***	-1.943***
three years	-5.099***	-1.811
Partner	0.542***	-0.622***
Educational level (ref. primary and lower secondary level)		
higher secondary	0.232**	0.412***
higher professional and university	0.672***	0.763***
Age (ref. = 55-64 years)		
18-24 years	1.915***	1.655***
25-34 years	2.000***	1.695***
35-44 years	1.670***	1.640***
45-54 years	1.498***	1.084***
Age youngest child (ref. = no children)		
0-5 years	-0.318**	-1.946***
6-11 years	0.095	-0.710***
12-17 years	0.428**	-0.198**
18-20 years	0.256*	-0.226**
Year (ref. = 1993)		
1994	-0.665***	-0.571***
1995	-0.243	-0.442***
1996	-0.386**	-0.278**
1997	0.003	0.024
1998	0.009	0.106
1999	-0.058	-0.093
2000	0.002	0.088
2001	-0.094	0.125
Constant	1.797***	1.600
Observations	19423	23792
R-squared	0.48	0.72

Source: SEP 1990-2001, * significant at 10%, ** significant at 5%, *** significant at 1%.

also the case for women. This supports the human capital hypothesis that persons who are unemployed experience less capital deprivation than persons who voluntarily exit (because they are more likely to invest in their human capital prior to the period of unemployment and thus retain a better bond with the labor market). Both past unemployment and past voluntary nonparticipation have a stronger effect on men's chances of working than on the chances of women participating in paid

labor. The negative effects of a withdrawal from the labor market are stronger for men than they are for women. This is true regardless of the nature of the exit and remains true no matter the duration. Men suffer a stronger penalty for leaving the labor market than women do, whether this is voluntary or involuntary. Regarding the difference in the nature of the exit, one can say that voluntary nonparticipation has a stronger negative effect on the chances of having work and this is the case both for men and for women. This supports the human capital hypothesis.

The next question to be answered is how the two types of exits differ in terms of their effects on socio-economic status and wage once a return is made. Table 4.5 presents the results of the socio-economic status analysis with more than one-third of the variance explained for men in the population and 29 percent of the variance for the women. Not all of the results of the key explanatory variables are significant. Starting with the men, one year of unemployment has a significant negative effect on the level of socio-economic status. The effects for two and three years of unemployment are not significant. In this model too, there is negative effect of a (recent) two-year history of voluntary nonparticipation on the level of socio-economic status. It is difficult to compare the effects due to the lack of significance but it can be said that by interpreting the standardized effects (not shown in the table), the significant negative effect found for one year of unemployment is slightly stronger than the significant effect found for two years of voluntary nonparticipation for men.[52] This is similar to the results found regarding the chances of employment after a labor market exit. This is not in accordance with the human capital hypothesis. Unemployment has a stronger negative effect on the socio-economic status of men than voluntary nonparticipation.

Women are subject to a stronger negative effect on their socio-economic status for past voluntary nonparticipation than for past unemployment. This is support for our human capital hypothesis. In fact, the significant effects found for one or two years past unemployment on women's socio-economic status are actually positive. This necessitates some explanation. One could interpret this finding using the perspective of labor market developments during the twelve-year period that is being analyzed. A woman with an unemployment history of one year would indeed have a better promotional chance as compared to the rest of our female population where the majority consists of voluntary nonparticipants who are not even seeking employment. Compared to this group, the chance of having a higher status job for a recently unemployed woman would indeed be good. This effect diminishes however and becomes negative after three years of unemployment although it is only significant at ten percent. It is at this point that her chances of a successful return to paid labor become less and her (less) recent work experience no longer gives her an edge over

52 The β, for one year of unemployment for men in the model = -0.023. The β, for two years past voluntary nonparticipation is -0.021.

Table 4.5: OLS regression of socio-economic status by history of voluntary nonparticipation and unemployment (model 2)

	Men	Women
History of voluntary nonparticipation (ref. = none)		
one year	-0.965	-2.797***
two years	-5.245**	-3.882***
three years	-5.299	-4.593***
History of unemployment (ref. = none)		
one year	-2.570***	3.028***
two years	-2.052	4.416**
three years	-3.419	-2.086
Part-time	-1.941***	-2.874***
Age (ref. = 55-64 years)		
18-24 years	-3.248*	-15.973***
25-34 years	-1.053	-11.804***
35-44 years	1.023	-8.095***
45-54 years	1.724	-4.024**
Educational level (ref. = primary and lower secondary level)		
higher secondary	7.802***	0.637
higher professional and university	24.282***	10.673***
Partner	1.362***	1.095***
Age youngest child (ref. = no children)		
0-5 years	-0.605*	10.031***
6-11 years	-0.583	6.388***
12-17 years	-0.917*	1.742**
18-20 years	-1.521**	-1.234**
Year (ref. = 2001)		
1993	1.169**	0.218
1994	1.049**	0.091
1995	0.911**	0.000
1996	0.870**	0.025
1997	0.280	0.255
1998	0.489	0.406
1999	0.362	0.320
2000	0.204	-0.272
Constant	37.039***	61.272***
Lambda	4.430	-8.984***
Observations	16704	9046
R-squared	0.35	0.29

Source: SEP 1990-2001, * significant at 10%, ** significant at 5%, *** significant at 1%.

women with no work experience or work experience from the distant past as is illustrated in the analysis. Another important note is the effect of age on women's socio-economic status. It is very clear that higher status levels are reached at 35 and older. This is not the case for men. Men are reaching high socio-economic status

levels at age 25 and older. This indicates a much flatter career path for women until after the time squeeze of family life.

Table 4.6: OLS regression of gross hourly wage by history of voluntary nonparticipation and unemployment (model 3)

	Men	Women
History of voluntary nonparticipation (ref. = none)		
one year	-0.291	-1.447***
two years	-3.530**	-2.413***
three years	-4.385	-2.969***
History of unemployment (ref. = none)		
one year	-3.710***	-1.593***
two years	-4.869***	-1.680
three years	-6.325**	-11.252*
Part-time	2.327***	0.505**
Age (ref. = 55-64 years)		
18-24 years	-7.940***	-10.878***
25-34 years	-6.689***	-8.610***
35-44 years	-4.287**	-6.338***
45-54 years	-2.222*	-4.131***
Educational level (ref. = primary and lower secondary level)		
higher secondary	1.924***	-0.511
higher professional and university	7.357***	1.277*
Partner	1.633***	-0.313
Age youngest child (ref. = no children)		
0-5 years	0.565**	6.027***
6-11 years	0.727**	2.883***
12-17 years	0.625*	0.680
18-20 years	-0.310	-0.909**
Year (ref. = 1993)		
1994	-0.968***	-0.810**
1995	-1.054***	-0.867**
1996	-1.479***	-0.833**
1997	-1.444***	-0.125
1998	-1.414***	-0.901**
1999	-1.473***	-0.687**
2000	-1.581***	-0.075
Constant	18.560***	24.018***
Lambda	-2.044	-4.906***
Observations	13661	6793
R-squared	0.21	0.12

Source: SEP 1990-2000, * significant at 10%, ** significant at 5%, *** significant at 1%.

The last model in the first set is the results of the wage regression as predicted by past unemployment and voluntary nonparticipation. This is presented in Table 4.6.

The model explains 21 percent of the variation in men's gross hourly wage rate and 12 percent of the variation in women's gross hourly wage. The effect of past voluntary nonparticipation is negative but only significant at two years for men. Past unemployment however is significant for one, two, and three years. Looking then first at the effects of past unemployment on men's wage level, there is an initial penalty for the first year and the second year increases but doesn't double (see the non-standardized coefficients). The third year has a stronger negative effect on the gross hourly wages of men than the difference between year one and year two. Comparing the negative impact of past voluntary nonparticipation and unemployment on the gross hourly wage level of men, one can see by looking at the coefficients for year two (where these effects are both significant at least 5%) that a labor market exit due to unemployment has a stronger negative effect.[53] This does not support the human capital hypothesis.

All the effects for past voluntary nonparticipation and past unemployment are negative on women's earnings. Again, by comparing the standardized coefficient of the significant results, it can be observed that a voluntary year's exit from the labor market is more detrimental to women's careers in terms of wage level than unemployment. One observes that the effects are exactly the opposite for men and women. There are of course fewer men with a history of voluntary nonparticipation than there are women and fewer women with a history of unemployment than there are men. This has as unfortunate result, that not all of the effects are significant, decreasing our possibilities of comparison. However, where it has been possible to compare, it has been established that unemployment is worse for the wages of men and voluntary exits are more damaging to the wages of women. This may be why there have been such conflicting results in the past. The effects are quite different for men and women. By running separate analyses, these differentiations have become more transparent.

4.4.2 Is the effect lasting?

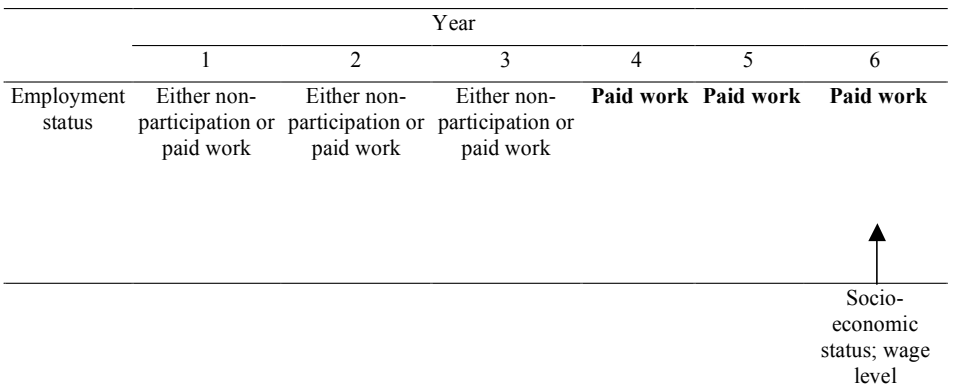
The analyses in the first set covered a four-year period. This was done so that the maximum number of respondents could be included when answering the questions: how does past nonparticipation affect careers, how does the duration of the interruption affect careers, and how does the nature of the interruption affect careers. Now the fourth question can be approached. Are the effects found one year back in full-time employment lasting? We have observed that the duration of the exit matters, but does it also affect the duration of the effect? Does the effect of two years past unemployment last longer than the effect of one year past unemployment?

This merits a longer look back in time, which is (partly) accomplished by covering a six-year period, which unfortunately results in a smaller number of cases included

53 The β for past voluntary nonparticipation compared to unemployment at two years is -0.024, -0.034.

in the next set of analyses. The following set of analyses presents the results of models following individuals for six years. This model is similar to the previous one, but follows respondents an additional two years to establish whether the effects found are lasting. The analyses again make use of a counter, this time measuring the number of years voluntarily not participating in paid labor during the first three years. The next three years must include active participation, whether part-time or full-time, in the labor market.

Figure 4.4: Sample under scrutiny



This provides insight into the tenacity of any scarring effects. Do the negative effects persist? Do they continue to be felt after a minimum of three years working? It has already been established how a labor market exit affects chances of employment. Re-running the analysis on the six-year data set would not offer any real new information on this indicator. This set will thus be limited to the two indicators measuring career development once actively participating: socio-economic status and wage level. Table 4.7 presents the results for socio-economic status.

The analysis presented in Table 4.7 includes a total of 14296 cases that have been followed during a six-year period of which at least the last three years have been participating in paid labor. The explained variance in the socio-economic status is again approximately one-third for the men and now just 30 percent for the women. For the first time the correction term for selectivity bias for the male population is observed to be significant. It is (again) significant for the women as well. Regarding the effects of a history of nonparticipation over the longer period, one observes that they remain quite significant for women but are no longer so for men. This means that even after a minimum of three years of working, the scarring effects can still be distinguished. Compared to the effects found and presented in the first set the negative effects have not diminished. On the contrary, they have increased over the span of time. In that set, socio-economic status in year four was measured possibly

Table 4.7: OLS regression of socio-economic status in year six by history of voluntary nonparticipation in years one, two, and three (model 4)

	Men	Women
History of voluntary nonparticipation (ref. = none)		
one year	-1.407	-3.029***
two years	-2.360	-4.233***
three years	1.688	-4.598***
Part-time	-1.669***	-2.738***
Age (ref. 55-64 years)		
18-24 years	-1.607	-15.533***
25-34 years	1.972	-10.982**
35-44 years	3.873*	-7.555*
45-54 years	4.156**	-3.637
Educational level (ref. = primary and lower secondary level)		
higher secondary	8.658**	1.161
higher professional and university	24.908**	11.809***
Partner	1.319**	1.325
Age youngest child (ref. = no children)		
0-5 years	-0.484	7.985**
6-11 years	-0.395	5.803**
12-17 years	-0.212	1.714*
18-20 years	-1.106*	-2.119**
Year (ref. = 2001)		
1995	0.734	0.269
1996	0.577	0.786
1997	0.170	0.509
1998	0.322	0.253
1999	0.254	0.495
2000	0.105	0.189
Constant	32.848	59.359
Lambda	11.778**	-7.280**
Observations	10103	4193
R-squared	0.34	0.30

Source: SEP 1990-2001, * significant at 10%, ** significant at 5%, *** significant at 1%.

during the first year back at the job. This analysis presents the socio-economic status level measured in year six, meaning that these individuals have been working a minimum of three years since their career interruption and possibly even longer. Nonetheless, the negative effects can still be observed in their level of socio-economic status and they are even stronger than observed after a minimum of one year back at work.

For men, no significant effects for one, two or three years past voluntary nonparticipation can be observed. The tendency of Dutch women to work part-time, which also

Table 4.8: OLS regression of gross hourly wage in year six by history of voluntary non-participation in year one, two, and three (model 5)

	Men	Women
History of voluntary nonparticipation (ref. = none)		
one year	0.179	-1.917***
two years	-3.974**	-2.121***
three years	-4.833	-2.502**
Part-time	2.889***	0.659**
Age (ref. = 55-64 years)		
18-24 years	-5.610**	-12.642***
25-34 years	-5.892**	-10.804***
35-44 years	-3.740**	-8.287***
45-54 years	-1.808	-5.513***
Educational level (ref. = primary and lower secondary level)		
higher secondary	2.057**	-0.936
higher professional and university	7.573**	0.353
Partner	2.059***	-0.614
Age youngest child (ref. = no children)		
0-5 years	0.311	7.216***
6-11 years	0.639	4.463**
12-17 years	0.569	1.820**
18-20 years	-0.355	-0.621
Year (ref. = 2000)		
1995	0.424	-1.048**
1996	0.023	-0.741*
1997	0.019	-0.281
1998	0.050	-0.982**
1999	0.035	-0.824**
Constant	15.963***	27.614***
Lambda	-0.512	-6.723***
Observations	8092	3245
R-squared	0.18	0.10

Source: SEP 1990-2000, * significant at 10%, ** significant at 5%, *** significant at 1%.

shows to have quite a strong negative effect, in combination with the resilience of the effects of voluntary time-outs, make for a sober enumeration of women's careers in the labor market.

The second analysis in this second set in Table 4.8 presents the effects of past voluntary nonparticipation on wage after a minimum of three years working either part-time or full-time.

This model presents the results of the wage analysis of a total of 11337 observations working a minimum of three consecutive years and measuring the history of volun-

tary nonparticipation in the three years prior. The gross hourly wage is measured in the sixth year after having actively participated in the labor market for a minimum of three years. Here too, one observes that the scarring effects of a voluntary exit from the labor market are enduring. Even after a minimum of three years of working, the negative effects on wage level due to a voluntary career interruption are still quite evident. The effect is stronger for men than it is for women although the results for men are only significant for a two-year voluntary career interruption. The effects found for women are strongest after just one year and the relative increase after two or three years is minimal. In general one can conclude that in terms of women's wages, the penalty is the same for a one, two or three year voluntary career break.

These two models demonstrate that the negative effects of voluntary career interruptions can still be observed both in the level of socio-economic status as well as the hourly wage rate even three years afterward, and in some cases even longer. A voluntary time-out leaves lasting scars that do not noticeably diminish over time. The effects established are stronger for men than they are for women, but both the status model and the wage model show that part-time work also has very strong negative effects. The combination of voluntary career interruptions and part-time work observed here is detrimental for women's careers. These models are analyzed on a population that works a minimum of two full working days (16 hours), which means that the very precarious position of women working in 'small' part-time jobs have already been taken into account. The strong effects observed for higher educational levels will compensate these other negative effects to some extent, but it has also been demonstrated that women do not cash in on their investments in education nearly as well as men do.

4.4.3 Establishing the long-term effects of voluntary nonparticipation and unemployment on wages

We take the fourth question one step further to ask: just how long do the effects last? The effects established up to this point have all been intermediate-term. To actually observe long-term effects, a smaller sample from the SEP will now be used including respondents who have taken part in the panel during the entire period from 1990 through 2000, for whom wage information is known for the year 2000, and who are of working age throughout the entire period. For this set, one analysis is performed using gross hourly wage level as the dependent variable. This narrows the group considerably and there is certainly some amount of selection, a point to which we will return. The total number of cases included in the analysis is 1658. The control variables are the same used in the previous sets of analysis. They are all measured in the year 2000 along with the hourly wage, which is included as the algorithm of the gross hourly wage in the equation and can be written as follows:

$$\ln(y_{t=11}) = \alpha + \beta X + \gamma PVNP + \lambda PU + \varepsilon \qquad [6]$$

Where the dependent variable Y is the algorithm of the gross hourly wage in the eleventh year (2000), X denotes the set of covariates to control for personal characteristics as well as the total work history, $\gamma PVNP$ is the parameter history of nonparticipation measured in the first four years (1990-1993) and the second four years (1994-1997), λPU is the history of unemployment in the first and second four years. The work history (number of years actively participating in paid labor) is included as a control variable in the model as four dummies: 0-3 years, 4-6 years, 7-9 years, and 10 years or more. The career deviation history is thus measured for both voluntary nonparticipation and unemployment over two separate periods providing an indication of possible different effects due to changes on the Dutch labor market.

Table 4.9: OLS regression of the logarithm[54] of the gross hourly wage in the year 2000 (model 6)

	Total	Men	Women
Work history in panel (ref. = 10 or more years)			
0-3 years	0.085	-	0.070
4-6 years	0.068	-0.035	0.062
7-9 years	0.005	0.028	-0.020
History of career deviations			
number of years nonparticipation 1990-1993	-0.074***	-0.086	-0.075***
number of years unemployment 1990-1993	-0.071**	-0.061	-0.069
number of years nonparticipation 1994-1997	-0.052**	-0.029	-0.058**
number of years unemployment 1994-1997	0.096	-0.098	0.043
Sex (ref. = male)	-0.099***	-	-
Educational level (ref. = primary and lower secondary level)			
higher secondary	0.183***	0.177***	0.181***
higher professional and university	0.443***	0.495***	0.348***
Age (ref. = 55-64 years)			
25-34 years	-0.124**	-0.178**	-0.064
35-44 years	-0.072**	-0.073	-0.052
45-54 years	-0.036	-0.015	-0.042
Partner	0.043	0.102**	-0.001
Age youngest child (ref. = no children)			
0-5 years	0.028	0.032	0.016
6-11 years	0.062**	0.016	0.113**
12-17 years	0.087**	0.062*	0.110**
18-20 years	0.023	0.046	-0.007
Constant	2.819***	2.566***	2.593***
Observations	1658	931	727
R-squared	0.32	0.24	0.24

Source: SEP 1990-2000, ** significant at 5%, *** significant at 1%.

54 For this wage model, the logarithm of the gross hourly wage is used because of the longer period of time covered in the model.

Starting with the analysis throughout the entire sample, a total of 1658 observations have been included. The model explains almost one-third of the variance in the gross hourly wage in the population in the year 2000. None of the employment history dummies have any significant effect compared to the reference group of individuals employed for ten years or more as observed in the panel. Regarding the long-term effects of these specific career deviations, the number of years spent voluntarily not participating in paid labor has a significant negative effect on wages that persists over time. A significant negative effect is found for a voluntary exit during the period 1990-1993 that still can be observed in the wages of individuals working in the year 2000. This means that the negative effects of a voluntary exit can still be observed in the wages of individuals up to ten years after the fact. This negative effect is also found for a period of voluntary nonparticipation between 1994 and 1997 although weaker. This supports the theoretical model, which states that by interrupting the career, individuals find themselves (after returning to the labor market) on a lower wage growth path. There is also an observable negative effect for a history of unemployment during the period 1990-1993 as opposed to the more recent period 1994-1997. It is not clear why this is the case, although there are considerably fewer individuals who were unemployed during the second period and this may be the cause of the insignificant results.[55]

Next, the analysis is run separately for men and women. This does not improve the model but it does give a clearer picture of exactly *who* is experiencing the effects. Starting with the men's model, the explained variance drops to 24 percent. The dummy variable for the first period of work history is excluded from the analysis (there are only four men in this sample who have less than four years of employment history). None of the key explanatory variables have significant effects. Both the middle and higher levels of education exhibit significant positive effects, as does the partner variable. The age group 25-34 years has a significant negative effect compared to the reference group of 55-64 years of age.[56] If the age of the youngest child is 12 to 17 years of age, a significant (at 1%) positive effect is observed.

The variance explained in the analysis for women has also dropped to 24 percent, but the key explanatory variables remain significant, and even increase slightly in strength. In any event, this is true for both of the periods of nonparticipation. Here too we observe that the earliest period (1990-1993) has a stronger negative effect on the wage levels of women than the later period of nonparticipation (1994-1997). The previous effects found for past unemployment have disappeared. This is most likely due to much smaller groups when doing the analysis separately for men and women.

55 During the period 1990-1993 this select sample registers 220 individuals reporting 1 to 4 years of unemployment. During the period 1994-1997 only 110 persons report 1 to 4 years of unemployment.

56 The youngest age group (18-24 years) is excluded from this sample, as a 24-year old in 2000 is only 14 in 1990.

No effect is found for having a partner as was the case for men. The age of the youngest child is significantly positive for children between the ages of 6 and 17. The effects of education are also positive, which would have most likely been significantly reduced if a Heckman selection bias test had been included in this model.[57]

One could argue whether the long-term negative effects of a history of nonparticipation (voluntary or unemployment) have indeed been isolated sufficiently to substantiate causality. This is of course a particularly complicated issue when modeling long-term effects. However, the effects have already been established for workers three years after returning to paid labor, which is as long as five years after the actual interruption. Now, we observe significant negative effects on the gross hourly wage of individuals in the year 2000 who have a history of voluntary nonparticipation or a history of unemployment during the period 1990-1993 (ranging from 1-4 years), as well as significant negative effects found for a history of nonparticipation (again ranging from 1-4 years) during the period 1994-1997. Furthermore, the control variables are the same as in the earlier models for the intermediate effects. There still remains the matter of the selectivity of the respondents who have taken part in the panel for the eleven-year period. This issue of selectivity remains. There is, however, substantial evidence to argue that there are indications of long-term negative effects of nonparticipation on the wages of individuals even ten years after the fact.

4.5 Conclusion

Three sets of analytical models have been presented in this chapter. It was necessary to use all three sets to find answers to the four research questions using the maximum number of respondents, as well as for differentiating for short-term, intermediate-term, and long-term effects. The analytical models have provided answers to the four research questions:

How does nonparticipation affect careers?
How does the nature of the interruption affect careers?
How does the duration of the career interruption affect careers?
Are the effects lasting?

These four questions have been divided into separate questions using three indicators:

1. How does (the nature and the duration of the interruption) affect the probability of having *paid work*?

57 No Heckman test was performed because although we realize that there is a certain amount of selectivity in the working population as established in the earlier models, there would remain additional selectivity due to panel attrition.

2. How does (the nature and the duration of the interruption) affect careers in terms of *socio-economic status*?
3. How does (the nature and the duration of the interruption) affect careers in terms of *gross hourly wage*?

In this manner, it has been possible to establish the effects of a labor market interruption, the different effects caused by the duration of the interruption, the effects of a voluntary versus an involuntary interruption, and whether the effects of an interruption are resilient in further career development, lasting even several years later. The results are now summarized briefly by the effect per indicator (paid work, socio-economic status, and gross hourly wage).

Regarding the effects on the chances of having paid work, it has been established that a period of nonparticipation has a significant negative effect on the chances of having work for both men and women and that the negative effect is stronger for men. As to the nature of the labor market exit, the analyses demonstrate that unemployment affects chances of being employed less strongly than voluntary nonparticipation. The negative effect of a recent history of unemployment is not as strong as the effect of a recent history of voluntary nonparticipation. The chances that women are working after a career interruption are better than men's chances, regardless of the nature of the interruption. These findings support the human capital hypothesis.

In terms of the duration, we find that the effect of the exit itself is more detrimental for a person's employment chances than the effect of the duration of the exit. This can be concluded because the effect found for two years out, whether voluntary or involuntary is not a doubling of the effect observed for persons with a one-year interruption. However, if the period of nonparticipation is longer than two years, the effects become stronger resulting in more difficulty rejoining the labor market. At least, this is true over the four years that individuals are followed in this set. This indicator, the chance of having paid work has not been used in the eleven year analysis from the third set because we realize that, over such an extensive period of time, there are too many external factors that play a role regarding whether individuals continue to participate in paid labor.

Concerning the effects on the socio-economic status, to begin with, the effects found for a recent history of unemployment for women are rather interesting. Women with a recent history of unemployment show a positive effect on their socio-economic status. This is not so for women with a recent history of voluntary nonparticipation. There is a negative effect after three years of unemployment, but the effect is not significant. This may be due to the stronger ties to the labor market that unemployed persons have compared to persons who are voluntarily not participating but this pattern is not found for men. Still, the effect is most likely due to the fact that these women have a (more) recent working history than most of the women in the popu-

lation. One can assume that this kind of effect will not be found in the future as an increasing number of women participate in paid labor and fewer women exit to take care of young children.

Men and women suffer more in terms of their socio-economic status if the interruption is voluntary. Here can be observed that the effects are quite a bit stronger for men than for women. As for the duration of the interruption, the negative effect after a one-year voluntary exit is quite small for men's socio-economic status. After two years, there is a sharp increase in the effect. The effects found for three years out are not significant. The strong increase after the second year however, demonstrates that duration is definitely important for men. For women, the effect after only one year out is stronger than the increase per year that follows. Women do pay an exit penalty regarding their level of socio-economic status. The eleven-year analysis from the third set was not possible for socio-economic set due to the great number of missing values on the occupational coding variable.

Summing up the effects on the gross hourly wage level, the nature of the interruption shows that unemployment has a stronger negative effect on the wages of men than voluntary interruptions. The opposite is true for women. This difference in effect for the sexes is most likely why such conflicting empirical results are often found. Regarding the duration, a history of voluntary nonparticipation only exhibits a significant negative effect on the wages of men if the interruption lasts for two years. Women display significant negative effects for one, two, or three years of past voluntary nonparticipation. For women, the effects are also more resilient in terms of their wages. The third set measured the long-term effects of a career interruption for a smaller sample on the gross hourly wage rate. Long-term negative effects are discernible on the wage levels of women as many as ten years after a voluntary career interruption. This model took up variables to control for total work history as well as the life course variables included in the previous analyses.

Significant negative effects are observed for past unemployment for the total population but disappear when running the analysis separately for men and women due to the smaller numbers. The negative long-term effects of these two career deviations: voluntary nonparticipation and unemployment are observable up to ten years after the fact. The negative effects are stronger for deviations earlier in the career supporting the tournament model hypothesis that it is wise to first create a bridgehead before exit. This is also an indication that wage growth is on a lower level upon return from a labor market exit. The farther back in the past that the career deviation has occurred, the stronger the effect on the wage growth, which supports the assumption of path divergence in the theoretical model. In addition, the fact that the effects found for voluntary nonparticipation in the first period (1990-1993) are significant at one percent, where the effects found for the second period (1994-1997) are weaker is indicative of the evolution on the Dutch labor market. An increasing

number of women are continuing to participate and voluntary exits are becoming less the norm. This is of course good news because of the increase in participation but it has a down side. Voluntary exits will be less easily 'forgiven' as norms shift and women are increasingly expected to remain active labor market participants. This implies that the penalty for voluntarily exiting the labor market is expected to increase.

This research has alleviated at least part of this information deficit by answering the question: how do recent periods of nonparticipation influence the chance of having a job and, for those individuals with a non-continuous career path currently engaged in paid labor, how does past nonparticipation influence their hourly wage and socio-economic status? The analyses show in connection to and in accordance with macro-participation data that nonparticipation still plays a greater role in the life course of women than it does in the life course of men, although its role for women is also decreasing. This is indicative of the increasingly large group of returning women laborers during the second half of the 1990s. Regarding the level of socio-economic status and the hourly wage levels, women suffer negative effects on both. Evidence of a cumulative wage gap is concentrated in the older female cohorts. Voluntary nonparticipation during the period directly prior has a stronger effect on the participation chances of men than for women. It appears that it is (still) more acceptable for women to temporarily exit the labor market than it is for men.

As men deviate from the 'male norm' and do not participate, this has immediate repercussions for their life course and, as the case may be, their careers (path dependency). Once men are back actively participating again, the period of nonparticipation has a slightly less damaging effect than it does for women in terms of the realized hourly wage. Going back to the theory-based hypotheses, one careful conclusion could be that the stigma effect caused by a period of nonparticipation is more devastating for men than the effect caused by the loss of human capital, while the opposite appears to be the case for women. There is thus some indication of an initial effect (in human capital terms: a 'once-only penalty') for an interruption and/or for nonparticipation.

In addition to this there is also a duration effect. The effect of the duration of the nonparticipation on the socio-economic status is not linear. For women however, there is evidence of a less than proportional negative effect, while this negative effect for men is more than proportional. The general conclusion is that recent periods of nonparticipation have a negative effect on both the chance of having work and, for those who at the end of each of the observation periods of four years actually are participating, on the socio-economic status and the earnings.

In the second series of analysis the focus is on whether the effects are lasting. To do this individuals are selected that have participated in the SEP survey for six consecutive years and who have worked for at least the last three years of that period. Do

the effects of a period of voluntary nonparticipation on the socio-economic status and the hourly wage differ when persons have again been participating for a longer period of time? In other words, when the career interruption is further behind them are the effects still observable? For women the answer is yes: the negative effects have not diminished, compared to the analysis after one year of renewed participation. The negative effects of voluntary nonparticipation whether for one, two or three years are quite resilient and can be observed both on the socio-economic status and wage levels of women. This is so even after at least three years of full-time work. For men the scarring effects have all but disappeared.

The last model further investigates the question of whether effects are lasting, comparing the long-term effects of past unemployment and past nonparticipation on wages. This model is run on a more selective sample including only those individuals who have taken part in the panel for eleven consecutive years and who are wage earners in the year 2000. The long-term negative effects for voluntary nonparticipation found up to ten years after can be observed in the wages of women. The effects are stronger for periods of voluntary nonparticipation farther back in the career path supporting the theoretical model for path divergence in wage growth. Returning from a labor market exit puts (female) employees on a lower wage growth plane, one that continues to be felt ten years later. The long-term effects for past unemployment are also observable when the analysis is done for men and women together. Here too, the effect is weaker (and no longer significant) for a 'more recent' period of unemployment.

5. *The effect of institutionalized breaks on careers*[58]

5.1 Introduction

The career detour focus of this chapter is an institutionalized career interruption and answers the research question: "How does an institutionalized break from working life affect the careers of individuals?" Making use of the experience on the Belgium labor market with career breaks since the implementation of this system in 1985, this research looks directly at the effect, both short and longer term, of institutionalized career breaks on careers.

Belgium and the Netherlands simultaneously attempted to tackle their high levels of unemployment using seemingly different methods. More than two decades later, the policies implemented by both countries are becoming ever more similar, while still retaining unique elements reflecting cultural differences in labor market policy. International comparisons (Oosterhout, 2003; Stier, Lewin-Epstein and Braun, 2001; Van der Aa, *et al.*, 2001) reveal similarities and differences in international policy systems conceived to promote labor participation while creating facilities to combine work with other life domains (care, training, and leisure). The problem remains that while each study focuses on forms of career breaks intended for individuals, the studies' approaches are, for the most part a macro-perspective. Nowhere is explicitly asked what the effects of institutionalized career breaks are for the individual employee and whether an institutionalized career break has lasting effects that carry on throughout the career. This study applies to exactly this gap in information. Belgium and the Netherlands have both proven to be enterprising enough to pioneer new methods of labor market reform designed to accommodate their own unique labor market demands. Seriously affected by the economic recession of the eighties, both countries suffered high levels of unemployment especially among the most vulnerable groups.[59] The extremely high percentage of youth unemployment was of particular concern. In response to this the Wassenaar Agreement was established in

58 This chapter is based on Román, A., J.J. Schippers and L. Heylen (2006), 'Career breaks in Belgium: how they affect labor participation and individual careers,' Tilburg: OSA, Institute for Labour Studies and Leuven: WAV, The Resource Centre for Labour Market Research.

59 The Netherlands had at its peak 847000 registered unemployed, totaling 16% of the labor force (SCP, 1988 p.377).

1982 and with it, the creation of part-time jobs in the Netherlands.[60] Confronted with an increasing unemployment rate, the unions agreed to wage moderation in exchange for working time reduction, believing that this would facilitate the distribution of labor. While their neighbors were thus engaged, in 1985 the Belgian government implemented a policy of career breaks designed to allow workers to temporarily exit the labor market for a pre-defined period during which they would receive a government subsidy while retaining job security. The odd thing about this development is that while both the Dutch and Belgian policies were designed to redistribute labor and combat the high youth unemployment, the two methods have seemingly evolved to become independent forces in these labor markets and in both markets it is women who have used these instruments overwhelmingly (but not exclusively).

The elaborate legislation guaranteeing equal rights for part-timers and legal rights to work less (or more) have taken on a new dimension and the Dutch are now faced with the problem of a part-time economy and need new answers to the question of just how to get their citizens to work *more* hours. At the same time, Belgium is continually revising its system, including more possibilities for reduction of hours because they see this as a key factor in achieving a higher participation rate. In research done by Devisscher and Peeters (2000) they find evidence that institutionalized career breaks are often used as an intermediate step in the transition to working part-time. Traditionally, Belgium has a lower overall participation rate than the Netherlands, but those employed work more hours per week than the average Dutch employee.[61] Other concerns to both countries are the low participation rates among the age group 55-64 years, along with the knowledge that their aging populations will need to extend their working careers in order to assure an affordable welfare state.[62]

In 2002, a new system called Time Credit was introduced in Belgium for the private sector only, resulting in a definite break from an employment oriented policy measure to the current policy which is designed in aiding workers in combining paid work with other major life domains: care, education, and training, and leisure. The scope of investigation here will be limited to the effects on participation by the career breaks policy and how the use of this measure affects careers in terms of continuity and wages. Much can be found in existing literature as to who uses the institutionalized

60 The Wassenaar Agreement, from 1982 was an agreement between government (Stichting van de Arbeid), employers' organizations, and the labor unions. The three parties were unified on the position that wage cost reduction was necessary to enable international economic competition. Working time reduction was agreed upon in exchange for minimal wage increase.

61 In 2002, the net labor participation rate for the labor force in the Netherlands was 65.6, 76.5 for men and 54.3 for women. The average number of working hours per week is 34.6 for men and 24.8 for women. (http://statline.cbs.nl).

62 According to recent calculations from the OECD, the average pension age in Belgium for men is 58.3 years and for women 56.9 years, with the one of lowest participation rates for 55-64 year olds (less than 40%).

career breaks as well as the intensity of use. However, little is known concerning their effects on labor market participation. Using a sample from the administrative data from the Crossroads Bank for Social Security called the Panel Mobility of Working age Population (PMWP) with waves running from 2nd quarter 1998 through 4th quarter 2002, and eleven waves (1992-2002) from the Panel Study of Belgian Households (PSBH), it is possible to observe career break users and how their career develops in terms of returning to their job, and once back, their wages. It has already been noted in research by Debacker, De Lathouwer and Bogaerts (2004) that little is known regarding the effects of institutionalized career breaks on individual careers, and what research has been done is limited to the effect up to six months after returning to the labor market. This gap in knowledge concerning the longer-term effects is something addressed in this research and leads to the research question:

1. *How do institutionalized career breaks affect careers?*

Do individuals return to the workplace after making use of the career break system? One can expect that most individuals that have used an institutionalized career break will return unless he or she decides not to continue working for personal reasons. There is no structural or legislative barrier for reentry. After all, the employer is required by law to reinstate the worker returning from leave. Furthermore, is the career break system effectively being used as a ticket out, a supple exit from paid labor? There have been several revisions and amendments to prohibit this type of use, but are they actually effective or are institutionalized career breaks still being used as subsidized labor market exits? If they do return, how does the prior use of a career break affect their career? Does it matter how long they remain away from their job? Does it matter at what point during their working life the career break is taken? Are part-time career breaks better than full-time breaks from working life? In essence, are all career breaks equal? This leads to the next research questions:

1. *How does the duration of the institutionalized career break affect careers?*
3. *How does the timing of the institutionalized career break affect careers?*
4. *How does the type of the institutionalized career break affect careers?*

Upon return, the employee is further protected for a period of six months during which his contract cannot be terminated. Even so, what happens to these employees after their legal protection has expired? There is some evidence (Elchardus and Cohen, 2003) that institutionalized career breaks have a significant effect on deterring premature labor market exit in terms of retirement, but how other (younger) users of the career break system are affected is still mostly unknown. By following the career paths of career breakers for a period of time it will be possible to observe whether they again become and remain active participants, i.e. regain *continuity* in the labor market and how they fare in terms of their *wages*. From a human capital theory perspective one expects that an institutionalized career break will be less de-

trimental for workers than non-institutionalized career breaks (voluntary labor market exits and unemployment) because the bond with the labor market is not severed and remains contractually intact. This attachment to the labor market should be conducive to a better reentry, resulting in less erosion of human capital (less time away, smooth re-entry). Regarding statistical discrimination theory, there should also be less chance of stigma or signaling, because the career break is institutionalized and hence, an accepted phenomena whereby an employee is less likely to suffer any negative labeling for his or her absence from the workplace.

Previous research shows that it is especially women that use this policy instrument. Devisscher and Peeters (2001) state that there is evidence that persons using institutionalized career breaks are less likely to permanently exit the labor market prematurely, as do Elchardus and Cohen (2003). But this was research in respect to premature permanent exit associated with pension-related exits, and their findings show a weaker effect for women. It is among others the low level of labor market participation by Belgian women that the career break system is intended to tackle. Although a majority of the users is women, the policy can certainly not be considered a success if women are using the career break as an interim step towards labor market exit. Regarding labor market continuity during prime working age, there is some evidence that the effects of career breaks are negative for women making use of full-time career breaks over extended periods of time. The longer the woman remains away from her job, the less likely she is to return to it (Deven, 2000).

The theory of tournament models can be used for the deduction of additional hypotheses regarding the career development once back at the job. Tournament model theory states that on an internal labor market (within organizations), there is competition between workers to climb the organizational ladder of success. Workers who, due to career breaks, are not present, will miss one or more rounds of competition for promotions, bonuses and other rewards. Although the data do not allow for insight into one particular organization (allowing for an actual examination of an internal labor market), it is still possible to test tournament model hypotheses indirectly. After all, persons making use of institutionalized career breaks remain on contract with one organization. In this manner it is possible to compare their wages to those of persons not using career breaks (using control variables).

The organization of this chapter is as follows: section 5.2 sketches the background of career breaks as a policy instrument in Belgium while describing parallel developments in the Netherlands. Section 5.3 uses the main theoretical frameworks to build hypotheses allowing specific analysis of institutionalized career breaks. Section 5.4 introduces the three data sources. Section 5.5 is an in-depth exploration and descriptive study of career breaks in the Belgian labor market during the period 1998 through 2002. In section 5.6 wage is analyzed as a determinant for use of the career break system. Section 5.7 moves on to the multivariate analyses to answer the first

research question: how do career breaks affect participation and continuity? In section 5.8 we turn to the question: how career breaks affect individual careers in terms of continuity and wage? Section 5.9 uses two methodological approaches to better understand the patterns of labor careers and the place of career breaks on a transitional labor market. Section 5.10 is a summary of the most relevant conclusions of this research on institutionalized career breaks, reverting back to the main research questions from chapter 1.

5.2 Background and parallel development in Belgium and the Netherlands

In describing the historical development of the Belgian institution of career breaks, it is important to reflect on the occurrences during the same time frame in the Netherlands. Facing many of the same problems and arriving at many of the same answers, the two countries are essentially entwined in a mirrored process as they both struggle to raise levels of labor participation while dealing with their own unique labor market cultures.

5.2.1 Same problems, different responses

This account begins in the mid 1980s, when most Western countries were faced with economic setbacks characterized by sluggish or even shrinking economies, soaring inflationary rates and alarming levels of unemployment. It was especially the disproportionally high youth unemployment that called for drastic measures. In response to this, the Dutch implemented working time reduction schemes and the way was made free for part-time work.[63, 64] Labor unions were skeptical of part-time work, fearing that it would undermine their efforts for collective agreements on working time reduction, and create another form of 'poor' labor belonging to the secondary labor market.

At the same time, the Belgians introduced a system of career breaks to deal with these problems which would allow individuals to exit the labor market while still retaining their binding labor contract with their employer. Employers were then obligated to replace the worker on leave for a discrete period of time with someone that was currently unemployed and receiving unemployment compensation. This was essentially designed to be a self-financing employment oriented policy measure. The system was innovative in that, up to that time, individuals wishing to take any kind of extended leave from work were forced to quit their jobs, be it for health reasons, to care for young children, care of spouse or extended family member, or

63 Working time reduction was as such indirectly responsible for the surge of part-time work, although the impetus was certainly women's emancipation.

64 Part-timers in the Netherlands are primarily women (66%) but a growing number of men are also opting for fewer working hours (15%), OSA Labour Supply Panel, 2002.

educational training. The research in chapter 4 focuses on the effect of exactly this kind of 'voluntary' nonparticipation on careers. Initially the design of the Belgian policy was quite rigid, requiring immediate hiring of an unemployed person in the temporarily vacated position. Over the years, several amendments have allowed for a more flexible implementation both for employers and employees.[65]

The new life course arrangement developed by the Dutch government allows all employees to participate, with the goal that more persons will thus be capable of a better combination of paid labor with other life domains. Employees may save up to 12 percent of the gross wage earned per year to help finance unpaid leave; time that can be spent in the form of a career break much as Belgium has been doing since 1985. A maximum of 210 percent of the gross year salary can be saved at any one time. This amount can then be used to finance unpaid leave. Once the balance has been used, an employee can begin to save again to the maximum amount. The system is flexible in that it applies to the individual employee with no restrictions on participation, and there are no restrictions on the reasons to take a career break. It creates individual freedom while at the same time places responsibility for the financial affordability with the employee who must make all necessary arrangements with the employer concerning any insurance contracts or even pension continuity. It is therefore a system that relies on good communication between employee and employer. The employee has no statutory right to take a career break (only to save for one). Actually taking the break is only possible in cooperation with and after receiving permission from the employer.

In the Belgian career break system, during the period of leave-taking, the worker receives no salary, does not accrue vacation time, but does continue to build pension. Although the government provides subsidy for the worker taking leave, it is a small, lump sum of a few hundred euros per month with some minor adjustments for full-time/part-time, lone parents, and lower income groups. It does not compensate for the missed earnings, nor is it intended to. What it does create is a buffer of security for the employee to temporarily exit the labor market knowing that his or her place will be there upon return. This type of security is especially important when labor markets are more dynamic and non-institutionalized exits can translate to longer than intended absence from working life with all the social and financial repercussions that ensue (see Román and Schippers, 2005).

The Belgian career break system is also flexible in many ways. The exit or hours reduction is not restricted by the reason for taking leave. The individual is completely

65 The Netherlands also introduced a leave taking system, albeit it quite a bit later, in 1998 called the Finlo Act (De Wet Financiering Loopbaanonderbreking). The Finlo Act ceased to exist on June 1st, 2005, mainly because of the high administrative costs, which were in no way compensated due to the low number of requests.

free in choosing his or her reasons for the exit and is not obliged to even justify the desire to take a career break. On the other hand, the employer is required to permit the career break as long as the maximum level is not exceeded or, if work continuity without the employee is not possible, the employer is obligated to well-motivate the denial. This is a major difference from the Dutch life course arrangement. The current maximum period of time for the (time credit) break is one year although extensions are possible through many of the collective labor agreements. In the second half of the nineties, a new amendment introduced three thematic leaves: parental, medical care and palliative.[66] Thematic leaves have priority over regular career breaks and are not subtracted from the amount of time allowed for regular career breaks. Thus, thematic leaves are *in addition to* career breaks. Individuals taking a thematic break are also entitled to a higher compensation than individuals taking regular career breaks. There are some logistic restrictions however. Leave-taking is not necessarily full-time. It can also be a reduction of working hours by one-fourth, one-third or one-half, which is essentially an official introduction of part-time work to the Belgian labor market albeit for temporary periods.

Regarding the use of the career break system for lifelong learning, there have been rigorous attempts by the Belgian government to stimulate this use. Since 1994, there has been a formal arrangement for employees using career breaks or working hour reductions providing a supplemental premium from the Flemish government. The Flemish incentive premiums are the result of the social agreement between the Flemish government and its social partners: the representatives of employers and employees. In 2002, this was substantially revised resulting in the current VAL system. The VAL premium is available under certain conditions to Flemish workers who take a career break.[67] This premium is doubled for the period that the employee is involved in occupational training, an added incentive for lifelong learning. Even with this additional incentive, actual requests made for the training premium remain low. According to the Flemish department for labor administration, applications for training premiums account for only 3 to 4 percent of the total number of yearly requests.[68]

5.2.2 Who uses the career break system and why?

When studying the effects of career breaks on the continuity and development of careers, it is important to differentiate between why and how these career breaks are being used. A complete descriptive overview will be given in section 5.5, but leading up to this, a general overview of the types of career breaks is relevant at this point.

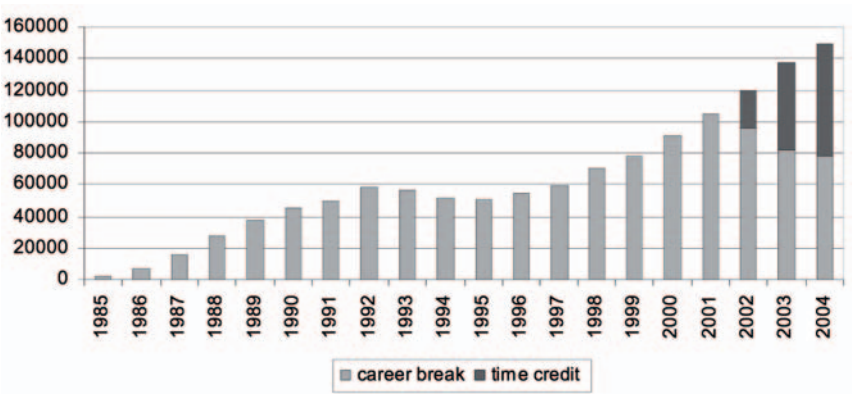
66 Palliative leave is restricted to terminal care for one month, which can be extended by one month per patient.

67 The premium is available for a maximum period of two years and amounts to 123,90 euro gross per month, 74,37 euro gross or 49,58 euro gross depending on the career break percentage (total working hours per week), and the labor agreement or contractual conditions between employee and employer.

68 Year Report 2004. Incentive premiums for career breaks and time credits. Ministry of the Flemish Community.

Figure 5.1 presents trends in career break use over the period 1985 to 2002. From its first introduction in 1985 until 1992 there is an observable increase in use to almost 60000 employees. Then, from 1992 until 1997 there is a period of stabilization in the number of career breakers. Another period of increased use follows through 2001 showing total number of users at more than 100000. The introduction of the time credit scheme in 2002 marks the beginning of a decrease in career breaks as users change over to the new system of time credit. Total use (of the combined systems) has risen to approximately 150000 users in 2004.

Figure 5.1: Trends in career break use 1985-2004*



Source: National Office of Employment (RVA), * in 2002 the time credit system was introduced.

Although the career break instrument is intended to promote labor, the career break itself is a temporary exit from the labor market used most commonly by women to better coordinate caring tasks at home. Women use the break in this way both as a reduction of hours and an actual break from paid work. Men, on the other hand, use the career break primarily as an intermediate step in the transition to retirement. Whereas initially the career break was used mainly in the form of a full-time exit from labor, there has been a definite increase in the number of men using the break as an hours reduction which could be an indication that men that otherwise may permanently (prematurely) exit the labor market are still actively involved in paid labor.

The Belgian career break system has proven itself to be a dynamic system, capable of change to more adequately meet the needs of the Belgian worker while allowing the kind of flexibility necessary for a successful implementation by Belgian employers. It is in any case a labor market instrument that is in increasing demand. However, demand does not measure actual effectiveness of the policy instrument. The career break system and the more recent time credit system are designed to effectively stimulate labor participation among women and older workers. A third goal is its use in accommodating lifelong learning. Answering the research questions should provide

a clear picture of just how successful this Belgian system is in achieving these goals. In addition to this, by analyzing how institutionalized career breaks affect individual careers, we hope to provide additional knowledge regarding the effects of career deviations.

5.3 Theoretical perspectives

This section borrows from three theoretical frameworks to build hypotheses for the analyses. Section 5.3.1 introduces the first and main theoretical framework, human capital theory. Section 5.3.3 applies statistical discrimination theory to institutionalized career breaks. Section 5.4.1 is an introduction to how tournament models are used to arrive at additional hypotheses concerning internal labor markets.

5.3.1 Career breaks seen from a human capital theory perspective

Up to now, human capital theory has not been (widely) used to build hypotheses regarding institutionalized career breaks. Even the more recent work modeling Mincerian wage equations (Kunze, 2002; Spivey, 2005) does not cover institutionalized systems of career interruptions. Taking the most extensive form of career break, full-time leave from work over an extended period of time, the employee is faced with more than one kind of human capital loss. The first type of loss is the simple erosion due to aging. The second kind of loss is due to the lack of growth or experience that would have occurred had that employee been at work. However, because there is no actual separation between the employer and the employee, no loss of organizational specific capital takes place. Now that the employee is not gaining experience at work but is otherwise occupied (or not), the erosion component is not compensated so that a reduction in human capital results. The additional loss of human capital through skills disuse, referred to by Mincer and Polacheck (1978) as atrophy is only likely to take place after an extended period of time. The longer the career interruption endures, the greater the chance that skills atrophy will occur, especially in view of the speed of knowledge obsolescence as influenced by technology. There are indeed few areas of the labor market that are not affected by developments in technology, and skills constantly need to be refurbished.

Additional training and education can compensate human capital loss. If the employee takes a career break for training, there is much less problem of skills disuse, and certainly the human capital gained on the training course should compensate any experience missed at work. The assumption is thus that career breaks used specifically for training should have a positive effect on both participation and individual careers. If the career break is for any other reason, are the chances of skills investment prior to the absence from work (*anticipation*) reduced as in the case in nonparticipation? Here, too the assumption is that institutionalized career breaks should differ with traditional career interruptions (as described in chapter 4) regarding prior investments in training.

In regard to the institutionalized career break, one could argue that individuals know that they are leaving the labor market for a well-defined, temporary period, whereby a lack of investment in their human capital would be detrimental to their career well-being. However, it is a fact that a sizeable number of individuals use the career break system as a bridge to exit the labor market, with no intention of returning their jobs at all. Investment in training prior to the career break may be an indication of actual intentions to return to the workplace. This creates a possibility to construct an indicator for intended labor market return. This raises the issue of whether it is possible to establish causality and its direction in advance. It may be difficult to establish use of occupational training as a tendency proxy due to the simple fact that older workers make less use of training facilities than their younger co-workers. But in the case of women, and certainly women younger than 50 years of age, prior investment in training (or a lack of it) it could be a good indicator of whether she truly intends to return after the break. If the employee does intend to return after the institutionalized career break, prior investments in training should not be significantly lower. Admittedly, it may be difficult to test intent without survey questions to directly inquire about future plans. Even then, it is difficult as described by Gronau (1988) who was confronted with a similar issue and stated that actual exits far exceeded reported intentions to exit. Still, the system of career breaks is designed for use as a break, not an exit.

The effects of human capital loss due to labor market absence are different depending not only upon the number of interruptions, and the length of the interruption, but the timing or placement of the interruption in the career path as well. When calculating working life earnings of women, Mertens *et al.* (1995) suggest that women are better off delaying exits related to childbearing until their careers are further developed. Women are making greater investments in their education before starting their professional careers. The longer educational period and career investments are further delaying the plans for starting a family, resulting in progressively older mothers with all the added problems for reduced fertility rates and other complications.[69]

In a recent study by Heylen and Mortelmans (forthcoming), they find that the timing of children plays an essential role in the continuity of women's careers. This timing issue concerns not only the age of women, but also the number of years of education (thus, the age upon entering the labor market), the age of the woman at the first birth, as well as the spacing of the children. Women juggling infants on career ladders tend, for the sake of balance, to take a few steps down, and when a third child is involved, there is a greater tendency to get off the ladder all together. The negative effects on labor market continuity and, after reentering the labor market, on wage

69 According to Eurostat, the mean age at which European women are giving birth is 29.2 years and the trend over the past two decades has been an increase in mean age.
See http://europa.eu.int/comm/eurostat/newcronos/queen/display.

caused by using non-institutionalized career breaks are described in chapter 4. The assumption is that institutionalized career breaks will better enable women to combine caring tasks and paid work, taking breaks (either full-time or part-time) and preserving the bond with the labor market, resulting in better labor continuity and higher wages. The use of an institutionalized career break creates a buffer of security for the employee to temporarily exit the labor market, knowing that his or her place will be there upon return.

The use of an institutionalized career break is also expected to alleviate much of the gender wage gap that has been created due to women's broken histories in the labor market. Numerous exits and patchy work histories have resulted in wage loss as well as a lack of wage growth as has been established through numerous studies (Albrecht *et al.*, 1999; Blau and Kahn, 2000; Budig and England, 2001; Corcoran, *et al.*, 1983; Mertens, *et al.*, 1995; Mincer and Polachek, 1978). It can be thus assumed that women making use of institutionalized career breaks and retaining their labor market continuity will have a higher wage and better wage growth resulting in a reduction of the gender wage gap. In addition, working mothers who do not take a career break may actually have a tougher time organizing their combined tasks. This is the basis for an interesting postulate. It is quite likely that working mothers who use a career break will, upon their return, be able to perform better than their colleague mothers who have not taken time off. This leads to the first hypothesis:

> *Working mothers who use the career break system will retain a better labor market continuity and wage development than mothers who continue working without using career breaks.*

5.3.2 Statistical discrimination theory

Institutionalized leave-taking implicitly has the benefit that because leave-taking is part of an institutionalized system it (should be) an accepted phenomenon. The chance that a worker will become stigmatized by exiting the labor market in this manner is minimal or even non-existent. Where other types of labor exit can result in lasting negative and scarring effects, institutionalized labor market exits will be less likely to do so. An interesting position is that of employers in the career break system. After all, they are required by law to grant employees leave. They are confronted with numerous logistical and administrative complexities by the career break system. They may be required to grant leave but they still have the ability to discriminate. If they feel that workers are less reliable because they have made use of an institutionalized career break, thus have a questionable level of productivity, they may be less likely to promote them. They could be less willing to select workers who have taken an institutionalized career break for higher positions.

Albrecht *et al.* (1999) find indications that employers consider male workers less *loyal* for taking leave even though they are entitled to do so in Sweden's parental leave

taking system. They find that the great number of women taking leave has neutralized any kind of stigma for female workers making use of the system. However, the fact that so few men use the system makes the level of job commitment by those men that do take parental leave questionable in the eyes of the employer.

If this is the case, the legal system of protection will not help if employers remain a barrier to career promotions. What will the position of employers be towards personnel who make use of the system? Will the effects be different for men and women as was observed in the study by Albrecht *et al.*? If the system is indeed an accepted phenomenon, employers should not view returning career break users as untrustworthy or undependable. Workers returning from a career break should not suffer the negative effects from stigma that have been observed in analysis results in chapter 4 on voluntary exits. This is the second hypothesis:

> *Employers using the career break system will not suffer negative effects on wages and wage growth after returning to their job*

5.3.3 *Tournament model views on career breaks*

The tournament model is useful in conceptualizing career path mobility, especially regarding the internal labor markets of organizations. Based on the premise that within organizations employees are in competition with one another for promotions to higher functions, the tournament model assumes that upon entering an organization, new employees are 'selected' or sponsored for the promotion track or not. Early career path decisions by individuals will thus be crucial for whether an employee can achieve upward mobility by way of promotion. In essence, the pre-selection is the basis for getting through to the top (of the organization). Without being in this pre-selection, the route is inaccessible (Rosenbaum, 1976). However, this pre-selection is not a guarantee for reaching the top. An ongoing competition takes place, in which there are losers and winners. Winners go on further in the competition, and losers are 'knocked out' of the game. Winners can thus go on to compete for even higher positions. Losers can only compete with the other losers for less attractive jobs with no chance of regaining the greater opportunities whose doors remain barred. Turner previously (1960) referred to this as sponsored and contest mobility. Sponsored is the act of pre-selection, and contest is each following round of competition.

Tournament models have been modified and repeatedly tested over time, many studies using sporting competitions to enable further mathematical and statistical modeling: Nascar racing, basketball, PGA golf championships, sumo wrestling, and stud poker, to name but a few. The original tournament model is quite strict, being a single elimination tournament where once knocked out, the way was barred from further competition at the highest level. The round-robin tournament takes early competition rounds into account, but relies more heavily on later success to predict outcome. The horse race uses the later position as the best predictor of winning

(Forbes, 1987). Building on tournament model theory, one can assume that making use of a career break early on in the career will be more detrimental for career continuity and upward mobility than a career break later on in the career, as early career competitions are the most decisive in upward mobility. Thus the timing of an institutionalized career break will have diverse effects on careers. This leads to the following hypothesis:

> *Institutionalized career breaks taken earlier on the career path will be more disadvantageous to labor continuity than career breaks taken later in the career path.*

Following this line of reasoning and now using the round-robin version of tournament models, individuals taking career breaks for longer periods will miss more rounds of competition, thus having a stronger negative effect on career continuity and upward mobility. Although this hypothesis could also be constructed using human capital theory, it is more appropriate for a round-robin tournament model because, part of human capital states that the duration of the interruption is only partly responsible for the loss of human capital. The anticipation effect, i.e. knowing that one will exit, will also cause the employee to be less likely to invest in human capital prior to departure. For this reason, the aspect of duration is more directly captured using the round-robin tournament model than human capital theory. Utilizing the round-robin version of tournament models, it would therefore be likely that the longer an individual does not take part in the competition, the less likely he or she will be to attain an advantageous position, thus making no advances on the career ladder. This leads to the following hypothesis:

> *The greater the duration of the career break, the more detrimental it will be in terms of career continuity and wage.*

Where these first two tournament model hypotheses assume negative effects for employees using career breaks, and in essence make no distinction between using the career break system and simply exiting the labor market similarly to the voluntary exits described in chapter 4, the next hypothesis tests whether institutionalized career breaks are more conducive to employees career continuity and career building.

The horse race version of tournament models states that there are no knockout rounds, nor is it essential to take the lead throughout the race. Winning by a nose can be achieved by a good end sprint. This allows for a more positive twist and one for all individuals using career breaks. It is based on the assumption that the career break literally allows the employee a 'breather' or a period of rest during the ongoing career with all of its pressure and competitive rounds. The career breaker, upon his or her return will thus have more effective staying power, remaining in the race longer and having more energy reserves allowing a better dash for the finish. Following this line of reasoning we are led to the third hypothesis for tournament theory:

Use of an institutionalized career break will have a positive effect on labor market continuity and wage.

The predicted positive effect is a direct comparison of employees who simply continue working and do not use a break, as well as making an indirect comparison to the effects found for non-institutionalized voluntary exits in chapter 4.

The use of tournament models is indirectly tested in this research, as the data do not allow for testing within organizations. However, because the nature of the career break is that the employee remains under contract with the same employer, it is possible to indirectly test the hypotheses by comparing the continuity of employment and wage level to that of employees who have not made use of career breaks.

5.4 The three data sets

The analyses in this research chapter on the Belgian career break system are performed on three data sets. The first data set is a large administrative sample providing a vast source of information on more than 600000 respondents, which is described in section 5.4.1. The second data set used for this research is eleven waves of the Belgian Household Panel (1992-2002) that is introduced in section 5.4.2. The third and last data set is a unique module from the 2002 wave of this same Belgian Household panel, called the career module, which is described in section 5.4.3.

5.4.1 The PMWP data sample

In order to answer questions regarding how institutionalized career breaks affect participation, and more particularly the labor market participation of those groups specifically targeted by this policy measure (women and older workers), it is necessary to look into larger data sources that allow for more descriptive analyses. In Belgium, one of the best resources for these data is the Datawarehouse Labour Market (DWHLM) at the Crossroads Bank for Social Security (CBSS).[70] In this Datawarehouse all administrative data from several Belgian social security institutes are linked via the national insurance number which is a unique identification number held by all individuals known to those institutes. These data, although vast in numbers, have obvious limitations due to privacy restrictions, even though the identifying number is made anonymous.

For this research project on career breaks, a sample from the DWHLM of the adult working age Belgian population totaling 609971 respondents is used. This sample

70 This Datawarehouse Labour Market was created within the context of the Agora Program of the Public Office for Scientific Research. WAV, The Resource Centre for Labour Market Research is charged with the scientific steering and counseling of this Datawarehouse. The PMWP sample has been created on request of the Resource Centre within the context of their own multi-annual research program to study transitions and career paths on the labour market.

called the PMWP (Panel Mobility of Working Age Population) was drawn on the basis of statistics from the last quarter of 1998, the first quarter for which the DWHLM data were created at the CBSS. The sample has been followed every quarter up to and including the last quarter of 2002, which at this time is the most up-to-date available data from the CBSS. Individuals who are in the sample in the first quarter remain in the sample throughout all 19 quarters unless they have died. This also means that the population ages and additions are only newborn infants. Each year, the research population is one year older. The sample includes all individuals known to any of the institutes during the period covered. This means that any persons not participating in the labor market and not receiving any kind of unemployment benefit will not have entered the sample at the start. However, persons already in the sample may change their labor market position, becoming inactive, and will remain in the sample.

The data sample also includes important information regarding the partner. Beyond basic information known previously, such as sex and relation to the head of the household, it is now known whether the partner works, whether this is full-time or part-time, as well as specific information on wages. In addition to the partner information and extended time period, there is some information on whether the break was thematic as well as possible activities while on the career break (i.e. training).

Administrative data, quite different from survey data, is not acquired specifically for social science research. No questions are designed with detailed methodologies enabling research analysis. This leads to all kinds of difficulties when using administrative data for social science research. There are for instance no variables on the level of education or any kind of information on occupational coding, which mean that it is not possible to do analyses on the socio-economic status or function level. It is however possible to trace the employment (sec) as well as drawing cautious conclusions regarding wage levels. These data also, simply by their sheer numbers, are a welcome addition to survey data in researching questions on how the institution of career breaks affect labor market participation and continuity. A list of variables used from this sample can be found in Appendix B, table B1. WAV has been authorized to analyze this PMWP sample for several research projects including this project in cooperation with OSA.[71]

5.4.2 The PSBH panel data

There are two sets of data from the PSBH panel used in this research. The first set is the actual longitudinal panel from the Panel Study on Belgian Households (PSBH) which is a survey originating in 1992 with annual waves following the original 4439

71 See Data Request Art5/02/002 at the CBSS, authorization of 19 July, 2005. Authorization for use by the Commission for the protection of the Personal Privacy nr. VT4003404. For this research the utmost of care has been taken to ensure complete anonymity of the individuals in the sample population. All analyses are done in cooperation with and under the supervision of WAV on their premises in Leuven, Belgium.

random selected household counting 11000 individual members. The survey is conducted using face-to-face interviews. Respondents are adults in private households (age 16 to 75 years). All of Belgium is covered with an achieved sample size of 4439 households and a response rate between 85 and 93 percent. The fieldwork is expedited during the period from May to November. The sampling frame is the Postcode Address File of the National Registration Office.

Regarding the registration of career breaks in the PSBH; only those individuals using a full-time career break are registered as career breakers. This does not mean that part-time career breakers are not in the data, only that it is not possible to discern whether they are making use of a career break, or are simply part-time workers. It is also not possible to ascertain the motivation for taking the career break (thematic or otherwise). Still, the use of the panel is essential for controlling for variables that are not included in the administrative data from the PMWP. This additional information allows for more insight into background characteristics as well as allowing us to follow respondents over a longer period of time (eleven years versus the four-and-three-quarter years from the PMWP sample). This time element is of particular importance when answering questions regarding labor market continuity, differences in effects through duration of the break, and establishing any intermediate-term effect on wage after returning from a career break.

Approximately 3 percent of the Belgian working population makes use of the career break per year. The PSBH is sampled from the entire Belgian population known to the postal registry, which means that the population is broader than only the population of working age. Another reason for the under representation of career breakers in the PSBH is due to the fact that only full-time career breakers are registered in the data. The total percentage of known career breakers in the PSBH panel is just over 1 percent. Table 5.1 presents the number of respondents making use of a career break during the period covered in the panel by sex.

Table 5.1: Career breakers by sex and duration of break in the panel population

	No break	1 year	2 years	3 years	4 years	5 years	6 years	Total
Men	5989	21	0	3	0	0	0	6013
women	6264	80	20	7	5	1	1	6378
Total	12253	101	20	10	5	1	1	12391

Source: PSBH 1992-2002

During the period covered by the eleven waves of the PSBH (1992 through 2002), there are a total of 138 respondents that make use of a full-time career break. The greater majority uses a career break for a period of one year. The number of female career breakers outnumbers the male users 4 to 1.

5.4.3 The PSBH career module

The second dataset used from the PSBH is from the 2002 wave of the panel, in which a special module on careers was included. It was completed by 4453 respondents answering questions on the entire career path starting with the moment that their initial schooling was completed or terminated through to their retirement and pension. Of the 4453 individuals completing the career module, a total of 99 persons registered having made use of a career break (between 1985 and 2002) at some time during their working career (just over two percent). There are obvious drawbacks to using retrospective data, especially when the survey questions are covering such lengthy periods of time. However, the career module is designed using questions that carefully guide respondents to register their periods of labor participation, inactivity, unemployment, schooling, etc., using major life course events as their historical markers (i.e. marriage, birth of children, etc.).

This last dataset is truly unique and invites more advanced and experimental methods of analysis to allow for the best methodological approach for analyzing labor careers. The career module will for this reason be used in section 5.9 in a comparison of two analytical methods used for tracing and making evident the career patterns existing on the Belgian labor market today, allowing for a better perspective on the place of career breaks as a labor market instrument within those labor market patterns. It will also allow for a better perspective of the long-term effects that career breaks have on labor market participation.

To properly address the main research question at hand and to adequately test the hypotheses based on the theoretical framework, a very broad range of data resources are used in this research. Descriptions of the methodologies, the data, and the variables used, will be given in more detail with the presentation of each of the different types of analysis. Human capital theory has been the theoretical basis in approaching the instrument of institutionalized career breaks. Human capital theory states that the worth or value of an individual erodes as we age, and this in itself is a somber note, faced as we are by an aging population (there are a lot more of us worth a lot less). On the other hand, human capital can be gained, refurbished and refreshed through training and education, which is certainly an important argument to support and sustain lifelong learning. Does an institutionalized career break provide the secure basis so that breaks from paid labor do not have the (lasting) negative effects as in the case of traditional (nonparticipation) labor market exits?

There are still many employees that use institutionalized career breaks to exit the labor market. In this sense, there is an exploratory element to this research. Has the *institutionalization* of career breaks changed how temporary labor market exits affect careers? Does an institutionalized career break alleviate the detrimental effects found in previous research (Román and Schippers, 2005) on non-institutionalized career breaks? Hypotheses derived from tournament models are used to indirectly

test for any negative effects that this institutionalized form of labor market exit has on labor market continuity and income experienced due to the fact that employees miss out on important rounds of competition on the internal labor market, making them less capable of successfully climbing career ladders. Finally, the last possibility is that a break, no matter how disadvantageous to income, will still prove to be the only feasible approach to effectively realizing longer working careers, allowing the breather that will keep employees working right on down the line.

5.5 Career break use 1998-2002

All analyses in this section are performed on the data sample from the PMWP. This section begins with an introduction of the career breaks in the data throughout the period covered 1998 through 2002. Section 5.5.1 provides a descriptive picture of total use, the types of career break taken as well as career breaks by proportion of working hours. Next, in section 5.5.2 the population throughout the period under study is presented with a specific look at how household composition affects the use of career breaks.

5.5.1 Career break use by type and size

This first section presents an overview of institutionalized career breaks during the period 1998 through 2002. It allows for a first indication of the type of career breaks being used; regular or thematic leave (palliative, medical care, or childcare) and whether they are applied as full-time leave or as reduction of working hours. Table 5.2 shows the distribution of career breaks by type in the population.

Table 5.2: Distribution of institutionalized career breaks by type (total numbers)

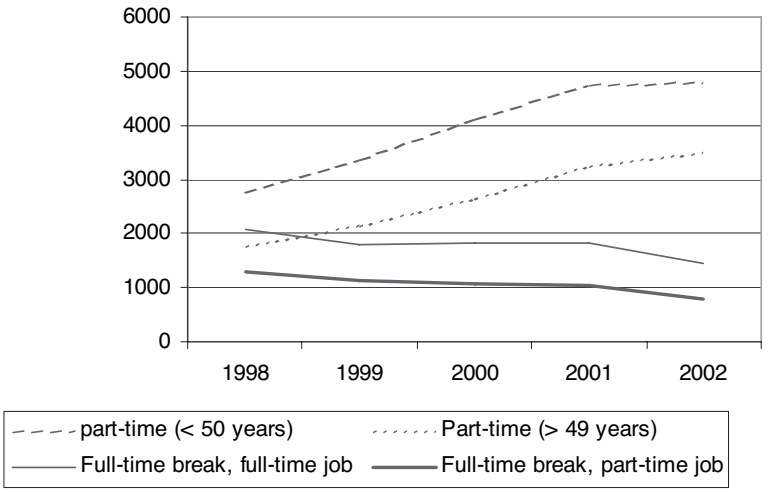
	1998	1999	2000	2001	2002
Regular career break	7789	7890	8892	9965	9341
Thematic leave:					
Medical	4	58	119	145	204
Childcare	72	440	644	719	828
Palliative	7	3	5	2	10
Total	7875	8397	9665	10833	10467

Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations).

The table makes manifest that regular career breaks are by far the most common type of career break used. Of the thematic leaves, childcare is most frequently used. As was stated earlier, palliative leave is quite specific and very restricted in its use. The overall trend is an increase in the thematic leaves, constituting approximately ten percent of all career breaks in the population in 2002, which is not surprising when considering that thematic leave is additional to the total amount of time

allowed for career breaks and that the premiums for compensation of wage loss are higher as well. The next figure presents the distribution of career break use by size: either as full-time leave or as a reduction of working hours.

Figure 5.2: Number of institutionalized career breaks by full-time leave and reduction of working hours



Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations).

Figure 5.2 shows some obvious trends in career breaks. In the legend, part-time stands for a reduction of working hours by full-time employment. This is delineated by the special arrangements for workers younger than 50 years of age and those who are 50 years and older. One of the most significant trends observable here is the increase in career breaks taken as a reduction of working hours. A marked increase in a part-time reduction of working hours by older workers is observable. This supports earlier findings by Elchardus and Cohen (2003) that older workers are beginning to use a reduction of working hours to remain active in the labor market (see Table 5.3). This is helping to reduce the high percentage of labor market exits among older workers.

At the same time, a new trend is also visible through the increase in the number of career breaks used as a reduction of working hours by persons younger than 50 years of age. Devisscher and Peeters (2000) find evidence that career breaks are often used as an intermediate step in the transition to working part-time. This total increase in part-time career breaks is reflected in the reduction of full-time career breaks. Part-time work as a solution for both older workers easing into retirement and younger workers combining paid labor with caring tasks are clearly new trends on the Belgium labor market.

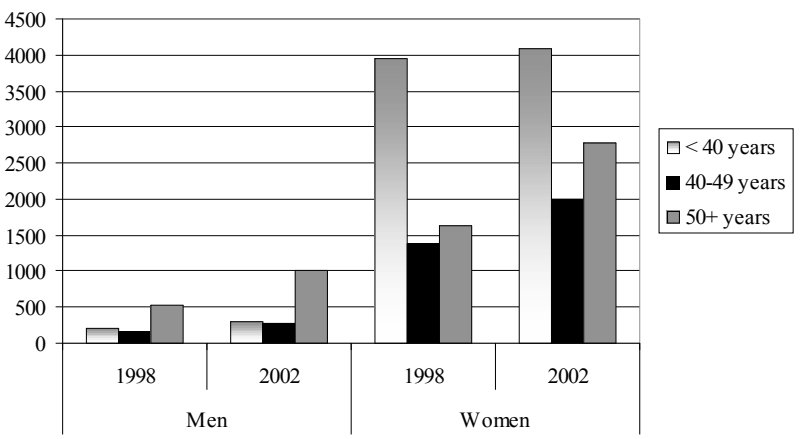
Table 5.3: Belgian labor participation rate of persons 50-64 years of age by sex, 1998-2002 (percentages)

	1998	1999	2000	2001	2002
women	25.3	26.4	27.6	28.4	29.3
men	51.1	50.2	52.9	52.7	52.6
total	38.0	38.2	40.1	40.4	40.9

Source: Eurostat, National Institute for Statistics (NIS)

Table 5.3 presents the national labor participation rate of persons 50 to 64 years of age for the period 1998-2002. During the five-year period, a modest increase can be observed in the participation rate of older workers on the Belgian labor market. This, together with the increased use of part-time career breaks by older workers, is an indication that use of the career break system by older workers is slowly changing from premature exits, to longer participation, albeit in the form of a reduction of working hours.

Figure 5.3: Number of persons with career breaks in 1998 and 2002 by sex and age



Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations).

Figure 5.3 presents the use of career breaks by sex and age in 1998 and 2002. A shift in distribution over the three age groups is evident. Career break use is evolving as we see an increasing percentage of use among the employees age 40 and older accounting for most of the growth in total number between 1998 and 2002. Note must be made of the fact that the PMWP sample is representative of the Belgian population for the year 1998, the year in which the sample was taken. Respondents remain in the sample and no additions are made except for newborn children. This results in an

increase in the average age in the population of one year for every following year. However, this is not substantial to explain the shift in career break use by age as can be observed in the figure. The total number of women younger than 40 years of age is stable at approximately 4000. The increase in use can be observed in the age group 40-49 years of age with an increase of some 700 women using the break and for the oldest age group, an increase of almost 900 women using a career break. Men show an overall increase, with the greatest increase found in the oldest age group (almost double).

During the period under study, there has only been a very gradual shift in distribution by sex. Of the total number of career breaks taken in 1998, men took only 12 percent and the women 88 percent. In 2002 men have increased their share of breaks using 15 percent in 2002 (and women 85%).

5.5.2 Household factors

Taking an institutionalized career break is influenced by a number of factors, and the actual decision to do so is usually not taken by the individual alone but at household level. It is for this reason that variables regarding household composition such as the presence of a partner, and whether the partner has an income, the number of children, and the age of the youngest children are essential in gaining insight into an individual's motivation for use of career breaks.

Table 5.4 presents the use of career breaks by the household demographics of the respondent. Career breaks are most commonly used by persons with a partner and children. The next highest percentage can be found by persons with a partner and no children. Single parent families experience a double economic handicap when using a career break due to the reduction of their own income and the non-existence of a partner's income. This is certainly one of the groups expected to be the most hindered in using career breaks. To establish whether household composition is indeed a barrier to use, a comparison of use by actual household distribution in the population is necessary. This is shown in the third column, the ratio of use.

Table 5.4: Career break use per household type, distribution of household type in population and ratio (in percentages)

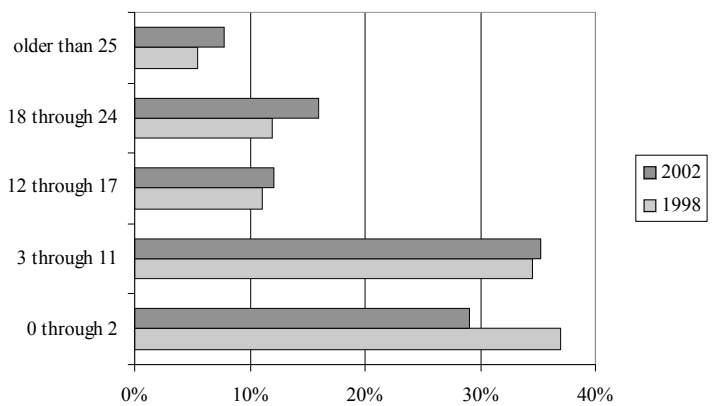
	Career break use	Household	Ratio
lives with parent	2.4	6.7	0.4
single	6.2	14.4	0.4
couple no children	21.3	22.8	0.9
couple with children	64.6	47.0	1.4
lone parent	4.2	6.9	0.6
other	1.2	2.2	0.6

Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations).

By comparing the distribution of households by career break use, a discrepancy can be established for all categories. This discrepancy is depicted by the ratio of use (percentage of career break use per household type divided by percentage of household in population), a shortage of use for all groups (they use less than their 'share') except by the group of couples with children where career break use far exceeds their representation in the population. The lack of career break use is the greatest for the group of singles and persons living with their parents. This is not surprising as these two household types are less likely to need a career break for either of the most common uses: childcare and reduction of working hours of older workers. But there is also a deficiency under the lone parent households showing 40 percent less use than their representation in the population. It indicates that there may indeed be structural barriers for this labor market instrument by this group. Aid for individuals combining paid labor and caring tasks is a major policy goal for institutionalized career breaks. Lone parents are less able to utilize this instrument, which suggests that additional measures are necessary for this group.

Up to now it has been established that career breaks are predominantly used by women to combine paid labor and caring tasks. At what point is the career break being used and at what age of the children are women able to return to their careers? The next figure provides answers to these questions. Figure 5.4 presents career break use by the age of the youngest child. Comparing the first and the last years in our data, a shift can be observed. There is a more equal distribution of use throughout the age groups of the youngest children. This is at least in part a reflection of the increased use by men, who are using the break to reduce working hours and continue participating in the labor market but also because women are apparently taking career breaks at later stages (hence the older ages of the children).

Figure 5.4: Career break use by age youngest child



Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations).

Using the PMWP sample at WAV in Leuven has enabled us to gain insight into the trends in career breaks and shifts in those trends over the period 1998 through 2002. The career break system is becoming increasingly more popular in Belgium, evident through the total increase in use. The thematic breaks are gaining ground and now represent a total of ten percent of the total career breaks used. The lower percentage of use of thematic leave can more than likely be attributed to the greater restrictions and shorter periods of time allowed for the break. The size of break is also experiencing some changes. There is an apparent shift from full-time career breaks to part-time breaks. These reductions in working hours are being used by older workers who in this manner remain active in the labor market before exiting all together into retirement. Younger age groups, especially for combinations of paid labor and caring tasks, are also using working hour reductions. There is a subtle shift in the distribution of use by sex. Men are starting to use career breaks more than in the past. Nevertheless, women take 85 percent of the breaks.

As most decisions that directly effect household income are taken at the household level, we also looked directly into these factors influencing use. Couples with children are the main users by household demographics. Couples without kids are the second largest group. Even when controlling for (household) distribution in the population, we see that couples with kids use the greatest share of career breaks. We find some evidence that lone parents are hindered in using career breaks. As stated previously, it is working mothers that make the greatest use of career breaks so it was necessary to get an impression of how old the children are when their mothers are using the career break system. During the period of study, there is an observable shift in the age of the youngest child in the home by career break use. The aging data population (average age increases one year each year) is not sufficient to explain this. Where the largest group could be found using career breaks when the youngest child was 0-2 years old, this has moved up to the age group of the youngest child being 3-11 years. This is interesting when keeping in mind that parental leave as a thematic leave can be included to the age of 6 years and up to one year per child. After that age, working mothers can use regular career breaks (just as everyone else).

5.6 Wage as determinant for career break use

A major criticism of the Belgian career break system is that it is not equally available to all participants in the labor market because of the reduction in household income during the break. In this section a critical examination is made of how accessible the career break system is to labor market participants in regard to income, both in terms of the wage of the individual and his or her partner. The career break system may not be affordable for all income levels considering that the wage compensation is minimal, even with additional subsidies for lower incomes, single parent households, and thematic leaves. We first look at the role of the partner's wages (5.6.1),

following which; a series of analyses is performed to estimate the selectivity in use of career breaks by higher wage earners in section 5.6.2. All analyses in this section are performed on the data sample from the PMWP.

5.6.1 Partner wage as determinant

We have already observed that single households are less likely to use a career break than households where there are two partners. It is important to establish in households where there is a partner, whether the partner's income is also essential in whether a career break can be taken or not. In other words, is the possible barrier to use due to the missed earnings or the missed partner or both? This is the next step in establishing the possible barriers for using career breaks. If economic factors are involved here, one of the most direct methods for testing is to analyze the chances for use of a career break by the presence of a partner's wage. It is certainly one of the most decisive factors when considering household information as being influential in career decisions.

Model 1 is a logistic regression that calculates the chance that an individual who is currently working in (T0) will take a career break in one of the years following observed in the data and is illustrated as follows:

a logistic regression to predict the chance of taking a career break in one of the following years as predicted by the current level of the partner's net daily wage:

$$\frac{p_1}{1-p_1} = e^{a+bX} \qquad [1]$$

The logistic regression predicts the chance that the dependent variable (career break) is equivalent to 1, where e is the base for the natural logarithm (e = 2.71828...), a and b are the regression constants and X is the independent variable. In this equation, X denotes the set of covariates to control for variables affecting taking a career break (partner wage) and the control variables:

- partner's net daily wage (included as dummies: 50-60 euros, 60-70 euros, 70-80 euros, 80-90 euros, 90-100 euros, 100-110 euros, 110-125 euros, and 125-150 euros);
- sex;
- age (included as five age group dummies: 18-24, 25-34, 35-44, 45-54 and 55-64);
- children and the age of the youngest child;

The dependent variable is 'career break'. Career break is computed for those individuals working in year T0, as a dichotomous variable (0/1) to indicate whether the person takes a career break in any of the following years (T1, T2, T3 or T4). The key explanatory variable 'net daily partner wage' is computed for the base year (T0).

Table 5.5 is a logistic regression of use of an institutionalized career break. A total of 966426 observations are included in the analysis using a stacked person period dataset. The standard errors are corrected for repeated observations. Dummy variables are included in the model to isolate the effect of each level of the partner's daily net wage on the chances of taking a career break.

Table 5.5: Logistic regression of taking a career break (model 1)

Partner's net daily wage (ref. = more than 150 euros per day)	
50-60 euros	-1.175***
60-70 euros	-0.995***
70-80 euros	-0.815***
80-90 euros	-0.596***
90-100 euros	-0.427***
100-110 euros	-0.341***
110-125 euros	-0.233***
125-150 euros	-0.147***
Sex (ref. = male)	2.298***
Age (ref. = 55-59 years of age)	
18-24 years old	-2.329***
25-39 years old	-0.831***
40-49 years old	-0.625***
50-54 years old	0.630***
60-64 years old	-0.585**
65+ years	-2.687**
Age youngest child (ref. = no children)	
0-2 years	1.615***
3-11 years	0.912***
12-17 years	0.165***
18-24 years	0.059
25 years or older	0.046
Constant	-7.337***
Observations	966426
R-squared	0.13

Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations), **significant at 5%, ***significant at 1%.

Model 1 explains 13 percent of the variance in the population. The wages are net wages per day with more than 150 euros as the reference category, this because the highest level for partner wage is also the modus for the group of career break users. Compared to this category, one observes a significant difference in the chance of using a career break. The chances lessen for each wage level lower than the reference category. What we observe here is that the effect of a partner's wage is indeed important for whether individuals take a career break or not. Career break use is more likely in households in which the partner (not taking the career break) has a higher net daily wage. What we do not see here is any evidence that when the partner belongs to a

lower wage group, that individuals are being *excluded* from using career breaks. There is however a significantly lower chance of using an institutionalized career break among those households where the partner's daily net wage belongs to a lower wage group. All in all, there is some substantial evidence found regarding economic barriers for career break use regarding households with couples. The evidence from Table 5.4 indicates that the presence of a partner is an important factor for being able to take career breaks; it appears that exactly what he (or she) earns is also an important factor in the household decision regarding career breaks.

An important question has been addressed in this section concerning restrictions due to income levels in households. We have seen that lone parents have a lower use of career breaks, which may or may not be due to economic restrictions. If it is only due to economic barriers, than lower income households would also show a significantly lower use. This is first tested using partner wage to determine the chance of using a career break. We find no evidence that lower income groups are excluded from using career breaks, but do find a significant reduction in the chance of use when lower partner wages are involved.

5.6.2 Employee wage as determinant

The next step is to establish how the individual's wage functions as a determinant for career break use. It is after all, this wage that is sacrificed during the career break. There have been indications that the wage level of an individual could be important in whether or not a career break is used. To assess this, three logistic regressions are run which also serve as an indirect test for selection bias of who takes a break using individual wage as an explanatory variable. Any significant effect found, whether positive or negative will establish whether there is selectivity, and if this is the case, just how great the selectivity is. The first logistic regression analysis (Model 2) is the chance of taking a career break using no break as the reference category. Because we also assume that there are differences in who actually takes a full-time break and who takes a part-time break or reduction of working hours, two additional models are required. Model 3 tests the chance of taking a part-time career break with, as the reference category, no break or a full-time break. Model 4 analyzes the chance of taking a full-time career break with no break or a part-time break as reference category.

In the PMWP data set, wage is registered as net wages per day using a ten-point scale running from 1 (low) to 10 (high) with corresponding daily earnings scales identical to those included in Table 5.5. This time, for each wage category an approximate middle point is taken to calculate the logarithm of the daily net wage in euros for the base year 1998. This wage is calculated as a full-time equivalent. The actual hours worked in 1998 are entered as a logarithm of the part-time fraction of a full-time working week. The three models can be written as follows:

$$\frac{p_1}{1-p_1} = e^{a+bX+\lambda+\gamma} \qquad [2\text{-}4]$$

Where e is the natural logarithm, a and b are the regression constants, X represents the covariates, and λ is the logarithm of the employee's wage recorded in 1998, and γ is the logarithm of his or her working hours as registered in 1998.

Model 2 uses a dependent variable: career break with no break as a reference, Model 3 uses the dependent part-time break with no break or a full-time break as a reference category, and Model 4 has a full-time break as the dependent variable with no break or a part-time break as a reference category. The results are presented in Table 5.6. A total of 309038 cases have been included in each of the three models and all three models explain 13 percent of the variance in the population.

Table 5.6: Three logistic regressions of career break and career break size (part-time or full-time)

	Model 2	Model 3	Model 4
	Break (ref. = no break)	Part-time break (ref. = no break or full-time break)	Full-time break (ref. = no break or part-time break)
Logarithm of wage 1998	0.499***	0.606***	0.183**
Logarithm of hours 1998	1.220***	1.904***	0.244**
Sex (ref. = male)	2.218***	2.227***	2.205***
Age (ref. = 55-59 years of age)			
18-24 years	-0.524***	-1.454***	0.518**
25-39 years	-0.034	-0.396***	0.698***
40-49 years	0.050	0.053	-0.058
50-54 years	0.686***	0.805***	-0.064
60-64 years	-1.522***	-1.312**	-2.334**
Partner	0.826***	0.869***	0.709***
Age youngest child (ref. = no children)			
0-2 years	0.914***	0.964***	0.758***
3-11 years	-0.129**	0.065	-0.480***
12-17 years	-0.405***	-0.209**	-0.981***
18-24 years	-0.147**	-0.022	-0.528***
25 years or older	0.051	0.117	-0.100
Constant	-10.591***	-11.380***	-10.577***
Observations	309038	309038	309038
Pseudo R-squared	0.13	0.13	0.13

Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations), ***significant at 1%, **significant at 5%, *significant at 10%.

Model 2 is the chance of taking a break in any of the observed years following (1999 through 2002) using the logarithm of the net daily wage as reported in 1998 along with the logarithm of the working hours as a part-time fraction of the full-time working hours from 1998. We observe a significant positive effect for the individual's wage level in 1998 on the chance of taking a break in any of the following observed years. This means that the higher the level of the personal wage, the greater the chance of taking a break in one of the next years.

It was established earlier that there was a significant effect for the chance of taking a break by level of the partner's wages. Now we observe that the wages of the individual are also a significant factor in whether or not a break is taken. Remember, this is the wage that will be missed during the period of time that the employee would be on the break. On the one hand, higher wage earners will have more to lose by taking a break, but they also are able to afford the temporary reduction in income. The significant positive effect observable by the logarithm of the working hours demonstrates that the greater the number of weekly working hours, the greater the chance of taking a career break. Part-timers have thus less need for a break than full-time employees.

The observed effects for age are interesting. There is a negative effect found for the youngest age group compared to the reference group (age 55-59 years). This could be expected, as this age group is not likely to already need a break. The effects for the age groups of 25 through 49 (time squeeze in the life course) do not significantly differ from the reference group. The age group 50-54 has a greater chance of using a break than the reference group, and the older workers have a significantly lower chance of using the break than the reference group. This seems to indicate a select group of older workers who have already made the decision to keep working until the actual pension date.

Model 3 is the chance of taking a part-time break compared to not taking a break at all or taking a full-time break. Here we observe a stronger positive effect for wage than in Model 2. There is also a stronger effect for the logarithm of hours in 1998. This indicates that a greater number of working hours per week will dictate a part-time break even more strongly. Here, just as in the other two models, women are much more likely to take a break than men. The effects found for age are similar to Model 2, with stronger negative effects for the age group 25-39 years in comparison to the reference category and a stronger positive effect for the age group of 50-54 years. Regarding the age of the youngest child, there is no significant effect found for 3-11 year olds. Part-time breaks are evidently used by women with younger (0-2 years) children.

Model 4 is the chance of using a full-time career break as compared to no break or a part-time break. The effect of wage is quite a bit smaller here than was observed in the first two models, but it still has a significant positive effect. The effect of the logarithm of the hours is also quite a bit less than in the other two models. The effects for the different age groups are almost all different than in the first two models. Younger age groups show a positive effect on taking a full-time career break compared to the reference age group (55-59 years). The sign turns negative at age forty but is not significant until the age group of 60-64 years of age. At this point it has a strong negative effect on the chance of taking a full-time career break as compared to the 55-59 age group.

Here too it seems that there is a group of employees decidedly against early exit. If one has not left the labor market by the age of 55-59, it is very unlikely that one will leave before reaching the age of 65. In this model more of the effects for the age of the youngest children are significant (all excepting 25 years or older) than in the other two models and all are negative compared to the reference group not having children except the youngest age group of 0-2 years. It appears that individual wage does play a strong role in the decision to take a career break or not. This effect is stronger for part-time career breaks than it is for full-time breaks.

We have observed that the individual wage does indeed play a significant role in whether or not an employee takes a career break. These findings in combination with the effects found earlier for the wages of the partner, establish that there is a certain amount of selectivity in the group of career breakers. This issue is something that we will come back to in section 5.8.

5.7 Effect of career breaks on labor participation and continuity

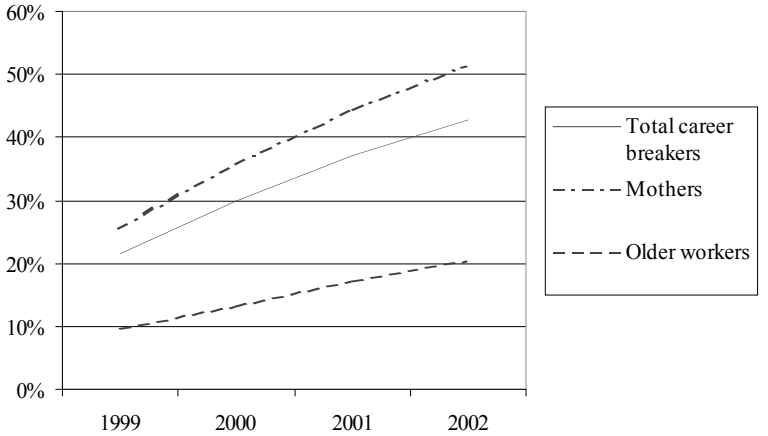
Although inherent in the institutionalized career break is the assumption that employees will return to their jobs, this is not always the case. This section begins with an inquiry into the effects on labor continuity by analyzing whether employees return (5.7.1) and remain on the job once they have returned (5.7.2). In this section both the PMWP data set and the PSBH data set are used. The PMWP is used for those analyses that require a greater number of respondents, and the PSBH panel is used for those analyses where a longer time period is essential for modeling effects.

5.7.1 Returning to the labor force

Addressing the first research question, it is essential to pay particular attention to how career breaks affect labor participation by the groups targeted: older workers and women with young children. The next figure illustrates the total percentage of career breakers returning to their jobs as well as the percentages of the targeted groups returning to work in the years following a career break. This is estimated using the PMWP data set which allows for an observation of a maximum number of respondents.

Figure 5.5 presents the return percentages for career breakers in the first year of the sample, 1998. By following respondents over the next four-year period, percentages are displayed for the total group of career break users returning to the job for each consecutive year. Note should be taken that for those persons using a career break in 1998, there is no information regarding how long they have been on the break. Approximately 43 percent of the total number of persons taking a career break in 1998 has returned to work by 2002. More than half of the women using career breaks to combine paid labor and caring tasks have returned (51.4%). This group is

Figure 5.5: Total percentage of career breakers in 1998 by percentage returning to work in consecutive years per targeted group



Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations).

selected as being female, younger than 50, having children, and taking a career break in 1998.

Only 20.5 percent of the older workers (50 years and older) have returned to their jobs by 2002. Nevertheless, if one-out-of-five older workers using the career break is actually returning to work, this may indeed be the beginning of a new trend where career breaks are being used by older workers to continue their participation in the labor market instead of using career breaks as a ticket out of active labor. This allows for a tentative answer to the question of how the career break actually affects labor market participation among the targeted groups women and older workers. It is, as stated previously impossible to know how long persons taking career breaks in 1998, the first year of our dataset, have actually been on the career break. It is for this reason, that results here must be used as indications.

5.7.2 Staying in the labor force

The next step is to assess how individuals are affected by their past career break once they have re-entered the labor market as an active participant. This is part of the first of our research questions: how does past use of a career break affect further labor participation? To answer the question of how career breaks affect labor market continuity, all eleven years of the PSBH panel are utilized. The panel is needed for the continuity model so that respondents can be followed for the maximum possible number of years. The model used is a logistic regression that calculates the chance

that an individual who is currently working will continue to be working in the next year (staying active in the labor market) by their prior use of a career break. The model is illustrated as follows:

a logistic regression to predict the chance of having paid work in the next year as predicted by past career break use and the duration of the current working period:

$$\frac{p_1}{1-p_1} = e^{a+bX+\lambda} \quad [5]$$

The logistic regression predicts the chance that the dependent variable (working) is equivalent to 1, where e is the base for the natural logarithm (e = 2.71828...), a and b are the regression constants, X is the independent variable, and λ is the duration of the current working period (1, 2, 3, 4, or 5 years). In this equation, X denotes the set of covariates to control for variables affecting labor participation while still remaining flexible for life course variation. Keeping life course theory in mind, a woman age 25 may have a youngest child in the age group 0-5, but so may a woman age 30, 35, 40 or even 45. For this reason, we have opted to use control variables in such a way as to allow for a complete realm of variety. These control variables are:

- duration of current working period (dummies included for 1, 2, 3, 4, or 5 years);
- sex;
- age (included in the models as five age group dummies: 18-24, 25-34, 35-44, 45-54 and 55-64);
- educational level (dummies for three levels: primary and lower secondary, higher secondary, and higher professional and university);
- partner (*living* with partner whether cohabitating or married);
- children and the age of the youngest child.

The dependent variable is 'stay'. Stay is computed for those individuals working in year T0, as a dichotomous variable (0/1) to indicate whether the person is working the next year (in T1). The key explanatory variable 'prior career break' is computed for each year whether a respondent has had a career break in any of the panel years previous. The results are presented in Table 5.7.

Table 5.7 shows the results of a logistic regression on a stacked person period dataset measuring the effect of having taken a career break (during the panel years) on the chance of remaining active in the labor market. The standard deviations are corrected for repeated observations. The analysis is done separately for men and women. The total number of observations included in the analyses is 100882. Model 5 explains 36 percent of the variance in the male population and 31 percent of the variance by women. All the dummy variables for the duration of the current working period have positive effects on women's chances for labor continuity, but this effect

Table 5.7: Logistic regression of staying in the labor force (model 5)

	Men	Women
Duration of current working period		
one year	0.826***	1.334***
two years	0.853***	1.294***
three years	0.768***	1.199***
four years	0.751***	1.106***
Prior career break	-0.789*	-0.810***
Duration of career break	0.147	-0.270***
Age (ref. = 55-64 years)		
18-24 years	0.658***	0.348**
25-34 years	1.534***	1.542***
35-44 years	1.715***	1.673***
45-54 years	1.592***	1.434***
Educational level (ref. = primary and lower secondary level)		
higher secondary	1.540***	1.780***
higher professional and university	1.592***	2.330***
Partner	1.962***	1.118***
Age youngest child (ref. = no children)		
0-5 years	0.785***	0.021
6-11 years	1.173***	0.897***
12-18 years	1.259***	0.897***
18-20 years	0.895***	0.524***
Constant	-4.228***	-4.453***
Observations	50095	50787
Pseudo R-squared	0.36	0.31

Source: PSBH panel 1992-2002, *** *significant at 1%, ** significant at 5%, * significant at 10%.*

lessens the longer the duration of the current working period. This means that the positive effect for working duration decreases, or the greater the likelihood that she will exit the labor market. Men show a similar pattern, although the effect is smaller than it is for women and this effect only lessens after two years of continuous work. Prior use of a career break shows to have a significant negative effect on labor market continuity. This effect is stronger for women than for men.

The duration of the career break also has a negative effect on women's labor participation showing that the longer the woman uses a career break, the stronger the negative effects will be on her labor market continuity thereafter which supports the second tournament model hypothesis. The effect of duration is not significant for men. Compared to the oldest age group (55-64 years), employees age 35-44 years have the strongest chance of remaining active on the labor force. The age effect shows clearly support for the first tournament model hypothesis, namely that career breaks taken early in the career will be more detrimental to labor continuity. The small positive effect for the youngest age groups cannot compensate the negative effect

found for taking a career break as well as the strong positive effect found for older age groups.

The effect of educational level is clear. The higher the level of education, the stronger the positive effect on labor market continuity. The effect of education on women's participation is much stronger than it is for men, especially the effect of a higher professional or university level education. This is important to remember when reviewing the wage models in section 5.8.[72] Having a partner has a strong positive effect on labor market participation, and this effect is stronger for men than for women. The presence of children has a positive effect on men and women's continued labor force participation except by the youngest age group.

The next model (Model 6) is done exclusively for women and uses an interaction term for the effects of having used a career break and having children. The model can be written:

$$\frac{p_1}{1-p_1} = e^{a+bX} \qquad [6]$$

Again with the chance of remaining active in the labor market with 'stay' entered as a dichotomous dependent variable (1/0), a and b are the regression constants, e is the natural logarithm and X represents the covariates. Here, the main explanatory variables are having taken a career break in the past, being a mother, and the interaction of these two variables. The assumption is that working women with children who use a career break will have a better labor market continuity upon their return to the labor market than working mothers who have not made use of a break. This is based on the idea that working mothers who use an institutionalized break to combine paid labor and caring tasks will be better able to continue their careers with less chance of having to drop out of the labor market altogether. They have used the break to rest, recover, organize and prepare themselves for their jobs. Working mothers who do not take a break will be more likely to suffer from fatigue, pressures from less organized households, and stress resulting in more burn-out and a greater likelihood of labor market exit.

Table 5.8 presents the results of Model 6 testing whether working mothers who make use of institutionalized career breaks have a better labor market continuity (afterward) than working mothers who do not take career breaks. The negative effect of a prior career break as shown in the table was already established. This effect is only for women taking career breaks, as men are not included in the analysis. The

72 For the wage models in section 5.8, no control variables for educational attainment are included due to data restrictions. The strong positive effect of higher educational levels on women's labor continuity implies a certain amount of selectivity bias in the wage models.

Table 5.8: Logistic regression of staying in the labor force (model 6)

Prior career break	-0.824**
Mother	0.435***
Prior career break and mother	-0.112
Age (ref. = 55-64 years)	
18-24 years	0.253**
25-34 years	1.550***
35-44 years	1.744***
45-54 years	1.509***
Educational level (ref. primary and lower secondary school)	
higher secondary level	1.015***
higher professional and university	1.699***
Partner	2.216***
Constant	-4.083***
Observations	50787
Pseudo R-squared	0.27

Source: PSBH panel 1992-2002, *** significant at 1%, ** significant at 5%, * significant at 10%.

effect of being a mother has a significant positive effect on labor market continuity. Belgian mothers are right out there playing an active role in the labor market as could be seen by their relatively high participation rates. Getting down to the key coefficient, and the human capital hypothesis, the interaction term of being a mother and having made use of a career break shows to have no significant effect. The coefficient is negative. This does not provide support for the hypothesis. The positive effect found for working mothers would certainly support the opposite postulate, namely that being a working mother has a significant positive effect on labor market continuity, and that working mothers that do take a career break have less chance of remaining active in the labor market than mothers who simply continue working. We do not find evidence that taking a career break enables working mothers to have a better labor continuity upon their return than working mothers who have not made use of a career break. There is indeed some evidence to support exactly the opposite postulate in terms of labor continuity.

5.8 The effect of institutionalized career breaks on individual wages

This section deals with the possible effects of taking a career break on individual careers in terms of wage and wage growth. Do career breakers suffer in wage development due to having been away? This involves including a number of variations in the wage models. The first attempts using the data from the PSBH panel proved unsatisfactory, which is unfortunate because it would have been more ideal to follow the effects of career breaks on wage and wage growth over longer time periods. For this

reason we use the dataset from the PMWP which, although having a shorter time frame (4.5 years), does include a far greater number of respondents (609971).

Using tournament model theory we can assume that both when a break is used and how long the break is taken are essential factors in explaining effects on careers. The following step is to present the wage models to ascertain whether or not taking a career break has an effect on the wages of individuals, if the duration of the break matters in this effect, and, if there are observable effects, whether these effects are persistent. For these analyses, three OLS regressions are performed to model effects on wage and this is done separately for men and women. For the regression analyses wage is included as the logarithm for the net daily wage. The model can be written as follows:

$$\ln(Y_{t+n}) = \alpha + \beta X + \lambda \ln(Y_t) + \gamma CB + \varepsilon$$

By including the logarithm of the net daily wage as an explanatory variable in the model, it can also be seen as a growth model expressed as:

$$\ln\left(\frac{Y_{t+n}}{Y_t}\right) = \alpha + \beta X + (\lambda - 1)\ln(Y_t) + \gamma CB + e \qquad [7\text{-}9]$$

In these equations, X denotes the set of covariates including age, partner, children and age of the youngest child. CB is career break included both as part-time and full-time, and a duration dummy for the two-year maximum duration. α, β, and λ are the parameters to be estimated, n is the year in which wage is measured, with ε being the error term. Of particular interest is in γ being the effect of a prior career break on the wage growth. As stated previously, there are no variables available in the PMWP sample to control for the educational attainment of respondents or their partners. There are two main questions to be answered by this analysis: how does a career break affect individual careers in terms of wage? Are breaks more detrimental the longer the duration? Here it is important to distinguish between effects for a complete break (full-time break by a full-time or part-time working contract) and a part-time break, or a reduction of working hours.

The three models are run separately for men and women. The number of observations varies per model. Included in the analysis are those individuals who report wages in 1998, for 1999, and 2000, are salaried employees or are on a career break, and in 2001 and/or 2002 are salaried workers.[73] In these models, if a career break is taken, it occurs in 1999 and or 2000. This selection is necessary to isolate effects. The key explanatory variables in the model are the dummies for a part-time/full-time career break in 1999, and part-time/full-time career break in 2000. A dummy variable

73 For 2001 and 2002, those individuals not reporting wages are omitted from the analysis.

for duration is used which measures when a part-time or full-time career break is taken for both years (the reference is no career break or a one year career break). Other covariates in the models cover age, partner, and age of the youngest child. The models are illustrated in the following three figures.

Figure 5.6: Career pattern of the sample under scrutiny (model 7)

	Year			
	1998	1999	2000	2001
Employment status	Salaried employee	Either salaried employee or career break	Either salaried employee or career break	Salaried employee
	wage level	→	→	wage level

Model 7 covers effects over a four-year period, using 1998 as a base year. All covariates are entered for this base year as well as the logarithm of the net daily wage. This model measures real wage change between 1998 and 2001.

Figure 5.7: Career pattern of the sample under scrutiny (model 8)

	Year				
	1998	1999	2000	2001	2002
Employment status	Salaried employee	Either salaried employee or career break	Either salaried employee or career break	Salaried employee	Salaried employee
				wage level →	wage level

In Model 8 covariates are also included for the base year (1998). The model measures the real wage change over a much shorter time period, namely between 2001 and 2002.

Figure 5.8: Career pattern of the sample under scrutiny (model 9)

	Year				
	1998	1999	2000	2001	2002
Employment status	Salaried employee	Either salaried employee or career break	Either salaried employee or career break	Salaried employee	Salaried employee
	wage level	→	→	→	wage level

Model 9 covers the entire period from 1998 through 2002. This model also takes op covariates and the logarithm of net daily wage from the base year 1998. The real wage change is measured over the full time window (1998 to 2002).

It is now time to return to the issue of selection in the group of career breakers. We know it exists. We know that the chance of taking a part-time break is quite a bit more likely for individuals with higher wages. However, by including wage in the model, selection is greatly tempered. It does nothing to alleviate the matter of selection we found in terms of participation and continuity where women with higher levels of education exhibit a greater labor continuity. Nevertheless, the career break system is for *workers*, and for this reason, the selection bias for who works and who does not, are not essential to the models. The effects of wage on taking a break are included (and thus controlled for) in the model.[73]

Because the three models are analyzed for men and women separately, the models for men are labeled 7a, 8a, and 9a. The three wage models for women are number 7b, 8b, and 9b respectively. The three wage models for men are presented in Table 5.9.

In Model 7a for men, 146637 cases are included and the model explains 53 percent of the variance in the population. The model explains more than half of the variance in wage. The wages from 1998 used in the model have a strong positive effect on the real net daily wage in 2001. It has the strongest effect of all the coefficients in the model. Nevertheless, we observe a significant negative effect on the wage in 2001 for those men who have taken a part-time career break in 1999. Of all the key explanatory variables, only the part-time break taken in 1999 has a significant effect on wage. This means that coming back from the part-time career break taken in 1999, men have an initial set-back in terms of their wage development.

Switching over to the men's next wage model (8a), the explained variance has jumped to 76 percent. The strongest explanatory variable is the logarithm included for wage in 2001. This now has a much stronger explanatory power due to the shorter time period (2001-2002) between the measures of the real wage levels. Of the key explanatory variables, two are significant and have more explanatory power than all the remaining covariates included except for the oldest age group. The negative effect for a part-time break has been compensated. There is even a significant positive effect observable on men's wages. After taking a part-time career break, men experience a slight increase in wages which would indicate an initial rebound effect as they recover from their time-out. There is also a significant positive effect for a part-time break taken in 2000. Why this effect does not show the delay as in the break

73 Additional analyses including partner income did not increase the explained variance. Although the effect was significant, it was less than .001, and because a substantial number of cases would have been excluded, this covariate was not included in the final version.

Table 5.9: Three wage models for men explaining real wage change for three periods

	Model 7a 1998-2001	Model 8a 2001-2002	Model 9a 1998-2002
Wage			
logarithm wage 1998	0.647***		0.606***
logarithm wage 2001		0.836***	
Career break			
part-time break in 1999	-0.088**	0.065**	-0.003
full-time break in 1999	-0.052	0.039	-0.032
part-time break in 2000	-0.003	0.039*	0.001
full-time break in 2000	0.012	0.028	0.039
duration full-time break	-0.033	-0.027	0.025
duration part-time break	-0.013	-0.073	-0.053
Age (ref. = 55-59 years of age)			
18-24 years	-0.066***	-0.028***	-0.070***
25-39 years	-0.015***	-0.017***	-0.023***
40-49 years	-0.010**	-0.013***	-0.022***
50-54 years	-0.010**	-0.018***	-0.033***
60-64 years	0.160***	0.106***	0.228***
Partner	0.023***	0.008***	0.025***
Age youngest child (ref. = no children)			
0-2 years	0.000	0.002	0.000
3-11 years	-0.005**	0.002	-0.005**
12-17 years	-0.004*	0.001	-0.005**
18-24 years	0.004*	0.003**	0.003*
25 years or older	0.003	0.001	0.006**
Constant	1.718***	0.822***	1.957***
Observations	146637	137238	137036
R-squared	0.53	0.76	0.50

Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations), *** significant at 1%, ** significant at 5%, * significant at 10%.

taken in 1999 is uncertain. The full-time breaks do not have significant effects on wage. The duration variables also do not have any significant effects on the wage of men which means that no support is found for the second tournament model hypothesis. There are fewer cases included in this model due to the additional year in the model (2002). The positive effect found for the part-time break support the third tournament model hypothesis.

Model 9a includes 137036 cases and explains 50 percent of the variance in the sample. Here we observe that the effects of the key explanatory variables are no longer significant and that those men who have taken a break in 1999 or 2000 are back on a normal wage level. They have in fact rebounded back to the wage plane they were on before they took the career break. No significant effects for the duration of the break are observed in any of the men's models.

The three models on wage are now presented for women in Table 5.10. Beyond the effects on wage and the effect of a two-year duration of the break on wage, we look specifically into effects of career breaks on the wages of working mothers. The next analysis compares the effects on the wages of working women, and more specifically working *mothers* by whether they have made previous use of a career break, whether this is part-time or full-time and how the duration of the break affects wage.

Table 5.10: Three wage models for women explaining real wage change for three periods

	Model 7b 1998-2001	Model 8b 2001-2002	Model 9b 1998-2002
Wage			
logarithm wage 1998	0.616***		0.573***
logarithm wage 2001		0.827***	
Career break			
part-time break in 1999	0.003	-0.004	-0.011
full-time break in 1999	0.038*	0.040**	0.085***
part-time break in 2000	0.008	0.009	-0.002
full-time break in 2000	0.056**	0.021*	0.048**
Duration full-time break	-0.082*	-0.100**	-0.172**
Duration part-time break	-0.006	-0.028	-0.017
Age (ref. = 55-59 years of age)			
18-24 years	-0.088***	-0.029***	-0.085***
25-39 years	0.000	-0.003	0.009
40-49 years	0.040***	0.013**	0.046***
50-54 years	0.015**	-0.016**	-0.011
60-64 years	0.326***	0.134***	0.367***
Partner	0.022***	0.005**	0.026***
Age youngest child (ref. = no children)			
0-2 years	0.028***	0.015***	0.031***
3-11 years	0.013***	0.010***	0.009**
12-17 years	-0.005	-0.002	-0.014***
18-24 years	-0.009**	-0.004	-0.015***
25 years or older	-0.007*	-0.003	-0.008***
Constant	1.842***	0.865***	2.091***
Observations	94687	87686	87328
R-squared	0.49	0.72	0.44

Source: The Datawarehouse Labour Market at the Crossroads Bank for Social Security, PMWP sample (own calculations), *** significant at 1%, ** significant at 5%, * significant at 10%.

In Model 7b, 94687 cases are included and the model explains 49 percent of the variance in the population. We observe a strong positive effect for the logarithm of net daily wage as measured in 1998. This coefficient is very similar to the effects of wage found in the first model for men. This variable has the greatest explanatory power in the model. Of the key explanatory variables, the full-time career breaks for 1999 and 2000 both have a significant positive effect on the wages of women. This supports again the third tournament model hypothesis. The part-time breaks have

no significant effects on wages. This is exactly the opposite of what was true for men. Women also experience an immediate positive effect as they return from their full-time break. The positive effect for the full-time break taken in 2000 is stronger than for the full-time break taken in 1999. Where no effect for duration was found for men, there is an effect for women. If they stay out on a full-time break for both years, the positive effect on wage is reversed and a wage penalty results. This duration effect is similar to what was found for women's continuity. The second tournament model hypothesis is supported for women only.

Moving straight onto Model 8b in which 87686 cases are included (an additional year making the selection more stringent) and which explains 72 percent of the variation (this model measures real wage change between 2001 and 2002), we observe that the significant positive effects found for full-time breaks in Model 7b persist in this wage model. Remember, the breaks are taken in 1999 and or 2000. The positive effects found for a full-time break in 2000 means that we are observing the same phenomenon from the first model, namely a rebound effect as women return to their jobs. However, the significant positive effect found for the full-time break in 1999 can hardly still be referred to as a rebound-effect. On the contrary, this has a more lasting positive effect on the wages of these women and provides support for the human capital hypothesis. However, the positive effect of a full-time career break on women's wages is reversed if the full-time break is taken for two years. The negative effect of a two-year duration is more than two times stronger than the positive effect for the full-time break in any one year. This provides support for the third tournament model hypothesis.

Model 9b covers the real wage change over the entire period from 1998 to 2002. It includes 87328 observations and the model explains 44 percent of the variation in the population. The significant positive effect of a full-time career break on women's wage growth can be clearly observed. The positive effect for the full-time career break in 1999 is even stronger than in Model 7b (and significant at 1% as compared to 10%). This is not the case for the full-time break taken in 2000. Although the effect remains significantly positive (at 5%), it has weakened very slightly in comparison to the first model. The significant negative effect for duration is strongest in this last model. Taking a full-time career break has a significant positive effect on the wages of women. But they must come back after one year. If they do not, the negative effect found for duration is much stronger than the positive effect for the full-time break and results in a wage penalty.

The covariates used in the three models sketch a very consistent picture and enable insight into the role of career breaks for working mothers. The effects for the age groups show that compared to the reference group (age 55-59 years) the youngest age group has lower wages and the age group of 25-39 years has no significant effects on wages compared to the reference group. At age 40-49, women are climbing in their

wage levels. The age group of 50-54 years shows little or no significant difference in wage growth to the reference category. Again we observe the die-hard group of workers age 60-64 who are still making quite a good go of it as is expressed in the positive effect on their wages. Significant positive effects are found for having a partner.

Quite contrary to the negative effects on participation, we find a positive effect for career breaks on earnings; that is to say as long as the career break is taken for no longer than one year. Part-time career breaks have a positive effect on the wages of men. This effect disappears once the man has returned to the wage growth rate he had before taking the break. Full-time career breaks have a positive effect on the wages of women. The effect of full-time career breaks on women's wages persists and is observable even three years after the break. Working mothers with young children (0-11 years of age) show positive effects on their wages compared to the reference group of women without children. Being a mother with youngest children 12 to 17 years, seems to be a turning point for which we observe mostly insignificant effects. Mothers of children 18 years and older have significant negative effects on their wages. This may be a cohort effect of older, more traditional women who did not continue working after having children.

One last reflection on the matter of selectivity: wage level plays a more modest role in the chance of taking a full-time break. With this as a background and looking at the results of the wage models, we can say that part-time breaks are more interesting for higher wage earners because they are less of a financial burden. Higher wage levels have more to lose by taking a career break. By taking up the logarithm of the individual wage into the model, we include the very variable for which selectivity applies. If this were not entered in the model, there would be a case for selectivity bias. The significant positive effect of a part-time break on the net daily wage was only seen for men, and then only long enough to put them back on the wage level they were on before they left. The fact that wage level is less significant for whether one takes a full-time break or not is very important here as we have observed the positive effect a full-time break has on women's wages. This effect is persistent as well. Women taking a full-time break, and returning after one year, experience an initial rebound effect that compensates the lack of growth during the break, and the growth persists. The increased wage growth is still observable even three years after returning from her career break.

In terms of the human capital hypothesis: working mothers who take institutionalized career breaks will achieve a better wage development than working mothers who do not take a break and simply continue working, we can say that we do indeed find support. The significant positive effects found for a full-time (one year) career break, combined with the positive effects of being a mother (of young children) provide some support for our hypothesis that working mothers who take career breaks will have a stronger positive effect on their wages than working mothers who do not take

a break. Part-time career breaks have no such effect, and once again, if a woman stays away from her job longer than one year, she ends up with a strong wage penalty.

The hypothesis for the statistical discrimination theory is supported. Employees do not suffer negative effects on wages and wage growth after returning to their job. No significant effects for longer breaks were found for men. The hypothesis that the longer a person takes a break, the more rounds he or she misses which will have a negative effect on earnings remains standing.

The results of the testing of the first hypothesis for tournament models shows: as far as whether it is better to take a break earlier or later in the career, the effects of age on wage are clear for men, earnings are highest at age 50 and older. For women, the earnings pattern is more diverse. Women earn their highest wages between the ages of 40-49 and 60-64 years of age. During a career break, earnings are sacrificed, and although partially compensated by the career break subsidy, this compensation in no way makes up for actual wage loss. On the other hand, strategic moves up the career ladder are made at early stages in the game. Mertens *et al.*, (1995) also advise substantial investment in women's careers *before* interrupting them for family engagements. Because life course events are not always easily planned, it will no doubt be a question of when the break is needed that will more likely be decisive in this matter. Regarding the second hypothesis based on tournament models (the greater the duration of the break, the more detrimental it will be in terms of wage) we find that if women take an institutionalized career break for two years, this has strong negative effects on wages. The effects are so strong that as soon she remains on the break longer than one year, all the good the break did in terms of wages is not only nullified, but a strong wage penalty results. The men's models provided no significant effects for duration.

5.9 The context of institutionalized career breaks as a labor market phenomenon

This section is designed to provide perspective on the career break as a labor market instrument; the magnitude that it currently commands and how its use differs among diverse labor market participants. This seemingly descriptive section on institutionalized career breaks on career paths comes as a last stage in this research. We have presented the Belgian career break from its first appearance, and traced its evolution in legislative labor market regulations in Belgium, comparing these to many similar developments in the Netherlands. This was followed by a descriptive chapter using Belgian administrative data (PMWP sample) presenting who actually uses it and why. The testing of the hypotheses was performed using multiple data sets and several types of analysis. It is now time for an explanation of just what kind of role the career break has in the labor market, how it compares to other forms of career transitions, who is experiencing sequences of career deviations, and whether we can

expect this particular labor market instrument to increase in scale or diminish. This makes it necessary to use a longitudinal data set that follows individual careers over a much lengthier period than has been examined up to now, and preferably includes *entire* career paths.

For this section only, we make use of a special data module from the 2002 wave of the PSBH called the career module. The data allow for a unique exploration of the career paths of the individual respondents following them through their diverse working (and non-working) careers since their departure from initial schooling. The nature of the career module is longitudinal because of the intricate and extensive retrospective questions tracing the work histories over (sometimes very) extended periods of time. This calls for some innovative analysis methods to make fully evident the complexity and richness of the career module. It also allows for an exploratory look into sequences of career deviations that have thus far been rather elusive.

Two methods have been selected, the first of which belongs to the family of sequence analysis, and the second is a Latent Class method of analysis. The first of the analysis methods is Optimal Matching Analysis (OMA) which is covered in section 5.9.1. Section 5.9.2 presents an exploration of the career module using an analysis technique called Latent Class Regression analysis. In the last section (5.9.3) a comparison of the results from both methods of analysis is made to answer the questions regarding whether career patterns are indeed changing, what the role of career detours is in the developing patterns, and more specifically what the magnitude of career breaks is as a labor market instrument and its place as a life course labor market instrument on a transitional labor market.

5.9.1 Using OMA to capture career patterns

Optimal Matching Analysis has its roots in molecular biology and more specifically DNA research. Optimal Matching Algorithms were used to recognize patterns in the DNA and protein sequences. The technique calculates for each pair of sequences how much the second sequence differs from the first. A predefined maximum number of mutations is established whereby those sequences requiring more than that maximum number fall into a new category. The adaptation for the social sciences was pioneered by Abbott (Abbott and Hrycak, 1990).

In terms of our career module data, the employment status of a respondent measured at each point in time forms one sequence that is analyzed as a career path. This is a logical approach to the data because we would like to understand how entire careers are affected by certain career path detours. A transition is a move from one labor market state to another. Persons who are studying and have not yet entered the labor market are not included. Only one labor market status is possible per year assessed by registering the labor market status for which the most time during that year is spent.

The dependent variable employment status is a nominal variable with nine categories: unemployment, unpaid activity, inactivity due to sickness or handicap, study/training, new part-time job, part-time job, new full-time job, full-time job, and pension.

The OMA technique is based on a number of assumptions that are inherent in the structure of the data. A timeline is assumed with multiple points of measurement t_1, t_2, ..., t_n. The variable X is measured at every point in time, which results in a range of observations. In this manner a sequence of observations of variable X at time t is made. This range represents the course or career path for that respondent over the points of measurement of the variable.

Figure 5.9: Sequence measurement

Respondent	X at t_1	X at t_2	X at t_n	Sequence
1	9	7	25	Sequence 1
2	3	6	18	Sequence 2
3	1	4	19	Sequence 3

The distance between sequence one (the first respondent) and sequence two (the second respondent) is calculated using a transformation measure. This shows the 'cost' of transforming sequence 1 into sequence 2. The transformation is made by inserting, deleting, or substituting elements. Each step entails transformation costs with a deletion or an insertion equaling 1 and a substitution equaling 2. The lower the transformation costs, the more similar the sequences are. This results in a distance or dissimilarity matrix. A dissimilarity matrix is used to establish when the maximum distance has been reached.[74] Once the distance matrix is calculated, the sequences are organized into career typologies using cluster analysis, grouping similar cases (Chan, 1995).

The career module includes respondents who began their career as far back as 1931 making a maximum number of 72 measurements possible (1931-2002). There are also respondents who have only just begun their careers with no more than one or two employment status measurements. A total of 4268 respondents have been included in the analysis resulting in a total of 17 identifiable patterns, which again can be reduced to six major grouping types. To simplify the description, each of the 17 career types has been numbered for which a brief explanation of each of the 17 types will now be given.

1. Student – Students are still involved with their initial education and do not actively participate in the labor market.

74 Ward's Minimum Variance Method.

2. Stable entrant – This group has only recently joined the labor market actively. This initial entrance has been without any noticeable problems. The majority of this group has found a full-time job rather quickly; others have started their career in a part-time position. The number of transitions is limited to a maximum of one; this is often a transition from one job to the next.
3. Short limited transitional career – Although this group has participated a bit longer and working in full-time jobs has a central position, many of these respondents have changed jobs already a few times. Others have exchanged periods of full-time work with periods of unemployment or part-time labor.
4. Job hopper – These respondents change regularly both their jobs and their employment status. Job-hopping is the central theme here. Many of the transitions are from full-time jobs to new full-time positions, but by the very tendency to change so often, the image is one of an unstable career pattern.
5. Stable full-time – These respondents fulfill the transitional career image in which full-time work is the common denominator. Full-time employment is carried out for longer periods and in the same job. Some of these individuals change occasionally; others make the transition to another employment status.
6. Transitional full-time – Just as the previous type, here too, working full-time is dominant with the main difference being that these respondents have a less stable career path. In this group, job transitions are more common. Furthermore, full-time career periods are interspersed with short periods of unemployment, part-time employment, unpaid activity or even periods of illness.
7. Stable part-time – These are the real part-time employees displaying a very stable pattern of part-time employment and only a few transitions.
8. Unstable part-time – This group is quite similar to the previous groups but has a much less stable career path. Although part-time work is the predominant pattern here, it is interchanged with periods of full-time work, unemployment or unpaid labor.
9. Stable nonparticipation – The career path for this group is predominantly unpaid labor revealing quite a stable pattern.
10. Unstable nonparticipation – This group also demonstrates a predominant pattern of unpaid activity but their pattern is much less stable, reflecting periods of nonparticipation interspersed with other kinds of employment such as regular full-time employment and unemployment.
11. Unemployed – These respondents have been unemployed for the major part of their career.
12. Sickness or handicap – These careers are characterized by long periods of illness and disablement.

13. Atypical career – A typical atypical career path is characterized by periods of unemployment, unpaid activity, schooling, and illness and is as diverse as can be imagined. These respondents have experienced just about everything.
14. Insecure career – The insecure career path shows periods of employment that are often interrupted for shorter and longer periods of unemployment and unpaid activity.
15. Standard career – These respondents have followed the traditional career path. After a stable full-time career with few or even no transitions, they retire from the labor market.
16. Transitional full-time – retirement – These respondents have also worked almost their entire career in full-time positions, ending their careers with retirement. Contrary tot the previous group, however, they have a more transitional career in which they have changed employment status a few times for periods of unpaid labor, illness or even a period of unemployment.
17. Atypical career – retirement – This last group has had a less traditional career considering that periods of full-time employment are not necessarily the main ingredient. Career detours are also dominant in their working life prior to their exit from the labor market for retirement.

The following tables are descriptive presentations of the career patterns found in the career module data using the OMA method. In Table 5.11, results are presented regarding the distribution of career typologies in the population.

The largest group is the longer labor careers with most of the respondents showing stable full-time employment throughout their careers. This group also has the second largest subgroup showing a predominance of transitional full-time employment. This is very much the norm and represents the standard career type. Of the six career types the students are yet to begin, leaving actually five discernible groups.

As can be observed in the table, either men or women dominate in a number of the typologies. Although at the start of the career path, women and men are evenly represented as labor market entrants, women are clearly over-represented among the job-hoppers at the start of their careers. Why this is so is not apparent. It would indicate a more transitional nature in terms of career styles. It certainly is worth looking into more directly. Women have more diversity in their career paths. This is well known and was one of the decisive factors in Mincer and Polachek's developing alternative models for analyzing women's earnings. The fact that this diversity is so evident at the beginning of career paths is not well known. Further, it can be noted that women dominate just about every typology where the word unstable or atypical is used: unstable part-time, unstable career of unpaid work, atypical career path and

Table 5.11: Career typologies, distribution by gender, and in population (percentages), and frequencies

Nr.	Type	Men	Women	%	n
1	Students			8	329
	Short full-time careers				
2	Stable entrant	49	51	8	329
3	Less stable entrant	48	52	7	317
4	Job hopper	28	71	4	176
	Longer labor careers				
5	Stable full-time	60	40	20	853
6	Transitional full-time	68	32	12	506
7	Stable part-time	5	95	2	93
8	Unstable part-time	1	99	2	91
	Career breakers				
9	Stable nonparticipation	1	99	9	403
10	Unstable nonparticipation	2	98	1	60
11	Unemployment	42	58	1	51
12	Sickness or handicap	49	51	2	73
	Atypical career paths				
13	Atypical career	21	79	4	188
14	Insecure career (unemployment)	44	56	2	87
	Completed careers				
15	Standard career	65	35	10	431
16	Transitional full-time career – retirement	75	25	6	241
17	Atypical longer career - retirement	8	92	1	40
	Total	46	54	100	4268

Source: PSBH career module, 2002 wave.

even the atypical longer career and retirement. Diversity and transitional are terms with less of a negative connotation to describe the highly varied career paths of women.

The typologies are presented once again, but now by birth cohort in Table 5.12. This gives an impression of which career types are most likely to diminish or increase. Leaving the starters and the retirees out of the picture, we focus on the longer labor career types, the career breakers and the atypical career paths. A higher level of transitional careers can be found for the younger cohorts. This is a first indication of a shift to more transitional careers. The new trend of part-time work is also apparent with a high percentage of stable part-time employment in the 1960-1969 cohort. These are certainly women combining paid labor and caring tasks. Among the career breaker types, we observe that the stable career of unpaid work is definitely a downward trend. This is rapidly disappearing on the Belgian labor market, as is the un-

stable career of unpaid activity, although it still has a rather equal distribution over the cohorts. High percentages of unemployment are most visible among the very young, reflecting high youth unemployment. The atypical career path has a high representation under the youngest cohorts.

Table 5.12: Career typology by birth cohort (percentages)

Nr.	Type	<1930	1930-1939	1940-1949	1950-1959	1960-1969	>1970	Total
	Short full-time careers							
2	Stable entrant				1	4	95	100
3	Less stable entrant				6	56	39	100
4	Job hoppers			1	10	66	23	100
	Longer labor careers							
5	Stable full-time	4	4	23	41	26	2	100
6	Transitional full-time	1	5	22	43	29	0	100
7	Stable part-time	4	12	13	24	45	2	100
8	Unstable part-time	2	15	27	37	19		100
	Career breakers							
9	Stable nonparticipation	34	28	20	12	6	0	100
10	Unstable nonparticipation	15	19	30	22	13	1	100
11	Unemployment	3	2	4	11	26	54	100
12	Sickness or handicap	6	28	42	17	5	2	100
	Atypical career paths							
13	Atypical career path		1	4	15	48	32	100
14	Insecure career (unemployment)	1	7	33	29	18	12	100
	Completed careers							
15	Standard career	48	39	13				100
16	Transitional full-time – pension	40	46	14				100
17	Atypical longer career – pension	85	15					100
	Total	14	13	15	20	23	15	100

Source: PSBH career module, 2002 wave.

Table 5.13 presents the average transitions per typology. The career types with the highest average number of transitions are characterized with terms like unstable, transitional, and insecure. When is a high number of transitions positive and when does it point to negative career patterns?

What we observe here is that not all transitions are positive in their effects on careers and some could better be avoided. Will the job-hoppers of the short-term career evolve into successful transitional careers? Or will they prove to be unstable or even insecure with longer periods of unemployment? More than 70 percent is female, whereas under the full-time transitional employment only 31 percent is female. This

Table 5.13: Average number of transitions per career path type and standard deviation

Nr.	Type	Mean	Std. Dev.
	Short full-time careers		
2	Stable entrant	0.46	0.50
3	Less stable entrant	1.56	0.50
4	Job hopper	5.14	2.11
	Longer labor careers		
5	Stable full-time	0.89	0.84
6	Transitional full-time	4.26	1.72
7	Stable part-time	1.28	0.78
8	Unstable part-time	4.13	1.56
	Career breakers		
9	Stable nonparticipation	0.90	0.88
10	Unstable nonparticipation	4.72	1.50
11	Unemployment	0.60	0.61
12	Sickness or handicap	3.79	2.53
	Atypical career paths		
13	Atypical career	2.65	0.47
14	Insecure career (unemployment)	6.47	2.50
	Completed careers		
15	Standard career	1.97	0.74
16	Transitional full-time – retirement	5.34	1.74
17	Atypical longer career – retirement	3.46	0.51

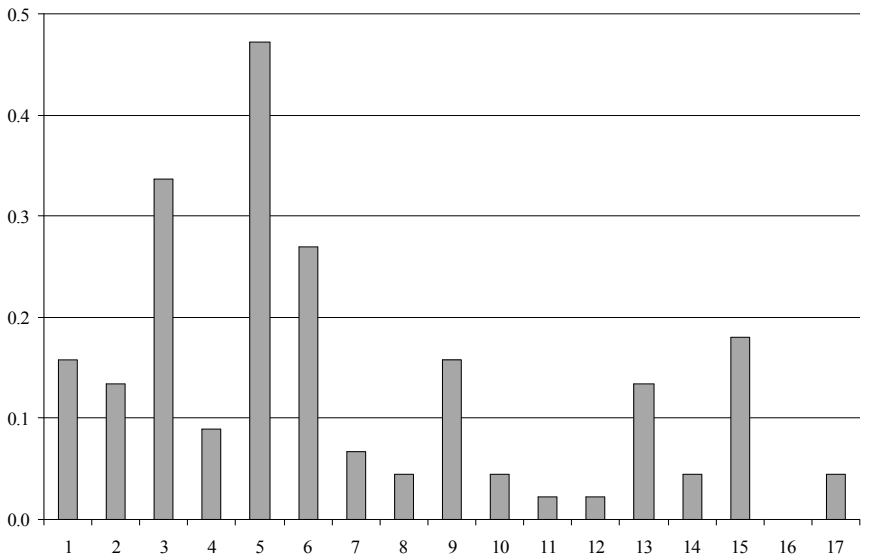
Source: PSBH career module, 2002 wave.

descriptive presentation of career types by transition averages raises many questions concerning how transitions can best be guided or maneuvered into positive career paths where transitions lead to new opportunities instead of dead ends. We observe in Table 5.12 that the more transitional career types can be expected to increase, as these are predominant by the younger cohorts. Older methods of employee protection such as union membership and sector agreements are declining. This calls for new labor market instruments to protect individual workers who are exhibiting a tendency towards a more transitional career path.

The last question to be answered is how the career break users are distributed among the 17 types resulting from the OMA. This is presented in Figure 5.10.

Career break users can be found in almost all of the 17 career types. The total average in the sample is just over two percent. The variation in distribution among the 17 types is presented in Figure 5.10 which demonstrates that the career type showing the greatest percentage of career break users is type 5 (with almost 5%). These are stable full-time employees with longer working careers which indicates that these workers are using career breaks to facilitate a greater participation and extended

Figure 5.10: Distribution of career break users relative to the average over the 17 types (career break user as percentage within type)



Source: PSBH career module, 2002 wave.

careers. Type 3 consists of the less stable labor market entrants that are from younger cohorts. The respondents in type 6 are the traditional full-time workers. What we observe up to now, is certainly not a picture of career break users as labor market drop-outs. The three types in which career break users are most frequently observed are active labor market participants. Those individuals using the career break to exit the labor market can be found in type 9 (the nonparticipants) and 15 (the completed careers). In the last case, they use the career break as an exit for early retirement.

At this point, we turn to our second method of analysis, Latent Class which uses an entirely different methodological approach to discerning patterns in our career module. Where the OMA approaches the career path as a sequential mathematical abstraction, the Latent Class Analysis identifies groups using underlying similarities. This is achieved by looking beyond similar scores to integrate covariates such as gender and age.

5.9.2 Latent Class cluster analysis for identifying career patterns

Unlike the previous method, Latent Class cluster analysis is from the family of latent structure models. Latent means that the analysis is directed to look for similarities that are not obvious or immediately discernible. For instance, in much the same way that a factor analysis can identify underlying dimensions that group similar survey

questions, latent class establishes underlying similarities in scores, with the aid of covariates to identify like groups.

There are no assumptions concerning the measurement level; both indicator and latent variables can be nominal. This is important for discerning career patterns as no hierarchy is entered in the model concerning career paths. Determining the correct number of classes in the model is essential because using too many classes makes for an unstable model, while too few classes does injustice to the variety in the data. This is achieved with the help of the log-likelihood values, the BIC (Basic Information Criterion) values and the number of parameters in the estimated models. It is also important to keep an eye on the classification errors which show the rate of incorrect predictions. Latent Class analysis allows for two types of control variables to be added to the model, predictors or explanatory variables, and covariates for descriptive distributions. The dependent variable is the nominal variable; *labor market status* this time, with five categories: unemployment, nonparticipation, pension, full-time work, and part-time work.

Drawing on our theoretical model, a number of assumptions are now introduced. Especially important is how labor patterns are influenced during particular life course stages. Included in the model as an explanatory variable (predictor) is the variable *age* entered with three categories to reflect major life course stages: younger than 30 years of age, 30 to 49 years of age (time squeeze), and fifty and older. Further, three variables are added as inactive (non-explanatory) covariates to distinguish how personal characteristics are distributed over the classes: gender, cohort (using the same six categories as the OMA) and, with an important additional variable – *past career break* – ever having taken an institutionalized career break in the past.

A total of 4453 cases are included in the analysis. The log-likelihood (LL)[75] decreases as the number of classes increase. Two parameters are essential in discerning the best number of latent classes for the model. The first is the BIC (Basic Information Criterion) a parameter derived from the log-likelihood. The second is the classification error that shows the error rate for predicting the class for each respondent. It is necessary to attain a balance between the simplest model and the model that allows for the greatest variety. As long as the BIC value decreases and the classification error

75 Likelihood is the hypothetical probability that an event, which has already taken place, will yield a certain outcome. This is different from a probability because probabilities refer to future events, where a likelihood refers to past events with known outcomes. Using a logarithm of the likelihood simplifies the calculation of very small numbers. Log-likelihoods are added together rather than multiplied (log-likelihoods will always be negative by discrete variables, and will just get larger (more negative) rather than approaching 0). When optimizing the log-likelihood (minimizing the negative log-likelihood) with respect to the model parameters, we also optimize the likelihood with respect to the same parameters, for there is a one-to-one (monotonic) relationship between numbers and their logs. The log-likelihood is thus statistical support for a hypothesis or parameter value.

does not get too high, increasing the number of classes is justified. The model improves up to and including the 11-class model (see Appendix B, table B2).

The first task at hand is distinguishing the relevant career types resulting from the analysis. This is done using the 11-class model results which are presented in Table 5.14. The program establishes classes in the analysis in a particular order, and class size gets progressively smaller as the class number rises. The numbers assigned by the program will not be changed. For the presentation of the analysis results, the arrangement of classes in the tables is not consecutive by number of class but grouped by type. In the table each of the eleven classes are shown with the most common labor market status per age category. By entering an age category as an explanatory variable into the analysis, it is possible to capture life course patterns during the career path that give a more dynamic view of how labor market patterns evolve during careers and throughout life course stages. Each of the eleven typologies is displayed as a percentage of the population as well with the percentage of women observed for each of the career types.

Class 1: full-time workers who retire early
Regarding the first of the eleven career types distinguished, class one is the largest and consists of 29 percent of the population. These are full-time employees who, for the most part, exit the labor market somewhere around age 50 for early retirement. There is no part-time work observed, no unemployment, and only a small (two percent) likelihood of not participating in the labor market during the early years of the labor career (younger than 30 years of age), probably due to a longer initial educational period. This is one of the two male-dominated classes showing only a third of this class to be female.

Class 2: full-time workers who retire later
Class two is the second largest, with 28 percent of the population. Persons belonging to this class are full-time workers throughout their career. They retire later than the persons from class one as can be seen from the large percentage still working full-time at 50-plus years of age (see Appendix B, table B2). This group also exhibits a small chance of having a late entrance onto the labor market most likely due to greater investments in initial education. This is the second male-dominated class with slightly less than two-thirds being men.

Class 8: full-time to nonparticipation
This class is 60 percent women who work full-time during the first two life course stages and then exit the labor market not as pensioners but as nonparticipants. Possibly these women have not worked enough to receive pension benefits, but leave the labor market at the same time that their partners do.

Table 5.14: Career types resulting from latent class nominal regression analysis, classes 1 through 11

	Age < 30	Age 30 - 50	Age 50+	Class %	% Women
Class 1	full-time	full-time	pension	28.5	33.2
Class 2	full-time	full-time	full-time	27.7	34.1
Class 8	full-time	full-time	nonparticipation	4.3	59.3
Class 4	full-time	full-time	unemployment	6.4	51.9
Class 6	full-time	full-time	part-time	5.3	78.8
Class 9	nonparticipation	full-time	pension	4.0	56.4
Class 5	part-time/ full-time	part-time	part-time	5.5	92.3
Class 11	full-time/ nonparticipation	part-time	part-time/ nonparticipation	3.1	95.8
Class 10	unemployment	unemployment	unemployment	3.7	75.2
Class 7	full-time/ nonparticipation	nonparticipation	pension	4.4	88.2
Class 3	nonparticipation	nonparticipation	nonparticipation	7.3	96.2

Source: PSBH career module 2002 wave.

Class 4: full-time to unemployment
This group is equally distributed among men and women. They are full-time workers throughout the first two life course stages. At age 50, they encounter some bad luck along the way and are for the most part unemployed. For this group, there are no early retirement packages, or at least none that they can afford to take.

Class 6: full-time to part-time
This class is female dominated. They work full-time throughout the first two life course stages and opt for working part-time during their last working phase to ease into retirement.

Class 9: nonparticipation to full-time to early retirement
This group is more or less equally distributed by gender, exhibiting a period of nonparticipation in their early years followed by full-time work from the age of 30 to 50 years before entering early retirement.

Class 5: combinations of part-time work and full-time work to part-time work
This class is made up of more than 90 percent women. They work either full-time or part-time until they are 30 years of age. Then they all work part-time, but do so consistently until reaching retirement age.

Class 11: full-time and nonparticipation to part-time, to part-time or nonparticipation
This too is a female-dominated class (96%) exhibiting diversity throughout the

career. The first phase is either nonparticipation or full-time work. At age 30, they make the transition to part-time work, most likely to accommodate their responsibilities at home. At age 50, they either continue working part-time or exit the labor market as nonparticipants. They have not built up enough rights to exit in early retirement.

Class 10: unemployment
This class is almost four percent of the population, three-quarters of whom are women. This group is unemployed from the start to the finish of their career. It is a relatively large group that never effectively enters and participates in the labor market.

Class 7: full-time work or nonparticipation to nonparticipation to pension
The first stage of this classes' working career is either working full-time or characterized by nonparticipation. It represents more than four percent of the population, and is made up of almost 90 percent women. The second life course stage is one of unpaid work. These women have exited the labor market to take up the more traditional role of housewife. For the last phase of their labor career they opt for early retirement.

Class 3: labor market nonparticipants
This group includes seven percent of the population and is a highly female-dominated class. They are the traditional housewives who do not participate in any form of paid labor during their potential working lives.

Only two of the classes are predominantly male (1 and 2). Six classes are predominantly female (3, 5, 6, 7, 10 and 11). Three classes are more or less evenly distributed by gender (4, 8, and 9). This is support for Hakim's statement that women are more heterogeneous in their labor market behavior. The resulting career types have been possible to characterize by their size in the total population and their gender distribution. But what can be observed regarding whether these are up and coming patterns in the labor market or whether they are more or less dying out? For this, information on the distribution by cohort is essential.

Table 5.15 is the proportion of career types per cohort relative to the overall average where 1 is the equilibrium. Any number higher demonstrates a disproportionately higher representation of the class type in the cohort, and lower than 1 is then a disproportionally lower representation of the class in the cohort. This provides an indication of whether certain career patterns are more prevalent by younger or older cohorts, which in turn is a sign of advancing or diminishing career types. The two more standard, male-dominated careers of working full-time (class one opting for early retirement) and class two (working through to retirement age) are still very strong although, as can be observed, it is the older cohorts that are over-represented in this career type. The two more traditional female-dominated careers of home-

Table 5.15: Proportion of class type per cohort relative to overall average

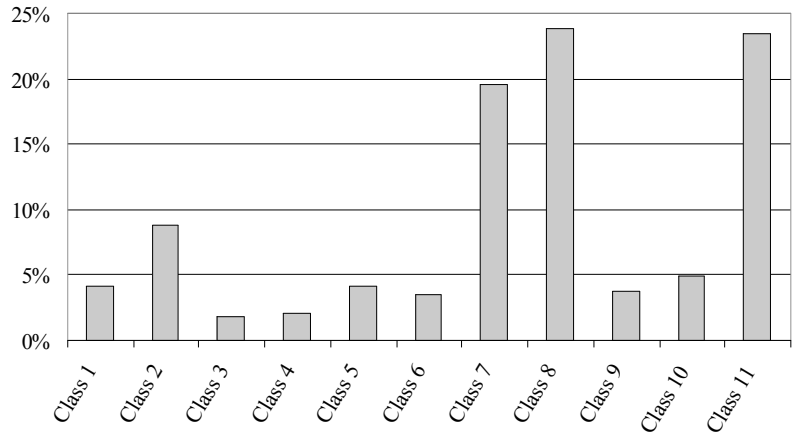
	< 1930	1930 – 1939	1940 - 1949	1950 - 1959	1960 - 1969	> 1970
Class 1	1.54	1.43	0.39	0.91	1.01	1.02
Class 2	0.29	0.35	1.70	1.23	1.03	0.95
Class 8	0.96	1.59	1.15	0.95	0.75	0.90
Class 4	0.38	0.68	1.17	1.16	1.03	1.21
Class 6	0.12	0.29	0.96	1.09	1.40	1.38
Class 9	2.71	2.21	0.60	0.63	0.63	0.46
Class 5	0.20	0.31	0.49	0.91	1.66	1.60
Class 11	0.63	0.92	1.39	1.29	0.84	0.82
Class 10	0.03	0.10	0.36	0.91	1.54	2.14
Class 7	1.95	1.36	0.86	0.91	0.89	0.56
Class 3	2.53	2.37	1.39	0.54	0.28	0.35

Source: PSBH career module, 2002 wave.

maker (class 3 and class 7) are on their way out. This type of career characterized by nonparticipation for the greater part seems no longer an option for younger cohorts of women. Classes 6, 5 and 10 are up and coming career patterns, all three of which are female-dominated. Class 6 and 5 are highly participative, either full-time or part-time throughout the working life. Class 10 shows a high over-representation by the two youngest cohorts and this class is one long state of unemployment. These women have missed their ticket into the labor market. This may be because they have left school without qualifications or with qualifications for which there simply was no work.

The next question to be answered is how the career breakers are distributed over the eleven types. This figure is different the presentation for OMA in Figure 5.10 where that was in relation to the total average. In Figure 5.11 the distribution of the 99 career breakers is presented. With a total of 99 respondents in this data set who have taken an institutionalized career break during some period in their working life, we observe that most of the career breakers fall into three distinguishable classes: 7, 8, and 11. Knowing that class 7 is decreasing in size per cohort, combined with the fact that the career break system is increasing in popularity, we can assume that types 8 and 11 will either increase or that we will see a growth coming from other class types. Class 2 also merits attention, as this is a typical male class, yet still almost 10 percent of the career break users are from this group. It is also the class that works full-time right on through to the pension age which indicates that individuals are indeed using career breaks to enable longer working careers.

Figure 5.11: Distribution of total number of career break users over the 11 classes (percentages)



Source: PSBH career module, 2002 wave.

5.9.3 Summary of the results

What have the two methods of analysis told us about how careers are developing and what can be expected in the future? And what is the role of career breaks among the wide variety of labor market instruments and the great number of transitions made by individuals during their working lives? It is especially with the help of the Optimal Matching Analysis that actual transitions became visible in the research population. Each of the five career type groups identified by this technique revealed one or more highly transitional career paths. One of the problems with the OMA method is that the costs are the same no matter *when* the dissimilarity occurs in the sequence. In layman's terms, whether a transition is made from full-time employment to part-time employment at the beginning or at the height of a career, the costs are the same. This is not consistent with human capital theory nor with our hypotheses from tournament models.

Another problem with the OMA method is that a transition is equal to any other transition. In this manner, the transaction costs for transitions to unemployment are equal to transitions from unemployment to employment. This method does not allow for hierarchical levels or values. The analysis leads to a dissimilarity matrix which than can be used in a cluster analysis to group similar types. Interpretations of these types are, for the most part ad-hoc. More transitional types are then attributed a positive or negative label: job hopper, transitional full-timer (positive), and unstable career of nonparticipation, insecure career (negative).

The Latent Class approach is similar to the OMA in that it too comes to a distribution

of scores over the class types. However, the method is not a simple subtraction, addition or replacement, but a Latent Class analysis allows finer tuning as well as the introduction of covariates to the model. An important plus to the Latent Class analysis was using an explanatory variable for the three major life course stages. This added a dynamic dimension to the model where the OMA was quite static; providing results only for where a person was at that moment. The Latent Class analysis exposed the different labor patterns that were effectively occurring during a particular life course stage. Another plus from the Latent Class analysis was the possibility of focusing more specifically on the institutionalized career break itself. By using the life course covariate, the distribution of career break users was far more accurate than with the OMA, giving a more realistic impression of just who is using it and why.

What have we learned about the career detours from this exploration of the information on life courses and careers of a large group of Belgian citizens? Both the OMA and the Latent Class established a growth in part-time work among younger, female-dominated cohorts, which means that part-time work is also a growing phenomenon on the Belgian labor market as it is in the labor market in the Netherlands. Nonparticipation is decreasing as a labor market option in Belgium similar to the situation in the Netherlands. Career break users show a distribution across cohorts and labor market states, but predominate in three of the typologies. One of these types is diminishing with each new cohort entering the labor market. This is the more 'traditional' use of the career break system as a labor market exit rather than a labor market detour.

The career break is also evident in one of the male dominated classes, a standard career type of full-time work where the career path extends through to the age of retirement. This is quite interesting as it indicates that men and women are indeed using the career break system to continue their working careers over a longer period, and this is precisely one of the goals of the Belgian career break system. The Latent Class analysis also established an increase in the career type of perpetual unemployment, particularly among younger females. This type of career deviation will no doubt continue to be a part of a dynamic market economy. The persistence of the unemployment period within this career type was rather alarming. It would seem that young individuals (three quarters of this class was female) who do not make a successful entry into the labor market are in danger of remaining unemployed for the duration of their potential working life.

The latent class approach is more compact leading to eleven classes (compared to the 17 from OMA) two of which are dominated by men, and six of which are dominated by women, making even more evident the fact that women have more diverse career types than men do. The rise in part-time work in Belgium is almost exclusively a female phenomenon. However, the career break is being used by an increasing number

of men. These men are using the break for the most part to ease into retirement. It appears that this is an option for an increasing number of men instead of premature exits. Still, 20 percent of the population was in the transitional full-time employment, two-thirds of which are men. Although women still have more varied careers than men do, this new type of male career, a transitional one, indicates the new style of working, one where job security is exchanged for individual responsibility for employability. Women have probably always worked under these conditions and we have not found any indications that this is likely to change in the near future.

5.10 Conclusion

This research answers the question: what effect does use of institutionalized career breaks have on individual careers in terms of labor market continuity and wages?

To answer this administrative data from the Crossroads Bank for Social Security (PMWP) is used with waves running from 2nd quarter 1998 through 4th quarter 2002, and eleven waves (1992-2002) from the Panel Study of Belgian Households (PSBH). For persons having used a career break, we can observe how their further career develops in terms of returning to their job, and once back, their labor continuity and wages. An interesting factor here is that the career break for some respondents is already some years in the past. In this manner it is possible to gain insight into the longer-term use and effects of the system.

From the first introduction of the Belgian career break system in 1985 until 1992, there is an observable increase in career break use to almost 60000 employees. Then from 1992 until 1997, there is a period of stabilization in the number of career breakers. Another period of increased use follows through 2001 showing total number of users at more than 100000. The introduction of the new time credit scheme in 2002 marks the first decrease in use of career breaks as users change over to the new system of time credit.

Using the PMWP sample at WAV in Leuven enabled insight into the trends in career breaks and shifts in those trends over the period 1998 through 2002. Career breaks are becoming increasingly more popular in Belgium evident through the total increase in use. Most of the breaks are taken for the duration of one to two years. The thematic breaks are gaining ground and now represent a total of ten percent of the career breaks. The size of break is also experiencing some changes as there is an apparent shift from full-time career breaks to part-time breaks. These reductions in working hours are being used by older workers who in this manner remain active in the labor market for a longer period of time before exiting all together into retirement. Working hour reductions are also being used by younger age groups, and then, especially for combinations of paid labor and caring tasks. There is also a subtle shift in the distribution of use by gender. Men are starting to use career breaks more than in the past although women still take 85 percent of the breaks. As most

decisions that directly effect household income are taken at the household level, these influencing factors for use have also been examined. Couples with children are the main users by household demographics. Couples without children are second largest group. The income of the partner plays an important role in this: higher partner incomes are correlated to greater use of the career break. It is not so that career breaks are inaccessible to lower income groups; they too use career breaks, although the percentage of users for these groups is significantly lower. There is some evidence that lone parents are hindered in using career breaks.

Due to the very small number of respondents in the PSBH that actually are registered as taking part in occupational training prior to a career break, it was not possible to directly test the hypothesis regarding investments in training. An attempt to test the hypothesis using the much larger PMWP sample also proved impossible, as information on occupational training is not included. The reason for the break is only known for those individuals who voluntarily offer this information, which is a very small number of the respondents in the total sample. Unfortunately, because of these data restrictions, the testing of this human capital hypothesis was not possible. The question remains whether institutionalized career breaks do differ from more traditional career interruptions regarding the employee's willingness to invest in training prior to the break. We suspect that institutionalized career breaks do differ and that employees are more likely to invest prior to and during their time-outs.

After the first round of analyses on the PSBH, the much larger PMWP sample is used to establish effects on individual careers in terms of wages. Quite contrary to the negative effects on participation – a significant number of individuals using career breaks do not return to their job – we find a positive effect for career breaks on wages. Men using part-time career breaks experience a rebound effect that brings them back up to the wage (growth) level as though they had never been gone. At this point, the positive effect then dissipates. For women, it is the full-time break that has a positive effect on earnings, and this effect remains, even a number of years after her return. This means that in controlling for other significant characteristics, under similar conditions (*ceteris paribus*) women using full-time career breaks and returning to their jobs actually do better in terms of wages than women who have not taken a break. This, together with the stronger positive effect for age demonstrates that career breaks taken later in the life course are better for wages than those taken earlier in the life course.

Working mothers who have taken a full-time career break have a higher wage than working women in general. It appears that career breaks enable Belgian mothers to maneuver restrictions in the labor market imposed by motherhood so that they experience far less negative effects (from motherhood) on their earning capacity. A control for selectivity has been used in the analysis by including their wage level in the first year. This means that the effects found are *in addition to* and not a matter of

selection bias. This effect is not being exhibited by a group of career 'die-hards', but simply by hard working Belgian mothers.

The last part of this chapter is focused on the questions just what kind of role the career break has in the labor market, how it compares to other forms of career transitions and whether we can expect this particular labor market instrument to increase in scale or diminish. The analyses performed in this framework place the career break system in a broader context. For this part of the research we utilize a special data module from the 2002 wave of the PSBH called the career module. The data allow for a unique look into the (sometimes entire) career paths of the individual respondents following them through their diverse working (and non-working) careers since their departure from initial schooling. This type of complex data required innovative analysis methods, the first of which Optimal Matching Analysis (OMA) belongs to the family of sequence analysis.

The second method presents a Latent Class analysis technique for categorical variables.

The analysis established five (six including students) main groups of clearly discernable career patterns; short full-time careers, longer labor careers, career breakers, a-typical career paths, and completed careers. The largest group (approximately 35 percent) consists of longer labor careers. Included in this group are the 'stable full-time employment' and 'transitional full-time employment'. Other large groups are formed by individuals with a 'stable career in unpaid work' (almost ten percent) and persons with a (completed) traditional career. The analyses corroborate the image that career patterns associated in one way or another with instability are the ones most often dominated by women. In fact, women dominate in only one stable career pattern – a career of unpaid work. The fact that only one – albeit it with approximately one-third still sizeable – minority group of the employees, adheres to a traditional continual and full-time career path, underscores the social and economic relevance of the career break system. The number of potential users appears to be a multiple of the current users. This conclusion is emphasized by the fact that our analyses show that traditional career patterns are primarily a matter for the older generations and more transitional career patterns are to be found among the younger cohorts.

6. *Conclusions and perspectives*

6.1 Deviating from standard careers: assessing the problem

An advancing process of individualization – where personal choice prevails in the organization of life course biographies – is resulting in a diversification of life course patterns in European societies. Within these life course patterns, paid labor takes a central but no longer automatically predominant position. The more traditional careers (or lack of which by women) of previous generations are losing ground as an increasing number of women enter and remain active participants in the labor market. This creates new requirements for combining work with other important life domains such as care, training, and leisure. This is particularly true during the period in the life course when work (through career building) and home (in raising a family) are experienced as conflicting demands in households resulting in a time squeeze (Groot and Breedveld, 2004).

Developments on the supply side of labor occur parallel to the changing requirements of European labor markets as the European economy broadens its horizons to compete on a global scale with a focus on the knowledge economy. Inherent in the very nature of the knowledge economy is a vast amount of flexibility enabling quick response to technological innovations, increased competition, and adapting to economic fluctuations within the global economy. This flexibility is also expected of workers who must take responsibility for their own employability including keeping up-to-date with skills and competences that become obsolete at an increasingly faster rate (Bovenberg, 2003).

Individualization counters globalization as micro and macro forces use labor markets as playing fields where time-outs are sometimes just as valuable as goals. It is at precisely this junction between the needs of labor supply (facilities for combining work with other important life domains) and the requirements from the demand side of labor markets (flexible labor and more employability) that policy has a crucial role as mediator.

Policy makers in various EU countries are constructing life course facilities to accommodate households in the rush hour of working life while optimizing the labor participation of all possible contributors, particularly women and older

workers. These frameworks are created for implementing flexible labor forms while accommodating labor markets with employees who are capable of managing their own employability in terms of know-how, productivity, and longer-term availability. Maneuvering through such life course models demands new competences from individuals, not the least of which is the ability to plan for the future. The choices that individuals make early in their careers can be vital for their spectrum of alternatives in the future. Deviating from a standard career path is increasingly becoming an option for individuals to combine paid labor with other important life domains. These career detours emerge in diverse labor forms such as part-time jobs, temporary working hour reductions, and labor force time-outs, and are used by individuals to alleviate conflicting time demands throughout careers, especially during the rush hour of working life. These labor market instruments are being promoted to facilitate working life throughout the life course, thus over the entire career path. Yet surprisingly little is known of their possible effects on the careers of individuals over the longer-term. Do they really allow individuals to return to the labor market? Do they contribute to successful long-term participation? Do they really help workers who have interrupted their participation to build up a career later on? Are they indeed the facilitators crucial to changing working lives from standard careers to more transitional and flexible patterns with a better encompassing of other important life domains? This thesis focuses directly on this information deficit and aims at answering the vital question:

How do deviations from a standard career path affect individual careers?

These alternative forms of labor are not all that new and have in fact been utilized, for the most part by women to combine work and home life with varying levels of success. The very forms of labor described and encouraged in new life course policy measures are actually quite similar to the part-time work and labor force time-outs that women have been using since their break with the more traditional role of housewife. This thesis encompasses three empirical studies covering four types of career path detours that are addressed as follows:

1. The effect of part-time work on careers
2. The effect of nonparticipation (voluntary and unemployment) on careers
3. The effect of institutionalized career breaks on careers

The Netherlands forms the basis for the first and the second empirical study (part-time work, and nonparticipation). The Netherlands was chosen for these two studies because of the prevalence of both part-time work and voluntary nonparticipation as phenomena in Dutch society.

For the third empirical study on institutionalized time-outs, the focus is on the Belgian career break system. Although the Belgian career break system was originally in-

tended as an employment policy, it has, through its many amendments evolved into a life course oriented employment policy, one of the most fully developed in Europe. To establish the longer-term effects of career deviations on individual careers, a range of social and economic indicators for careers is applied to cover diverse career aspects such as labor participation and continuity, effects on the level of socio-economic status and its change over time, the function level, and wage and wage growth.

The foundation for the theoretical framework of this thesis is human capital theory, an economic theory expanded by among others Becker (1975), Ben-Porath (1967), Mincer (1958, 1962), and Schultz (1964). Mincer first applied human capital theory for explaining wage differentials, and later made important additions for a better modeling of women's careers to capture periods of nonparticipation. Human capital theory states that the earning potential of an individual is dependent on the sum of his or her knowledge and skills, most of which are acquired during the initial educational period. Additional human capital can be gained through experience and training. There is also job specific human capital or knowledge particular to the organization that is less easily transferred when changing employers, and something employers are reluctant to lose. In the course of working life, a constant erosion of human capital occurs similar to the aging process of all human beings. During a period of nonparticipation there is also a reduction of earning power resulting through the disuse of skills, called atrophy (Mincer & Polachek, 1978). Through disuse in combination with a lack of maintenance of skills, the erosion or aging process accelerates.

To approach the problem equipped only with human capital theory, would be an injustice to the current complexity of career deviations, as influenced by the increased participation of women and the changing life course biographies. After all, the very concept of the career deviation is a social (institutional) phenomenon, with roles for employees and employers as facilitated by government. To better capture the complex social aspects of career deviations, it becomes essential to also use theories that incorporate other important aspects in the model. The employee does not work in a social vacuum, but works for an employer and with colleagues.

Building on the aspect of other players (than the worker) influencing and affecting careers, use is made of statistical discrimination theory to explain employers' behavior – regarding aspects other than investments in employee training – and for generating hypotheses regarding effects of deviations on individual careers. According to statistical discrimination theory (Arrow, 1973; Phelps, 1972) employers try to acquire insight into the future productivity of potential workers in the most economically viable way. Employers want reliable information, but will often opt for the next best thing to cut costs. The term statistical discrimination refers to situations whereby a lack of information or incorrect information on employee or candidate employee productivity leads employers to use proxies. Verifiable measures of achievement are for example the educational level and work experience. However,

these are not guarantees for a prospective individual employee's future productivity. Employers also use observable characteristics like gender, race, or age if they feel these provide a better indicator for predicting productivity levels. The proxies are for groups, and individuals belonging to a discriminated group are paid less and have less chance for promotion. In this manner the 'face value' (man or woman, white or colored, young or old) is interpreted as an indicator for future productivity. The employer bases these judgments on 'prior statistical experiences', experiences that he (or colleague employers) have previously had with members of a certain group and will use these until proven wrong.

Prospective employees with career deviations (interruptions in the form of nonparticipation, unemployment, and institutionalized career breaks, and part-time work), may be seen as a group with a variable level of productivity, thus a group to be avoided. Employers may perceive this as a possible indicator for (a lack of) commitment and reliability. A potential employee with a varied career path certainly merits consideration: 'How long will this employee stay with our organization?' Career deviations can thus be the cause of a certain amount of stigmatizing.

In explaining the effects of deviations on careers, both the human capital and the statistical discrimination theories place the productivity of workers central in absolute terms. The third theoretical mode is tournament models which states, at least concerning internal labor markets, that the key issue when searching for job candidates is not the actual level of productivity, but the interpersonal competition between employees. Internal career ladders are climbed by beating the competition at each step, whether this is by a length or by a nose. In terms of a tournament model, this means that career interruptions, i.e. a period of nonparticipation, unemployment or a career break, indicates that the worker is not present to take part in a number of track rounds. Unique to tournament structures is the fact that the prizes are awarded based on the rank order at the finish, not the absolute performance of the participant (Becker and Huselid, 1992). The consequences of not participating can differ considerably and depend on both what part of the race is missed (start, middle, finish), and how many rounds (duration) one fails to attend. For this research we have used individual, micro-data which only allows for a partial testing of hypotheses based on tournament models. Future research, using multi-actor data would enable a more comprehensive testing of these hypotheses.

The first empirical study in this thesis concerns the intermediate effects of part-time work as experienced by men and women on the Dutch labor market. For this, twelve waves (1990-2001) of the Dutch socio-economic panel (SEP) are used. The second empirical study examines two forms of nonparticipation in the labor market; voluntary and involuntary (unemployment), again using twelve waves (1990-2001) from the SEP. The third empirical study broaches a less widely known career deviation, the institution of career breaks as it exists on the Belgian labor market. The

career break system, in existence since 1985, provides Belgian employees with the right to a labor force time-out or a temporary reduction of working hours while retaining pension building and guaranteeing job (return) rights. For this last study three data sets are used: eleven years (1992-2002) from the Panel Study on Belgian Households (PSBH), the PSBH Career Module (with retrospective data covering entire careers), and the Panel Mobility of Working Age Population (PMWP), administrative data following 609971 respondents over a four-and-one-half year (1998-2002) period, drawn from the Datawarehouse Labour Market at the Crossroads Bank for Social Security.[76]

The major goal of this thesis is to measure the *longer-term* effects of career detours using as many indicators as possible (participation, function level, socio-economic status, and wage) to enable a more complete understanding of how career detours affect individual careers, how these effects may differ for different groups, and whether these effects are lasting. In each of the separate studies, control variables are included to provide knowledge into effects for gender, life course stages, household composition, and educational attainment as well as modeling effects due to the duration of the career detour. The longer-term effects found for each of the career deviations as captured by the different indicators are summarized per study in the following section. For a schematic summary of the career deviation aspects covered, please see Appendix C, table C1.

6.2 Summary of results

Study one: part-time work
The multivariate analyses on Dutch panel data show that part-time work is not conducive to climbing career ladders. This applies to both men and women and is based on the negative effects observed on both socio-economic status and the function level. Part-time jobs are not compatible with higher status and function levels. This supports the hypothesis from statistical discrimination theory stating that employers will be less likely to hire part-time workers for important positions due to their questionable level of productivity. Extensive legislation in the Netherlands protects part-time workers in terms of equal treatment, thus equal pay. This is evident through the fact that part-time workers are able to realize high wage rates. Part-time work is correlated with high wage rates and this is observed to be even more so for the part-time wages of women.

76 This Datawarehouse Labour Market was created within the context of the Agora Program of the Public Office for Scientific Research. The Resource Centre for Labour Market Research (WAV) is charged with the scientific steering and counselling of this Datawarehouse. The PMWP sample has been created on request of the Resource Centre within the context of their own multi-annual research program to study transitions and career paths on the labour market. The research for this thesis was performed under supervision at WAV in Leuven.

Part-time work experience is not beneficial for women's career building. Even after three years of working full-time the negative effects of past part-time continue to be felt in terms of lower socio-economic status and function levels. Men show no such effect on their socio-economic status level, but do in their function level. The effect of past part-time employment on wage is negative for both men and women even after returning to full-time work for at least three years. This supports the human capital hypothesis that the total capital accumulation is lower for employees with a history of part-time employment. It also may be an indication that part-time workers and full-time workers use different criteria for job selection and a different sort of cost-benefit analysis is performed. Where part-time workers are more focused on what each hour of labor participation can deliver in terms of wage, the full-time worker looks for more secondary and tertiary rewards. Exactly how these effects interact is difficult to decipher and not conclusive with our analyses.

Whether these negative effects can be compensated by sufficient wage and socio-economic status growth was also investigated. Women do not experience this compensation on their socio-economic status or wage growth. Past part-time continues to be felt on these career indicators, and no catching up takes place. Women are unable to recover the loss in socio-economic status due to a history of part-time work after successful re-entry in a full-time position. There is no evidence supporting the occupational recovery found by Blackwell (2001) in her research on UK panel data. Men do catch up in terms of wage growth. No effect was found on their socio-economic status. Men seemingly can recover from their part-time past.

The next model measured effects on participation and labor continuity. Currently working part-time increases the likelihood of labor market exit. This applies to both men and women. Part-time workers more easily leave the labor market than full-time workers, which supports the human capital hypothesis stating that labor market exit is more likely (stimulated by an external event) for part-time workers than full-time due to the lesser sacrifice of earnings. Part-time work experience however, actually increases the likelihood of remaining an active participant. This may be indicative that part-time work functions as a buffer on a transitional labor market facilitating employees to participate who otherwise would not be engaged in paid labor. This can be observed through the returnees entering the labor market in part-time positions who remain working part-time and by the full-time workers who make the transition to part-time (instead of exiting the labor market). Unfortunately, the costs of this transition are totally for the worker who is more than likely a woman.

The last wage growth models incorporated a larger population and covered a total of eleven years during which the Dutch labor market has experienced an explosive increase in women's participation and particularly their part-time participation. These wage growth models present an unambiguous picture that positive wage growth is attainable after a number of years working part-time. This is evident for

both men and women. The fact that no analysis of socio-economic status or function level was possible on this sample is unfortunate as we are still left with doubts of whether careers can be developed and maintained in part-time functions. The fact that current part-time working status has a negative effect on the growth rate of wages (of men and women) only adds to this reservation.

Study two: voluntary nonparticipation and unemployment
The research in chapter 4 on Dutch SEP panel data answers the question how recent periods of nonparticipation influence the chance of having a job and, for those individuals with a non-continuous career path currently engaged in paid labor, how past nonparticipation influences their hourly wage and socio-economic status. The analyses show that although the role of nonparticipation in the life course of women is decreasing, it is still greater than in the life course of men. The negative effects of labor force exits on women's wages described by Mincer and Polacheck back in 1978 remain just as resilient today. In addition, the findings demonstrate that three years after returning to work, the scarring effects of women's voluntary exits can still be observed, and this is true not only for their wage levels, but their socio-economic status as well. Voluntary nonparticipation during the period directly prior has a stronger effect on the participation chances (chance of returning to work) of men than on that of women. It appears that it is more acceptable for women to temporarily exit the labor market than it is for men. As men deviate from the 'male norm' and do not participate, this has immediate repercussions for their life course and, as the case may be, their careers (path dependency). Once men are actively participating again, the period of nonparticipation has a less damaging effect than it does for women in terms of the realized hourly wage and no significant effect on their socio-economic status. Reflecting back to the theory-based hypotheses, one careful conclusion can be that the stigma effect caused by a period of nonparticipation is more devastating for men than the effect caused by the loss of human capital, while the opposite appears to be the case for women.
Lasting negative effects are observed for men on wage levels and for women on both their levels of socio-economic status and their gross hourly wage levels. Reflecting upon the findings from chapter 3 where a part-time work history is equally devastating, it appears that the currently available work and care combinations for women on the Dutch labor market are not conducive to career enhancement.

In comparing the effect of a period of unemployment to a period of voluntary nonparticipation, the analyses show that unemployment affects men's chances of returning to the labor market as active participants less negatively than a period of voluntary nonparticipation. The same is true for women. The effect of a recent history of unemployment is not as harmful as the effect of a recent history of voluntary nonparticipation. Unemployment will more than likely always be part of dynamic market economies. Proactive labor market policy is currently being implemented throughout the EU placing more responsibility with the employee to ensure his or her own

continuing employability. Awareness of the problem groups, those groups most likely to experience unemployment and enduring unemployment, can help in a proactive policy approach. These groups (women, youths, older workers, and ethnic minorities) are especially susceptible to an erosion of skills and competences during periods of unemployment, something that becomes ever more crucial for employability in knowledge economies (Sap and Schippers, 2004). Here too, the accessibility to training facilities and reintegration are key instruments to shorten unemployment duration.

This study looked directly at long-term effects regarding past nonparticipation and unemployment on wages. Long-term negative effects are discernible on the wage levels of women as many as *ten years* after a period of voluntary nonparticipation. Significant negative effects are observed for past unemployment for the total population but dissipate when running the analysis separately for men and women due to the smaller numbers. The negative long-term effects of these two career deviations (voluntary nonparticipation and unemployment) are observable up to ten years after the fact. The negative effects are stronger for deviations earlier in the career supporting the theory that wage growth is on a lower level upon return from a labor market exit (path dependency) (see MaCurdy, 1981). The farther back in the past that the career deviation has occurred, the stronger the effect on the wage growth, which supports the assumption of path divergence in the theoretical model. This supports the tournament model hypothesis that women should create a bridgehead before taking any kind of a career deviation.

Study three: institutionalized time-outs

Chapter 5 explored a principal part of the life course arrangement in Belgium the institutionalized system of career breaks using Belgian panel data, the PSBH career module, and administrative data. Although the system is available to almost all Belgian workers, there are some indications of barriers for use of this life course instrument. Single parent households and lower income groups are less likely to use the career break system. Even though the income compensation is higher for these groups, it is evidently still insufficient. Users of a full-time break are more likely to simply exit the labor market (and not return). Within the two targeted groups for increased participation (women and older workers), this is certainly the case. However, an increasing number of employees is opting for a temporary reduction of working hours whereby exits are avoided entirely.

When looking at the effects on the career for those that return to their job, it appears that the Belgian career break system adds up to a positive balance. Men experience positive effects on wage and wage growth after temporary hour reductions (part-time breaks), which bring them back up to the wage level prior to the break before dissipating. Women experience a positive effect on their wage and wage growth after using a full-time career break and this effect persists over time. Working mothers

who take a full-time break, provided the break does not exceed a period of one year, experience a higher wage growth upon return, which persists. Working women with higher wages have more to lose by taking a break and are more likely to take part-time breaks for which no positive effect is found. On the other hand, no negative effect is found either. All in all, this life course labor market instrument has a positive effect on individual careers with the warning not to remain away from the job too long.

The importance and the necessity of some kind of a career break system or life course arrangement is evident. Several ex ante analyses of the Dutch life course arrangement have all pointed to a number of weak points and areas of risk (Goudswaard *et al.*, 2002; Sap and Schippers, 2004; SCP, 2004). One economic and especially budgetary problem inherent to the Belgian career break system is the fact that a great many of the users do not actually return to the labor market at all. On the other hand, by means of a relatively small investment of public funds, it is possible to facilitate the return of individuals to the labor market under considerably favorable conditions. Use of the career break immunizes employees for the most part from the negative effects of a (complete or partial) career interruption 'at personal expense' like the ones used especially by mothers in the Netherlands.

The inspection of the Belgian career break system provides a first indication of legislative and policy instruments actually relieving labor market inequality. This instrument demonstrates that given the facilities, women will continue to participate throughout periods of task combination and that this definitely benefits earnings equality. The wide scale of possibilities for use and compensations create a very assessable (albeit not yet perfectly) and increasingly popular life course oriented policy instrument. Nevertheless, a warning is warranted. Results show that career breaks taken longer than one year have strong negative effects on wages. The official ruling by the Belgian federal government is for a maximum period of one year. Many collective agreements extend this period, supposedly for the benefit of the employee. However, this is not in the interest of (Belgian) workers. One year out positively affects the wages of those who make use of a career break. Taken longer, career breaks are just like any other cure, the side effects can be worse than the original ailment.

6.3 Questions that require further research

At this point it is essential to assess which questions have gone (at least partially) unanswered. The intermediate-term effects of four career deviations on the working careers of individuals have been examined. Questions about the difference in effects regarding the timing of the deviation in terms of life course stage and the differences in effects for duration of the deviation were scrutinized. Sequences, although more difficult to cover simply due to the extended panel analysis required, were included

in two of the three empirical studies. In chapter 4 the effects of past nonparticipation and past unemployment were explored in combination with a current part-time working status. The positive effects of currently working part-time on wages could not compensate the negative effects of a history of voluntary nonparticipation. There were also strong negative effects of currently working part-time on the socio-economic status in combination with a history of voluntary nonparticipation. This is a typical work history sequence found in the resumes of many women on the Dutch labor market. It is certainly a strong indication that the effects of the sequence are a multiple of the negative effects found for each of the individual career deviations. In chapter 5, extended sequences were observed but their effects on labor continuity and upward mobility were not evaluated. This is something that still remains to be pursued, certainly when considering that an increase in the use and combinations of use of career deviations can be expected.

The Belgian data did not allow for an isolation of the effect of the career break system on the participation of the targeted groups: older workers and women. The question of how this policy instrument has affected the participation of the targeted groups was only partially answered with this study and requires further research. The negative effects found for having taken a career break in the past on labor market continuity were confounded by the amendments to the arrangement, the different additional arrangements between employee and employer, and the relatively short time window in the administrative data set. There are indications that an increasing number of employees from both groups targeted are opting for a temporary reduction in working hours in lieu of full-time breaks. This in itself suggests that these groups are continuing their labor participation rather than exiting the labor market completely. Still, this is a question that remains to be unequivocally answered because it is also essential for policy makers in the Netherlands who are, compared to the Belgians, in the early stages of developing a career break system.

One human capital hypothesis from chapter 5 remained untested. In approaching an institutionalized career break with the human capital model, the question was how individual employees would invest in their human capital before and during such a time-out. From a human capital perspective a planned withdrawal from the labor market makes any kind of investment prior to exit superfluous. However, an institutionalized break is designed so that the worker (theoretically) intends to return. In fact, there is a guarantee for return. With the data at hand we were unable to test whether the investment in human capital by employees exiting the labor market and using the career break system was different from investments made by employees for voluntarily exits. The expectation was that the investment in human capital by users of the career break system would be similar to that of continuous workers.

The results in chapter 5 from the explorative analysis used to capture patterns in labor market careers provided support for Schmid's transitional labor market model.

Younger cohorts on the Belgian labor market exhibit a greater number of transitions than older cohorts. This is an indication that labor markets are changing and that transitions are no longer restricted to job – job mobility but also from full-time to part-time work, work to study, and general transitions from one labor market state to another as was observed in the analysis. These transitions are indicative of a more flexible labor market, which answers the needs of the demand side of labor. Here too, further research is needed to discern how the more highly transitional groups are progressing in terms of labor continuity and wages further down their career paths. More transitions require in any case more transition facilities as well as sufficient transition skills from workers. A transitional labor market should not be sought at all costs. It would of course be a poor trade off; the welfare states of Europe in exchange for full employment on a transitional labor market if employment for so many translates into lesser jobs on a segmented labor market (Tilly, 1996).

The continuing over-representation of women's use of career deviations is indicative of the assertion that women's labor market behavior is heterogeneous and that work-centered women (highly committed to career) are a minority (Hakim, 2002). Their preference (or need) to make concessions in their professional careers in order to combine work with caring tasks is observable in their enduring use of career deviations. Interestingly enough, as was observed in the explorative analysis in chapter 5, is that women not only exhibit a greater diversity in career patterns, they do this right from the start of their careers. This would suggest that women are not exhibiting more diverse patterns and transitional behavior necessarily to accommodate task combinations (of work and care). It may be a precursory anticipation effect in human capital terms (Mincer and Ofek, 1982). Do women enter the labor market exhibiting an anticipation effect which translates to a more highly transitional labor market behavior right from the start of their careers? Or are these women indeed simply more heterogeneous in their preferences and thus also more diverse in the career paths they prefer? An important fact has been established: women begin their careers demonstrating a greater diversity in labor patterns, and this clearly differs from the career paths of men.

A crucial career path detour that has not been investigated here is one that is expected to increase (and possibly more rapidly than the rest): labor migration. Mincer and Ofek (1982) described this as a source of human capital loss showing that skills and knowledge are not completely transferable across frontiers. At the same time, this instrument has also become a high priority policy item on the current EU agenda designated as the "European Year of Workers' Mobility 2006." Opening borders and encouraging mobile workers within the European member states is yet another career path trajectory for which we can only guess at the repercussions for individual careers. This form will become increasingly important both to labor markets and to the individuals that make them, let alone the households that move with them, and certainly should receive priority on the research agenda as well.

6.4 Future issues and policy implications

In addressing what issues have arisen as priorities for the research and policy agendas the main question to be asked is: Is the Dutch labor market ready for a life course arrangement?

In the move towards a transitional economy, the Netherlands is relying heavily on part-time work. The results of this study provide evidence that part-time work has a lasting negative effect on labor market continuity and the upward mobility of individual careers. Furthermore, there appears to be a definite gender bias regarding the effects of part-time work on careers. There is observable evidence that women working part-time are capable of acquiring good starting wages, but are less capable of recovering from the repercussions of a history of part-time work after re-entry into full-time employment. This may be because they take a step down when they make the transition to full-time work, or that they are not capable of achieving comparable wages when competing on a gendered job market. This means that despite the many legislative efforts to protect the position of part-time workers on the Dutch labor market, equal rights do not necessarily translate to equal opportunity. It is especially the lasting negative effects of part-time employment history that are troubling.

If part-time work is intended as a temporary transition to better accommodate working life with other important life domains, these past-part time negative effects need first to be alleviated. Also, it is women in particular who are bearing the brunt of these burdens. The waste of human capital (as women are investing just as highly as men in their initial education) is vast. The cost for this kind of human capital waste is not mitigated by a life course savings plan. The lasting negative effects encountered on the micro-level are compounded by the vast numbers of part-time workers and potential part-time workers on the Dutch labor market. The effects on individual careers are in this way magnified in their effect on the macro-level.

Women prefer working part-time in the Netherlands (Baaijens *et al.*, 2003). There is evidence of a shift to larger part-time time jobs (Román *et al.*, 2004), but the trend of part-time working is set and becoming increasingly popular. Although women are able to attain quite respectable levels of hourly income for part-time jobs, the total career earnings remain proportionally lower than full-time equivalents and pension building is sharply reduced. This has consequences on the macro economic level. A recent report from the Dutch Social Cultural Planning Office (Portegijs *et al.*, 2006: 111) concludes that, "views about employment and childcare are the main factors determining whether mothers are willing to work and whether they are prepared to use childcare facilities." The modest levels of participation and strong beliefs that young children are best taken care of by their parents are correlated. It appears that the one-and-one-half earner's economy of the Netherlands is still quite robust and the preferred working arrangement for the majority of Dutch households. As long as

this is economically feasible within the household, any real shifts in women's participation are not likely. If indeed the Dutch policy makers are determined in their intentions to increase the levels of labor participation by women in the Netherlands, it would seem that the only instrument that will actually have effect is a fiscal one. Policy makers will have to make it economically *appealing* to work more hours.

Many women still withdraw from the labor market when children are very young. This form of (voluntary) nonparticipation has lasting negative effects on the micro-level. Individuals with a history of nonparticipation have less labor continuity (thereafter) and lower wages and socio-economic status levels three years after returning to the labor market. A voluntary career interruption has a resilient scarring effect that carries on well into the career. The total number of this type of labor market exit in the Netherlands has seen a marked decrease since the mid 1980s. This number is expected to further decline through the introduction of institutionalized career breaks similar to those described in chapter 5. Periods of nonparticipation would then make way for periods of temporary time-outs, making use of institutional facilities whereby the lasting negative effects as described in chapter 4 will increasingly become labor market history.

One of the most important elements of the Belgian career break system is the aspect of a legal right to take a break. The Dutch life course arrangement only provides a legal right to *save* for one. This in itself illustrates a crucial difference inherent in the two systems. Dutch life course policy stresses the individual's responsibility for his or her own employability and career planning. It requires additional skills and competences that many individuals do not (yet) have, some will find difficult to acquire. If this is left uncorrected, it may lead to yet another source of inequality in Dutch society.

The Dutch life course policy is being promoted as a method to save for early retirement. This is, in view of the evidence from the evaluation of the Belgian career break system, the greatest flaw in the policy. If it is necessary that more individuals work and that their working careers are extended, any policy initiative designed or promoted to encourage early retirement is entirely counter productive. Another aspect is just who will be capable of saving for this kind of perk? It is certainly not the minimum wage earners, nor even the households that bring home two minimum wage salaries. This points to a new inequality where only those who can *afford* the luxury of early retirement will benefit from the new life course arrangement.

A second flaw in the life course arrangement is the (however unintended) tendency for gender bias. Women will use the life course arrangement to temporarily exit the labor market to combine careers with caring tasks. Their life course savings are already more difficult to accumulate due to their part-time employment, and what they are able to save will be spent on caring tasks. This ironic twist of fate leaves them

faced with the prospect of a very long working life if they are ever going to build a sufficient pension with which to retire. In the meantime, the men will reap the fruits of the life course arrangement in the form of shorter labor careers.

There is a valuable lesson that can be learned from the experience of the Belgian career break system. Use of the career break system still equates to a gender bias: women use the system primarily to reconcile work and family life, and thus during earlier stages of their life course. Men use the arrangement primarily nearing the end of their careers: as an instrument to ease them into their retirement. This is precisely the pitfall of the Dutch life course arrangement. A possible solution might be that leave, full-time or part-time to care for young children, be subtracted equally from both parent's leave-taking savings so that both will have options further down the career path. This might even have an unintended effect: as long as they are paying the tab, more men just may decide to take career breaks to care for their young children as well.

Inequality in the labor market is still very much a gender issue. Women have, despite all their struggles for emancipation including enormous strides in equal educational attainment, still not achieved equality in earnings. The wage gap is evident throughout life course stages and across country borders. Women are currently shouldering the brunt of the economic implications of combining care and paid labor. Their voluntary exits and part-time jobs are not only excluding them from any real career building, it also excludes them from accumulating any kind of a sizeable pension. Now, in an almost ironic twist of fate, life course policy in the Netherlands allows them to save for these detours while men are saving for their early retirement.

The purpose of this thesis was to make evident the longer-term effects of career deviations on individual careers in terms of labor continuity and important job-related indicators. The motivation for doing this was that these types of career detours are currently being promoted by policy makers as facilitators of labor participation, and for combining work with other important life domains, especially during the rush hour of working life. If it is indeed the plan of policy makers to normalize these previously marginal types of labor participation (deviations, detours, and alternate routes), the negative longer-term individual effects as observed and described in this research will first have to be addressed. If not, there will certainly be negative ramifications on the macro level. If it is the intention to make deviating from standard careers a viable option for individuals during their working lives, several crucial undesirable effects still need to be remedied.

Appendix A (chapter 3)

Table A1 Usual weekly volume of hours worked by employed[1] men and women by country, 2000

countries, ranked by men's average hours	average for employed men	average for employed women	average gender gap in working hours for the employed[4]
Ireland	44.7	33.4	11.3
Greece	44.6	39.6	5.0
Portugal	43.8	38.7	5.1
UK	42.9	29.8	13.1
Finland	42.5	39.0	3.5
Spain	42.3	36.2	6.1
Austria	42.1	36.0	6.1
Norway[2]	41.8	32.5	9.3
Belgium	41.4	32.9	8.5
Germany	41.2	32.2	9.0
Italy	41.2	35.1	6.1
France	40.9	35.0	5.9
Sweden	40.0	35.2	4.8
Denmark	38.7	33.3	5.4
Netherlands	36.9	25.2	11.7
EU 15[3]	41.6	33.2	8.4

Note:
1. Main job, including paid and unpaid over-time.
2. Data for Norway are from *Employment Options Survey 1998*
3. Luxembourg is not shown separately due to sample size limits, but is included in the overall EU15 figure.
4. Employed men's average usual weekly working hours minus employed women's average usual weekly working hours.
Source: European Working Conditions Survey, 2000.

Appendix B (chapter 5)

Table B1: List of variables used from the PMWP sample:

Gecodeerd_insz
T_prest_rsz_xxy
Tauxpt_rsz_xxy
Saljrs_rsz_xxy
Nomenc_982
Weeg
Weeg_pop
Hoed_xxy
Redenlo_xxy
Fiche7a_xxy_1-fiche7a_xxy_4
Fiche7_xxy_1-fiche7_xxy_4
Geslacht_xxy
Cum_pct_xxy
Leeftijdsklasse_xxy
Gezinspositie_xxy
Leeftklasse_jongste_kind_xxy
t-prest_p_rsz_xxy
saljrs_p_rsz_xxy
nomenc_p_xxy
leeftijdsklasse_p_xxy

Table B2: Results of eleven models for latent class nominal regression analysis

Model	Classes	LL	BIC(LL)	Para-meters	L^2	df	p-value	Classification Error (%)	R^2
1	1	-124019	248139.8	12	234212.2	4441	1.0e-46074	0	0.10
2	2	-85965.5	172141.1	25	158104.3	4428	5.8e-29937	0.01	0.41
3	3	-74132.5	148584.2	38	134438.2	4415	2.0e-24963	0.02	0.48
4	4	-69609.3	139647.1	51	125391.9	4402	3.1e-23075	0.02	0.51
5	5	-66462.7	133463.1	64	119098.7	4389	3.4e-21767	0.03	0.53
6	6	-63897.8	128442.4	77	113968.8	4376	2.1e-20704	0.15	0.56
7	7	-62176.5	125109.1	90	110526.3	4363	4.1e-19995	0.18	0.58
8	8	-60564.7	121994.8	103	107302.8	4350	3.3e-19332	0.19	0.59
9	9	-59659.9	120294.4	116	105493.1	4337	2.5e-18964	0.19	0.60
10	10	-58560.8	118205.3	129	103294.8	4324	9.8e-18516	0.20	0.61
11	11	-57614.7	116422.5	142	101402.8	4311	3.8e-18131	0.19	0.61

Source: PSBH career module, 2002 wave.

Table B3: Estimated values for eleven class latent class nominal regression analysis

age	status	Class 1	Class 2	Class 8	Class 4	Class 6	Class 9	Class 5	Class 11	Class 10	Class 7	Class 3	Overall	Observed
		28.5%	27.7%	4.3%	6.4%	5.3%	4.0%	5.5%	3.1%	3.7%	4.4%	7.3%		
< 30	full-time	0.97	0.94	0.91	0.77	0.75	0.43	0.43	0.48	0.34	0.46	0.20	0.77	0.75
30-<50	full-time	1.00	1.00	0.71	0.76	0.74	0.81	0.03	0.09	0.10	0.05	0.00	0.72	0.72
50+	full-time	0.37	0.95	0.06	0.13	0.32	0.35	0.00	0.01	0.02	0.01		0.41	0.33
< 30	part-time	0.00	0.00	0.00	0.01	0.19	0.03	0.45	0.13	0.06	0.04	0.00	0.05	0.04
30-<50	part-time	0.00	0.00	0.01	0.01	0.25	0.00	0.96	0.56	0.10	0.00	0.00	0.09	0.07
50+	part-time	0.00	0.00			0.45	0.00	0.65	0.31	0.01	0.00	0.00	0.07	0.03
< 30	werkloos	0.00	0.01	0.03	0.15	0.03	0.01	0.09	0.03	0.52	0.08	0.00	0.04	0.04
30-<50	werkloos	0.00	0.00	0.01	0.21	0.01	0.00	0.01	0.05	0.74	0.02		0.05	0.03
50+	werkloos	0.00	0.00	0.00	0.51		0.00		0.07	0.97			0.07	0.03
< 30	nonpart	0.02	0.04	0.06	0.07	0.02	0.53	0.03	0.35	0.08	0.43	0.80	0.14	0.16
30-<50	nonpart	0.00	0.00	0.28	0.01	0.01	0.15		0.30	0.05	0.92	1.00	0.14	0.17
50+	nonpart	0.00	0.01	0.66	0.02		0.01	0.00	0.35		0.46	1.00	0.14	0.25
< 30	pension										0.00			
30-<50	pension	0.00			0.00	0.00	0.04						0.00	0.00
50+	pension	0.62	0.03	0.28	0.34	0.23	0.64	0.35	0.25		0.53		0.31	0.37

Source: PSBH career module, 2002 wave.

Table B4: Number of VAL premiums granted for training and number granted for other reason per year by sex

Year	Reason for premium request	Men	Women	Total
1998				
	Training	79	248	327
	Other	2136	14408	16544
1999				
	Training	181	658	839
	Other	4652	23778	28430
2000				
	Training	256	882	1138
	Other	6310	29245	35555
2001				
	Training	316	1027	1343
	Other	7262	32393	39655
2002				
	Training	148	606	754
	Other	2525	14673	17198

Source: Ministry of the Flemish Community, department of Employment.

Appendix C (chapter 6)

Table C1: Summary of research included

Content factors					
	Number	Duration	Short-term effects		Intermediate-term effects
Detour type					
Career Break	++	++	++		++
Nonparticipation	++	++	++		++
Unemployment	++	++	++		++
Part-time	++	++	++		++
Sequence	+	+	+		+
Methodological factors	Type of detour				
	Time-out	Voluntary nonparticipation	Unemployment	Part-time	Sequence
Key controls					
gender	++	++	++	++	++
age	++	++	++	++	+
educational level	+	++	++	++	++
marital status	++	++	++	++	++
partner income	+	–	–	+	+
number of children	++	++	++	++	++
age youngest child	++	++	++	++	++
Data					
representative sample	++	++	++	++	++
cross-national comparisons	–	–	–	–	–
recent waves	++	++	++	++	++
number of waves	++	++	++	++	++
range of indicators	+	++	++	++	++

++ Well covered, + covered, – poorly covered, – – not covered

Table C2: Summary of findings

	Labor continuity		Socio-economic status		Function level		Wage		Wage growth	
	men	women	men	women	men	women	men	women	men	women
part-time	–	–	–	–	+	+	+	+	–	–
past part-time	n.s.	–	n.s	–	–	–	–	–	+	–
non-participation	–	–	–	–			–	–		
unemployment	–	–	–	++			–	–		
career breaks	–	–								
part-time break							+	n.s.	+	n.s.
full-time break							n.s.	+	n.s.	+

–negative, + positive, n.s. not significant.

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Summary in Dutch

Afwijken van de standaardloopbaan

Aanleiding en probleemstelling

Het voortschrijdende proces van individualisering – waarbij persoonlijke keuzes prevaleren bij het inrichten van de levensloop – leidt tot een grotere verscheidenheid in levensloopatronen in Europese samenlevingen. Binnen deze nieuwe levenslopen neemt betaalde arbeid een centrale, maar niet langer een vanzelfsprekend dominante positie in. De meer traditionele loopbaan (of het ontbreken daarvan voor vrouwen) van vorige generaties verliest terrein, doordat een steeds groter aantal vrouwen de arbeidsmarkt betreedt en actief blijft tijdens verschillende fasen van gezinsvorming. Hierdoor ontstaan nieuwe behoeften rond het combineren van werk en andere belangrijke onderdelen van het leven zoals zorg, onderwijs en vrije tijd. Dit geldt vooral voor de levensfase waarin de carrière en zorg voor een jong gezin concurreren om de schaarse tijd.

De ontwikkelingen aan de aanbodzijde van de arbeidsmarkt vinden hun pendant in de veranderende eisen aan de vraagzijde van de Europese arbeidsmarkten. De Europese economie verbreedt haar horizon om wereldwijd te kunnen concurreren, waarbij de nadruk steeds meer op de kenniseconomie komt te liggen. Kenmerken van deze globaliserende kenniseconomie zijn o.a. grote flexibiliteit, voortdurende technologische innovaties, meer concurrentie en het vermogen tot snelle aanpassing aan schommelingen binnen de wereldeconomie. Deze flexibiliteit wordt ook verwacht van werknemers, die in toenemende mate zelf verantwoordelijk worden gesteld voor hun inzetbaarheid op de arbeidsmarkt, inclusief het bijhouden van steeds sneller verouderende vaardigheden en competenties (Bovenberg, 2003).

Juist op het punt waar de behoeften van werknemers (faciliteiten voor het combineren van werk met andere belangrijke levensdomeinen) en de eisen van werkgevers (flexibele arbeid en een betere inzetbaarheid) samenkomen, kan beleid een beslissende rol spelen. Beleidsmakers in verscheidene EU-landen bedenken (levensloop) regelingen om huishoudens tijdens 'het spitsuur van het leven' te ontlasten, terwijl ze tegelijkertijd de arbeidsparticipatie van alle potentiële werknemers trachten te bevorderen, in het bijzonder van vrouwen en oudere werknemers. Deze regelingen worden ontworpen om flexibelere arbeidsvormen in te voeren, waarbij de arbeidsmarkt tegelijkertijd voorzien wordt van werknemers die zelf in staat zijn hun inzet-

baarheid te regelen op het gebied van kennis, productiviteit en beschikbaarheid over de langetermijn. Het omgaan met levensloopregelingen vereist nieuwe vaardigheden van individuen, zeker wat betreft het vermogen om toekomstgericht te denken. De keuzes die individuen vroeg in hun loopbaan maken, zijn van vitaal belang voor het spectrum van hun keuzemogelijkheden in de toekomst. Afwijken van de standaardloopbaan wordt steeds meer een optie voor individuen die betaalde arbeid met andere belangrijke levensdomeinen willen combineren.

Deze 'omwegen' in de loopbaan zien we in diverse arbeidsvormen, zoals deeltijdbanen, een tijdelijke vermindering van het aantal arbeidsuren en periodes van non-participatie en worden gebruikt door individuen als instrumenten om de conflicterende eisen met elkaar te verzoenen, vooral in fasen van het leven waarin de combinatiedruk extra hoog is. Steeds meer worden deze arbeidsvormen door beleidsmakers als *levensloop*instrumenten ingezet en aangeprezen om soepele transities gedurende de gehele loopbaan te faciliteren.

Dit is op zich een nobele zaak en geeft aan dat beleidsmakers het probleem van de combinatiedruk serieus nemen. Maar er is verbazingwekkend weinig bekend over de mogelijke langetermijneffecten van het gebruik van deze instrumenten op de verdere loopbaan van individuen. Stellen deze instrumenten individuen in staat om daadwerkelijk terug te keren op de arbeidsmarkt? Leveren ze een bijdrage aan succesvolle langetermijnparticipatie? Helpen ze werknemers die hun arbeidsdeelname hebben onderbroken werkelijk bij de verdere opbouw van hun loopbaan? Zijn dit inderdaad de katalysatoren die het werkzame leven kunnen omvormen van een standaardloopbaan tot een meer transitioneel en flexibel patroon, waarin andere levensdomeinen beter geïntegreerd kunnen worden? Dit proefschrift richt zich op dit nijpende informatiedeficit en heeft tot doel de volgende cruciale vraag te beantwoorden:

> *Welke invloed hebben afwijkingen van de standaardloopbaan op de verdere loopbaan van individuen?*

Genoemde alternatieve arbeidsvormen zijn niet wezenlijk nieuw en worden met name door vrouwen (met overigens wisselend succes) gebruikt om werk en zorg te combineren. De arbeidsvormen die door de nieuwe levensloopregelingen gestimuleerd worden, lijken in feite veel op het deeltijdwerk en de periodes van non-participatie waar vrouwen gebruik van maken sinds ze met de meer traditionele huisvrouwenrol gebroken hebben. Juist om deze reden zullen in dit proefschrift de effecten van deze loopbaanafwijkingen nader onderzocht en bepaald worden. Het gaat daarbij om drie empirische onderzoeken naar een viertal veel voorkomende 'omwegen' van de loopbaan.

1. *Het effect van deeltijdarbeid op de loopbaan.*
2. *Het effect van non-participatie (vrijwillige non-participatie en – werkloosheid) op de loopbaan.*
3. *Het effect van geïnstitutionaliseerde loopbaanonderbrekingen op de loopbaan.*

Nederland vormt de basis voor het eerste en het tweede empirische onderzoek (naar deeltijdwerk en non-participatie) en wel vanwege het veelvuldig voorkomen van deze loopbaanafwijkingen. Voor het derde empirische onderzoek (naar geïnstitutionaliseerde time-outs) is gebruik gemaakt van gegevens over het Belgische systeem van loopbaanonderbreking. Dit systeem was aanvankelijk bedoeld als werkgelegenheidsinstrument, maar is via vele aanpassingen een levenslooparrangement geworden en is één van de meest ontwikkelde in zijn soort in Europa. Om de langetermijnconsequenties van deze vier loopbaanomwegen op individuele loopbanen vast te stellen, zijn de effecten van deze omwegen op een aantal sociale en economische kernindicatoren onderzocht. Het betreft: arbeidsparticipatie en continuïteit, het effect op het niveau van de sociaaleconomische status en de veranderingen daarvan door de tijd heen, het functieniveau, het loon en de loongroei.

Theoretische achtergrond

De theoretische basis voor dit proefschrift wordt in belangrijke mate gevormd door de *human capital*-theorie, een economische theorie die onder andere uitgewerkt is door Becker (1975), Ben-Porath (1967), Mincer (1958, 1962) en Schultz (1964). Mincer paste de human capital-theorie (de theorie van het menselijk kapitaal) als eerste toe om inkomensverschillen te verklaren. Later voegde hij belangrijke aspecten toe om periodes van non-participatie in de loopbanen van vrouwen beter te kunnen modelleren. De human capital-theorie stelt dat het inkomenspotentieel van een individu afhankelijk is van de som van zijn of haar kennis en vaardigheden, waarvan het grootste deel tijdens de initiële onderwijsfase wordt verworven. Aanvullend human capital kan door middel van ervaring en training worden verworven. Er is ook human capital dat alleen gerelateerd is aan een specifieke baan, of kennis die alleen betrekking heeft op één organisatie. Dit kan minder gemakkelijk worden overgedragen aan een nieuwe werkgever. Tijdens het werkzame leven heeft ieder individu te maken met veroudering van human capital, vergelijkbaar met het fysieke verouderingsproces. Tijdens een periode van non-participatie bestaat er ook een achteruitgang in inkomenspotentieel door het niet gebruiken van vaardigheden. Dit laatste wordt ook wel *atrofie* genoemd (Mincer & Polachek 1978). Het niet gebruiken van vaardigheden, gecombineerd met het niet onderhouden ervan, versnelt het proces van afbrokkeling of veroudering.

Vanuit het perspectief van de human capital-theorie is de invloed van de werkgever vooral vast te stellen door de investeringen die deze doet in de werknemer met betrekking tot opleiding en training. Dit verklaart (een deel van de) inkomensverschillen binnen een bedrijf of organisatie. Maar er zijn ook andere aspecten die door de werkgever bepaald worden, zoals selectieprocedures (kans op een baan) en promotiebeleid, die vanuit de kerngedachte van de human capital-theorie minder goed te duiden zijn. Wanneer het probleem uitsluitend met behulp van de human capital-theorie

wordt benaderd, doet dit ook geen recht aan de huidige complexiteit van loopbaanomwegen die versterkt wordt door de toegenomen participatie van vrouwen en de geïndividualiseerde levenslopen. Het hele concept van een loopbaanafwijking is immers ook een sociaal en institutioneel fenomeen, met specifieke rollen en verantwoordelijkheden voor werknemers en werkgevers die door de overheid gemedieerd worden. Om deze andere aspecten rondom effecten van loopbaandeviaties op individuele carrières te modelleren, worden twee complementaire theorieën gebruikt: de statische discriminatietheorie en de theorie betreffende toernooimodellen.

Volgens de statistische discriminatietheorie (Arrow, 1973; Phelps, 1972) trachten werkgevers inzicht te krijgen in de toekomstige productiviteit van hun potentiële werknemers. Dit proberen ze te verwezenlijken op een voor hen zo goedkoop mogelijke manier. Werkgevers willen betrouwbare informatie, maar nemen vanuit kostenoverwegingen soms genoegen met minder degelijke zoekprocedures. Ze baseren zich dan op ervaringsgegevens op groepsniveau in plaats van dat ze proberen de individuele productiviteit te achterhalen. Voor het bepalen van de groep waartoe een potentiële werknemer behoort, hanteren werkgevers vaak simpele criteria, zoals bijvoorbeeld opleidingsniveau en werkervaring. Deze bieden echter geen garantie voor de toekomstige productiviteit van een potentiële werknemer. Werkgevers maken ook gebruik van waarneembare kenmerken zoals sekse, etniciteit of leeftijd, wanneer ze het idee hebben dat dit betere indicatoren zijn voor het voorspellen van het productiviteitsniveau. Deze alternatieve maatstaven worden toegepast op groepen. De individuen die bij een minder gunstige groepsindeling horen, krijgen vervolgens minder betaald en hebben minder kans op promotie. Zo wordt '*face value*' (man of vrouw, blank of zwart, oud of jong) gezien als een indicator voor de toekomstige productiviteit. De werkgever baseert deze oordelen op 'eerdere statistische ervaringen', ervaringen die hij (of collega-werkgevers) eerder hebben gehad met leden van een bepaalde groep en zal zich op deze ervaringen blijven baseren totdat het tegendeel bewezen wordt. Toekomstige werknemers die een loopbaanomweg maken (onderbrekingen in de vorm van non-participatie, werkloosheid, geïnstitutionaliseerde loopbaanonderbrekingen en deeltijdwerk) zouden kunnen worden gezien als een groep met een wisselend productiviteitsniveau en dus als een groep die beter kan worden gemeden.

De derde theoretische aanpak is die van de toernooimodellen (tournament models), waarin gesteld wordt dat het belangrijkste punt bij het zoeken naar kandidaten voor een baan niet het daadwerkelijke productiviteitsniveau is, maar de persoonlijke concurrentie tussen werknemers, in ieder geval met betrekking tot interne arbeidsmarkten. Interne carrièreladders kunnen worden beklommen door de concurrentie steeds een stap voor te zijn, of dit nu om een grote of een kleine stap gaat. Wanneer we uitgaan van een toernooimodel betekent dit dat loopbaanomwegen, zoals een periode van non-participatie, werkloosheid of een onderbreking, tot gevolg hebben dat de werknemer niet deelneemt aan een aantal competitierondes. Een uniek ken-

merk van toernooistructuren (Becker en Huselid, 1992) is dat het uitreiken van een beloning plaatsvindt op basis van de volgorde bij de finish en niet op basis van de algehele prestaties van de deelnemer. De gevolgen van het niet deelnemen kunnen per werknemer aanmerkelijk verschillen en zijn zowel afhankelijk van het onderdeel dat gemist wordt (begin, midden, einde), als van het aantal rondes (duur) waaraan iemand niet meedoet.

De opzet van de drie deelstudies

Het eerste empirische onderzoek in dit proefschrift heeft betrekking op de langetermijneffecten van deeltijdwerk op de loopbaan van mannen en vrouwen op de Nederlandse arbeidsmarkt. Hiervoor zijn twaalf golven (1990-2001) van het Sociaal-Economisch Panel (SEP) gebruikt. Het tweede empirische onderzoek richt zich op twee soorten non-participatie op de arbeidsmarkt: vrijwillige non-participatie en onvrijwillige (met name in de vorm van werkloosheid), wederom met gebruikmaking van de genoemde golven (1990-2001) van het SEP. In beide studies gaat het om analyses onder circa 13.000 respondenten. Het derde empirische onderzoek behandelt het systeem van loopbaanonderbrekingen op de Belgische arbeidsmarkt. Dit systeem, dat sinds 1985 bestaat, biedt Belgische werknemers het recht op een loopbaanonderbreking of een tijdelijke vermindering van het aantal arbeidsuren terwijl de pensioensopbouw doorgaat en terugkeer naar de baan gegarandeerd is. Voor dit afsluitende onderzoek zijn drie datasets gebruikt: gegevens uit elf jaren (1992-2002) van de Panelstudie van de Belgische Huishoudens (PSBH), de PSBH Loopbaanmodule (met retrospectieve data waarin volledige loopbanen opgenomen zijn) en het Panel Mobiliteit van de Werkende Populatie (PMWP). Deze laatste dataset betreft administratieve data waarin meer dan 600.000 respondenten bijna vijf jaar lang gevolgd werden (1998-2002), afkomstig van het Datawarehouse Arbeidsmarkt van de Kruispuntbank van de Sociale Zekerheid.

Samenvatting van de resultaten

Onderzoek één: deeltijdarbeid
Uit de resultaten van het eerste onderzoek, gepresenteerd in hoofdstuk 3, blijkt duidelijk dat deeltijdarbeid niet bevorderlijk is voor het stijgen op de carrièreladder. Dit geldt zowel voor mannen als voor vrouwen en is gebaseerd op de negatieve effecten die waargenomen worden voor sociaaleconomische status en het functieniveau. Dit ondersteunt de hypothese afkomstig uit de statistische discriminatietheorie die stelt dat werkgevers minder snel parttimewerknemers zullen aannemen voor belangrijke functies vanwege hun onzekere productieniveau. Uitgebreide wetgeving in Nederland beschermt deeltijdwerknemers op het gebied van gelijke behandeling en dus gelijke betaling. Dit weerspiegelt zich in de bevinding dat parttimewerknemers in staat zijn

om een hoog loonniveau te realiseren. Parttimewerkervaring is niet gunstig voor de carrièreopbouw van vrouwen. Zelfs drie jaar na het hervatten van een voltijds werkverband zijn de negatieve effecten van eerder verricht deeltijdwerk nog steeds zichtbaar, doordat zowel de sociaaleconomische status als het functieniveau lager is. Bij mannen heeft het geen effect op hun sociaaleconomische status, maar wel op hun functieniveau. Het effect van deeltijdervaring op het loon is minstens drie jaar lang zowel voor mannen als vrouwen negatief, zelfs na een terugkeer naar een voltijdse baan.

Tevens is onderzocht of deze negatieve effecten op de langere termijn gecompenseerd kunnen worden door voldoende groei van het loon en de sociaaleconomische status. Vrouwen ervaren deze compensatie niet voor hun sociaaleconomische status of loongroei. Mannen halen de schade op het gebied van loongroei wel in. Er is geen effect gevonden voor hun sociaaleconomische status. Mannen kunnen blijkbaar wel herstellen van hun deeltijdverleden.

Deeltijdwerkers verlaten de arbeidsmarkt gemakkelijker dan voltijdwerknemers, hetgeen de human capital-hypothese bevestigt die luidt dat (onder invloed van een externe gebeurtenis) de arbeidsmarkt eerder wordt verlaten door deeltijdwerkers dan door voltijdwerkers omdat zij minder loon te verliezen hebben. Deeltijdwerkervaring vergroot echter wel de kans dat iemand een actieve participant blijft. Dit kan een aanwijzing vormen voor het feit dat deeltijdwerk als buffer op een transitionele arbeidsmarkt functioneert, waarbij werknemers die anders geen betaald werk verricht zouden hebben, makkelijker kunnen deelnemen.

Onderzoek twee: vrijwillige non-participatie en werkloosheid

De analyses in hoofdstuk 4 demonstreren dat de negatieve effecten van het (tijdelijk) verlaten van de arbeidsmarkt op het loon van vrouwen, zoals beschreven door Mincer en Polacheck in 1978, ook vandaag nog steeds gelden. Ook laten de bevindingen zien dat de schadelijke effecten van het vrijwillig verlaten van de arbeidsmarkt door vrouwen drie jaar na de terugkeer naar werk nog steeds zichtbaar zijn; dit geldt niet alleen voor hun loonniveau maar ook voor hun sociaaleconomische status. Vrijwillige non-participatie gedurende de periode direct voorafgaand aan terugkeer heeft een groter (negatief) effect op de participatiekansen (kans op terugkeer naar werk) van mannen dan van vrouwen. Het lijkt erop dat het voor vrouwen een meer geaccepteerd verschijnsel is om tijdelijk de arbeidsmarkt te verlaten dan voor mannen. Zodra het mannen echter gelukt is weer te participeren op de arbeidsmarkt, heeft de periode van non-participatie voor hen een minder schadelijk effect dan voor vrouwen op het gerealiseerde uurloon en geen significant effect op hun sociaaleconomische status.

Wanneer het effect van een periode van werkloosheid wordt vergeleken met een periode van vrijwillige non-participatie, laten de analyses zien dat werkloosheid de terugkeerkansen voor mannen en vrouwen als actieve participanten op de arbeidsmarkt minder sterk negatief beïnvloedt dan een periode van vrijwillige non-participatie.

In dit tweede onderzoek is rechtstreeks gekeken naar de langetermijneffecten op het

loon als gevolg van non-participatie en werkloosheid in het verleden. De negatieve langetermijneffecten zijn maar liefst *tien jaar* na een periode van vrijwillige non-participatie nog steeds zichtbaar in het loonniveau van vrouwen. Voor de gehele populatie worden significant negatieve effecten waargenomen bij een geschiedenis van werkloosheid. De negatieve langetermijneffecten van deze twee loopbaandeviaties (vrijwillige non-participatie en werkloosheid) zijn tot een decennium nadien nog waarneembaar. De negatieve effecten zijn sterker wanneer de omwegen vroeger in de loopbaan worden gemaakt.

Onderzoek drie: geïnstitutionaliseerde time-outs
In hoofdstuk 5 wordt een belangrijk onderdeel van de levensloopregeling in België, namelijk het geïnstitutionaliseerde systeem van loopbaanonderbrekingen onderzocht. Deze levensloopregeling is toegankelijk voor bijna alle Belgische werknemers, maar er zijn toch indicaties dat er barrières bestaan bij het gebruik van deze regeling. Eenoudergezinnen en personen met lagere inkomens maken minder vaak gebruik van deze mogelijkheid. Individuen die gebruikmaken van een voltijdse onderbreking verlaten de arbeidsmarkt eerder voorgoed. Bij de twee doelgroepen, waarvan men zeker een verhoogde participatie wil bewerkstelligen (vrouwen en oudere werknemers) is dit met name het geval.

Het onderzoek naar het effect op de loopbaan van individuen die terugkeren naar hun baan lijkt er op te wijzen dat het Belgische systeem van loopbaanonderbrekingen positief uitvalt. Bij mannen observeren we een positief effect op het loon en de loongroei na een tijdelijke vermindering van het aantal uren (parttimeonderbrekingen), waardoor ze terugkomen op het loonniveau van vóór de onderbreking. Daarna ver-dwijnt het effect. Bij vrouwen is er een positief effect op hun loon en loongroei zichtbaar na een voltijdse onderbreking. Dit effect brengt ze niet alleen terug op het niveau van voor de onderbreking, maar blijft doorwerken. Werkende vrouwen met hogere lonen hebben meer te verliezen wanneer ze van een onderbreking gebruikmaken. Zij maken vaker gebruik van een parttimeonderbreking, waarbij geen positief effect waargenomen wordt. Er wordt echter ook geen negatief effect vastgesteld. Over het algemeen heeft dit op de levensloop gerichte arbeidsmarktinstrument een positief effect op individuele loopbanen, mits de werknemers hun werk niet te lang onderbreken.

Toekomstvragen en beleidsimplicaties

De meest wezenlijke kwestie waartoe onze onderzoeksresultaten aanleiding geven, is de vraag of de Nederlandse arbeidsmarkt klaar is voor levensloopbeleid. Dit geldt met name voor het vraagstuk of er wel voldoende zicht is op de mogelijk negatieve langetermijneffecten van levenslooparrangementen.

Bij de overgang naar een transitionele economie leunt Nederland zwaar op deeltijdbanen. De resultaten van dit onderzoek tonen helder aan dat het werken in deel-

tijd een blijvend negatief effect heeft op loopbaancontinuïteit en het stijgen op de carrièreladder. Deze effecten reflecteren een evidente sekseongelijkheid: voor vrouwen zijn deze loopbaangevolgen beduidend negatiever. Ondanks de vele pogingen om de positie van parttimewerknemers op de Nederlandse arbeidsmarkt juridisch te beschermen, vertalen gelijke rechten zich niet automatisch in gelijke kansen. Vanuit levensloopperspectief zijn de blijvende negatieve effecten van een deeltijdverleden, het ontbreken van loongroei en de onverenigbaarheid van deeltijd met hogere functies en sociaal economisch statusniveaus, zonder meer zorgwekkend.

Als het de bedoeling is om deeltijdwerk als een tijdelijke transitie te bevorderen, waarin werk beter gecombineerd kan worden met andere belangrijke levensdomeinen, dan moeten deze negatieve effecten met voorrang worden aangepakt. Het lijkt er op dat vrouwen deeltijd helemaal niet als een tijdelijke transitie beschouwen, maar als een permanente optie. Vrouwen in Nederland werken gewoon liever in deeltijd (Baaijens *et al*., 2003). De Nederlandse economie van anderhalfverdieners staat kennelijk stevig overeind en het merendeel van de Nederlandse huishoudens prefereert deze werkverdeling. Zolang deze verdeling binnen het huishouden ook in de toekomst financieel haalbaar is, is het onwaarschijnlijk dat er grote verschuivingen in de netto participatie van vrouwen gaan ontstaan. Als de Nederlandse beleidsmakers er werkelijk van overtuigd zijn dat de arbeidsparticipatie van vrouwen omhoog moet, dan moet het eenvoudigweg economisch *aantrekkelijk* worden om meer uren te gaan werken.

Een van de belangrijkste elementen in het Belgische systeem van loopbaanonderbrekingen is het wettelijke recht om van een onderbreking gebruik te maken. De Nederlandse levensloopregeling kent alleen het wettelijke recht om voor een onderbreking te *sparen*. Dit verschil is cruciaal. Het Nederlandse levensloopbeleid legt de nadruk op de verantwoordelijkheid van het individu voor zijn of haar eigen 'employability' en loopbaanplanning. Het vergt aanvullende vaardigheden en competenties die velen (nog) niet hebben en sommigen moeilijk zullen kunnen verwerven. Wanneer dit beleidsmatig niet wordt gecorrigeerd, zal dit tot een nieuwe ongelijkheid in de Nederlandse samenleving kunnen leiden.

De Nederlandse levensloopregeling wordt op dit moment gebracht als een arrangement waarmee men ook voor een vervroegd pensioen kan sparen. Dit is, met het oog op de resultaten uit de evaluatie van het Belgische systeem van loopbaanonderbrekingen, de grootste tekortkoming in de regeling. Als het noodzakelijk is dat meer individuen langer gaan of blijven werken, is ieder beleidsinitiatief dat (ook) gebruikt kan worden voor vervroegd pensioen, bijzonder contraproductief. Een tweede tekortkoming van de levensloopregeling is de *gender bias*. Vrouwen zullen de levensloopregeling vooral gebruiken om tijdelijk de arbeidsmarkt te verlaten om hun werk met zorgtaken te combineren. Het is voor hen sowieso al moeilijker om te sparen in het kader van de levensloopregeling omdat ze vaker in deeltijd werken en wat ze kunnen sparen zal uitgegeven worden aan zorgtaken. Deze ironische speling van het lot zorgt

ervoor dat het vooruitzicht voor vrouwen er één is van een zeer lange loopbaan, als ze ooit genoeg pensioen op willen bouwen om te kunnen stoppen met werken. Tegelijkertijd zullen mannen de vruchten van de levensloopregeling plukken door (nog) eerder de arbeidsmarkt te kunnen verlaten.

Het doel van dit proefschrift was het empirisch zichtbaar maken van de langetermijneffecten van loopbaandeviaties op de verdere loopbaan van individuen, met name wat betreft arbeidscontinuïteit en elementaire baangerelateerde indicatoren. De achterliggende motivatie betrof de huidige aanmoediging van dit soort loopbaanomwegen door beleidsmakers als bevorderlijk voor de arbeidsparticipatie en voor het combineren van arbeid met andere belangrijke levensdomeinen, met name tijdens de periode die betiteld wordt als het spitsuur van het leven. Indien het Nederlandse arbeidsmarktbeleid zich voorneemt om deze voorheen gemarginaliseerde vormen van arbeidsparticipatie (omwegen en afwijkende routes) te standaardiseren, dan zullen de individuele negatieve langetermijneffecten, zoals die in dit onderzoek vastgesteld zijn, eerst aangepakt moeten worden. Blijft dit achterwege, dan zal het levensloopbeleid ook op macroniveau geduchte averij oplopen en mogelijk zelfs schipbreuk lijden.

Curriculum Vitae

Amelia Román was born in Palo Alto, California. After graduating high school with honors, she spent a year as a foreign exchange student in Eindhoven, the Netherlands (1979-1980). Once back in California, she attended De Anza College in Cupertino, receiving an Associate of Arts degree, awarded magna cum laude. She returned to the Netherlands in 1984 and worked as a training and employment counselor in the public sector. In 1993 she began a bachelors study in Labor and Organizations at Fontys University of Applied Sciences in Eindhoven, receiving her degree in 1997. Immediately following, she started her study in Sociology at Tilburg University, and received her masters degree in 2000. In the same year she joined the research staff of NIDI (Netherlands Interdisciplinary Demographic Institute) in The Hague. Since 2001 she works as researcher at OSA (Institute for Labour Studies) affiliated with Tilburg University and Utrecht University. The focus of her research and publications is on inequality in the labor market, labor participation throughout the life course, and European labor policy for social inclusion. She is married, has two children and works full-time.